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July 8, 2025

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**Sent By Electronic Mail and Filed on RESS**

Ottawa

Ms. Nancy Marconi  
Registrar  
Ontario Energy Board  
27th Floor - 2300 Yonge Street  
Toronto, ON M4P 1E4

Vancouver

New York

Dear Ms. Marconi:

**EB-2025-0129  
Five Nations Energy Inc. – Revenue Requirement Application**

We are counsel to Five Nations Energy Inc. (“FNEI”).

FNEI has filed its transmission revenue requirement application (“Application”) on the Ontario Energy Board’s Regulatory Electronic Submission System (“RESS”).

FNEI will also post a copy of the Application on FNEI’s website for public access.

Sincerely,

*Cole Tavener*

Cole Tavener

Enclosure

c: Richard J. King (Osler, Hoskin & Harcourt LLP)  
Chris Chilton (Five Nations Energy Inc.)  
Dorothy Kioke (Five Nations Energy Inc.)  
Andrew Mandyam (Utilis Consulting Inc.)  
Brandon Ott (Utilis Consulting Inc.)  
Jeffrey Sauer (Ontario Energy Board)  
Musab Qureshi (Ontario Energy Board)

# **EXHIBIT 1 – Application 2026 Cost of Service**

**Five Nations Energy Inc.  
EB-2025-0129**

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**ONTARIO ENERGY BOARD**

**IN THE MATTER OF** the *Ontario Energy Board Act, 1998*, S.O. 1998,  
c.15 (Schedule B).

**AND IN THE MATTER OF** an application by Five Nations Energy Inc.  
for an Order or Orders pursuant to section 78 of the *Ontario Energy  
Board Act, 1998* approving or fixing just and reasonable rates and  
other charges for the transmission of electricity as of January 1, 2026.

**1 Application**

The Applicant is Five Nations Energy Inc. (“FNEI”), a non-profit, non-share capital corporation with its main operational office in Timmins, Ontario. FNEI carries on the business of owning and operating electricity transmission facilities in the western James Bay region of Ontario.

FNEI’s forecasted Revenue Requirement for 2026 is \$10.52 million, comprised of a transmission Revenue Requirement of \$10.44 million and other forecasted revenue of \$0.08 million. Based on current transmission rates and forecasted load, FNEI forecasts a 2026 transmission revenue deficiency of \$2.45 million.

FNEI hereby applies to the Ontario Energy Board (the “OEB” or “Board”) for an order or orders made pursuant to section 78 of the *Ontario Energy Board Act, 1998* (the “OEB Act”) approving a five-year incentive rate-setting plan (“IR Plan”) which:

- establishes a base transmission Revenue Requirement of \$10.44 million for the 2026 Test Year (effective January 1, 2026) using a cost-of-service methodology.

- 1 • adjusts the base transmission Revenue Requirement over the remaining four years of the IR period
- 2 (ending December 31, 2030) by an inflation factor (“I”), less a stretch factor (“X”).
- 3 • incorporates a Z-factor for prudently incurred material costs beyond the control of FNEI;
- 4 • incorporates a regulatory review in the event of a 300 basis point variance in normalized earnings
- 5 from the Board approved ROE; and,
- 6 • incorporates a new deferral account for anticipated but presently unforecastable environmental
- 7 remediation costs, as well as use of the OEB’s generic deferral account for cloud computing
- 8 implementation costs.

9

10 FNEI further applies to the Board for such final and interim Orders, accounting orders and deferral and

11 variance accounts as may be necessary in relation to the approving or fixing of just and reasonable rates

12 for the transmission of electricity effective January 1, 2026, including the establishment of a deferral

13 account as needed to track Revenue Requirement deficiencies incurred from January 1, 2026 until FNEI’s

14 proposed 2026 Revenue Requirement is approved.

15

16 This Application is made in substantial accordance with Chapter 2 of the Board’s *Filing Requirements for*

17 *Electricity Transmission Applications*, dated February 11, 2016.

18

19 This Application is supported by written evidence. The written pre-filed evidence may be amended from

20 time to time, prior to the Board’s final decision on this Application.

21

22 The Applicant requests that a copy of all documents filed with the Board in this proceeding be served on

23 the Applicant and the Applicant’s counsel, as follows:

24

1           The Applicant:

2                   Five Nations Energy Inc.

3                   #725-Highway 655

4                   Timmins, ON

5                   P4N 0B7

6                   Attention:

7                   Chris Chilton, Chief Executive Officer

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16  
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18                  Osler, Hoskin & Harcourt LLP

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1 - and -

2 Mr. Cole Tavener

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5 Fax: (416) 862-6666

6

7 **DATED** at Toronto, Ontario, this 8<sup>th</sup> day of July 2025.

8

**FIVE NATIONS ENERGY INC.**

*Cole Tavener* for Richard J. King

By its counsel, Osler, Hoskin, Harcourt LLP

Per: Richard J. King

9

10

**Exhibit List**

The following table lists out the Exhibits that comprise FNEI's Application:

**Exhibit 1: ADMINISTRATIVE DOCUMENTS**

**Exhibit 2: TRANSMISSION SYSTEM PLAN**

**Exhibit 3: RATE BASE**

**Exhibit 4: SERVICE QUALITY AND RELIABILITY**

**Exhibit 5: OPERATING REVENUE AND CHARGE DETERMINANTS**

**Exhibit 6: OPERATING COSTS**

**Exhibit 7: COST OF CAPITAL AND CAPITAL STRUCTURE**

**Exhibit 8: DEFERRAL AND VARIANCE ACCOUNTS**

**Exhibit 9: COST ALLOCATION TO TRANSMISSION POOLS**

**Exhibit 10: RATE DESIGN FOR UTRs AND BILL IMPACTS**

### 3 Executive Summary

#### 3.1 Introduction

This transmission rate application (the “Application”) filed by Five Nations Energy Inc. (“FNEI”) is based on a 2026 Test Year. FNEI is applying for rates that will allow FNEI to recover its forecast 2026 transmission service Revenue Requirement of \$10.52 million, and base transmission Revenue Requirement of \$10.44 million.<sup>1</sup> FNEI’s 2026 base transmission Revenue Requirement represents a small portion of the provincial transmission Revenue Requirement of 0.44%, and as such the approval of FNEI’s applied-for Revenue Requirement will not result in a material change to the province’s Uniform Transmission Rates (“UTR”), with an estimated monthly bill impact on a typical residential customer of only 0.02%.<sup>2</sup>

FNEI is a non-profit, non-share capital, federally-incorporated corporation with its head office in Moose Factory, Ontario, and main operational office located in Timmins, Ontario. FNEI is a licensed transmitter of electricity in Ontario (ET-2003-0074), owning and operating transmission facilities along the western coast of James Bay. The FNEI transmission line serves the three First Nation communities of Attawapiskat, Fort Albany and Kashechewan. A material change since FNEI’s last Cost of Service application to the OEB, is the decommissioning of the DeBeers Victor Diamond Mine, which was previously a fourth customer to FNEI and its only Large Customer.

FNEI was incorporated in 1997 by the three First Nation communities of Attawapiskat, Fort Albany and Kashechewan. The three members of FNEI are the Attawapiskat Power Corporation, the Fort Albany Power Corporation and the Kashechewan Power Corporation, each of which in turn is controlled by its respective First Nation. FNEI’s Board of Directors contains representation from not only its three owner First Nations but also has representation from Moose Cree First Nation and Taykwa Tagamou First Nation, because FNEI’s assets pass through the traditional territories of these two First Nations.

Prior to FNEI’s coming into service in 2001, all three communities were electrically remote because the provincial transmission grid extended only as far north as Moosonee, Ontario (at the southern tip of James Bay). Each of the three First Nations were serviced by a localized electricity distribution system powered

---

<sup>1</sup> Exhibit 5

<sup>2</sup> Exhibit 10

1 by a diesel generation plant. Hydro One Remote Communities Inc. (“HORCI”) operated the diesel  
2 generation plants and local distribution systems in each of the three communities.

3 The FNEI project was conceived in the mid-1990s and had three components: (a) to extend the provincial  
4 transmission grid north from Moosonee to Attawapiskat in order to connect the three remote  
5 communities to the provincial transmission grid; (b) to transfer the electricity distribution system in each  
6 community from HORCI to local, First Nation-owned and operated distribution companies; and (c) improve  
7 the socio-economic well-being in the three communities, consistent with FNEI’s Letters Patent. The entire  
8 project was initiated and implemented by the three First Nations, through a mix of public-sector and  
9 private-sector financing. Construction of the transmission line was not completed until March 2002, but  
10 the communities of Fort Albany and Kashechewan were connected in November and December 2001.  
11 Attawapiskat was energized in December 2003.

12 Since coming into service, FNEI has made substantial capital improvements to what was initially a “bare  
13 bones” radial line. These improvements include installing and putting spare transformers on potential,  
14 installing fibre optic communications to better monitor system outages, and twinning the line from  
15 Kashechewan to Moosonee in order to accommodate the load from the now decommissioned DeBeers  
16 Victor Diamond Mine.

17 FNEI’s most recent approved rate application was filed on July 27, 2016 (EB-2016-0231). The Board  
18 rendered its decision in respect of that application on December 14, 2017. This Application will be FNEI’s  
19 fourth rate case. The remainder of this Exhibit 1 sets out the key aspects of this Application that the Board  
20 should consider.

21 FNEI has produced its 2026 Revenue Requirement application in accordance with the OEB’s most recent  
22 filing requirements<sup>3</sup>.

## 24 **3.2 FNEI’s Operating and Business Environment**

25 FNEI is a unique transmitter in the Province of Ontario, as a result of its challenging operating environment,  
26 ownership structure, age, and financial arrangements. Each of these unique characteristics inform FNEI’s

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<sup>3</sup> Filing Requirements For Electricity Transmission Applications Chapter 2 Revenue Requirement Applications,  
February 11, 2016

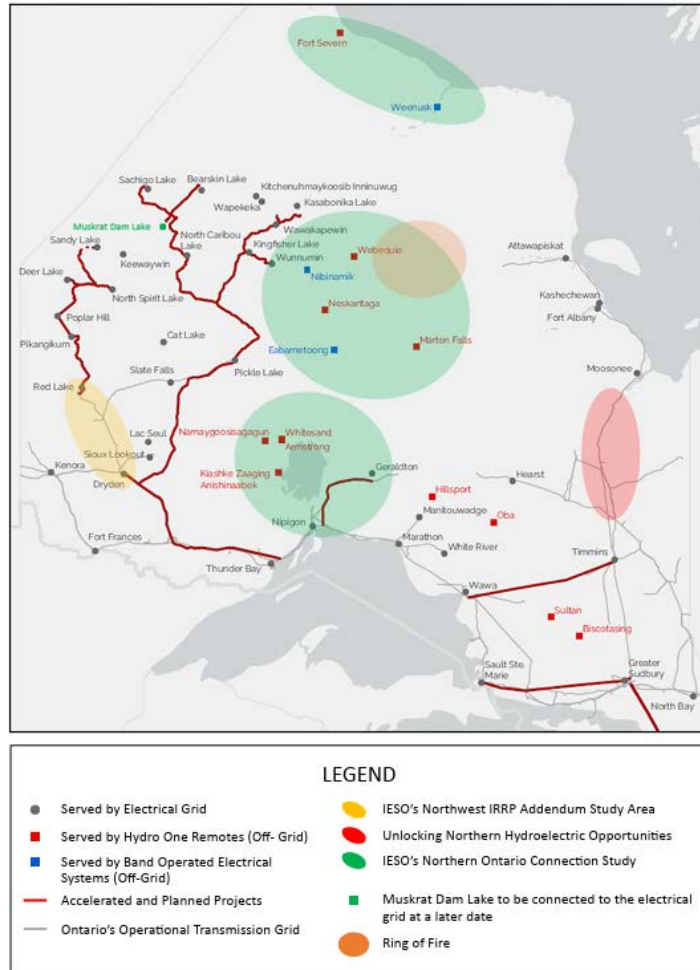
operating costs and Revenue Requirement on a current and forward-looking basis. FNEI highlights the following aspects of FNEI's circumstances for the OEB's consideration in its review of this Application:

- FNEI Operates in a High-Cost Environment: FNEI is a small company, operating assets in a very remote part of the province – the west coast of James Bay, a vast swampy plain (i.e., muskeg) that is not serviced by road or rail (with the exception of a winter ice road which is operational a few weeks each winter). The remoteness, harsh climate and difficult physical geography of the region means that the cost of doing business for FNEI is more expensive than if the assets could be more easily accessed, transported and stored. This includes not only the physical/technical work (e.g., inspection, maintenance, vegetation management, repairs, etc.), but also the administrative work of the company (e.g., travel for Directors' and Committee meetings, etc.). See Section 4.15 below for a description of FNEI's service area.
- Value of FNEI System Far Outweighs Rate Base: Although FNEI's current Board-approved Rate Base is \$35.47 million (proposed to be \$36.53 million in 2026), the value of the system that FNEI owns and operates is significantly in excess of that amount. The bulk of the initial funding for the FNEI transmission line came via a multi-year funding agreement (i.e., grant) from Indigenous and Northern Affairs Canada ("INAC"), which was disbursed directly to FNEI. As such, this amount was treated as an aid-to-construct capital contribution and excluded from FNEI's Rate Base. Second, in order to facilitate service of the DeBeers Victor Mine, a portion of FNEI's transmission line was twinned, accompanied by substantial capital contributions from DeBeers. Today, FNEI's system incorporates regulated Gross Property, Plant and Equipment ("PP&E") of \$132 million when excluding the impact of historical capital contributions.
- FNEI is a Valued Partner for its Member Communities and the Province: FNEI is an essential partner for its member communities, providing not only safe, reliable and essential electricity service in a harsh physical environment, but providing ownership of critical assets to the people of Attawapiskat, Fort Albany, and Kashechewan. Further, the physical location of FNEI's assets positions the utility as a key current and future partner for the Government of Ontario and Independent Electricity System Operator, given FNEI's proximity to the IESO's Northern Ontario Connection Study, Unlocking Hydroelectric Opportunities study, and the Ring of Fire. FNEI's continued safe, reliable and financially viable operation may prove critical in advance some or all



of these provincial priorities in the coming years, as FNEI engages with partners to achieve broader goals in a manner that protects the rights and traditions of First Nations and advances reconciliation.

**Figure 1 - Government of Ontario Proposed Economic Development Zones**



### 3.3 Revenue Requirement

In this application, FNEI is applying for approval of a Service Revenue Requirement of \$10.52 million, which is an increase of \$2.37 million as compared to the 2018 Revenue Requirement

<sup>4</sup> Government of Ontario, Energy for Generations: Ontario's Integrated Plan to Power the Strongest Economy in the G7, June 2025, page 25

approved in FNEI's last rates application of \$8.15 million. These amounts include Other Revenues that make up the service Revenue Requirement of FNEI. FNEI's Service Revenue Requirement has increased 29% over an 8 year period, at a Compound Annual Growth Rate ("CAGR") of 3.24%. For comparison, application of the OEB's electricity transmitter inflation factors from 2019 through 2026 yields an 8-year increase of 26%, or a CAGR of 2.92%. Table 1 below articulates the changes between FNEI's 2018 Board-approved Revenue Requirement and the 2026 Test Year Revenue Requirement:

**Table 1 – 2018 Board-approved vs. 2026 Test Year Revenue Requirement**

| (\$millions)                       | Board<br>Approved | Test         | Variance    | Variance   |
|------------------------------------|-------------------|--------------|-------------|------------|
| Components                         | 2018              | 2026         | \$          | %          |
| OM&A                               | 4.38              | 6.19         | 1.81        | 41%        |
| Depreciation                       | 1.44              | 2.01         | 0.57        | 40%        |
| Regulated Return on Capital        | 2.33              | 2.31         | -0.02       | -1%        |
| <b>Service Revenue Requirement</b> | <b>8.15</b>       | <b>10.52</b> | <b>2.37</b> | <b>29%</b> |
| Less: External Revenues and Other  | -0.15             | -0.08        | 0.07        | -47%       |
| <b>Base Revenue Requirement</b>    | <b>8.00</b>       | <b>10.44</b> | <b>2.44</b> | <b>30%</b> |

This increase is being driven principally by higher OM&A costs, paired with a relatively stable overall Rate Base, declining Other Revenue, and slightly decreased cost of capital, as described below:

- OM&A: FNEI's OM&A expenses are to grow to \$6.19 million in 2026 relative to \$4.38 million as approved by the OEB for 2018, representing a compound annual growth rate of 4.44% over an 8-year period. This increase is primarily driven by inflation, necessary maintenance cycles, the addition of required staff, prudent adjustments to employee compensation, and other factors further described in Exhibit 6.
- Rate Base: FNEI's Rate Base for 2026 is \$36.53 million in 2026, relative to OEB-approved of \$35.47 million in 2018. FNEI's Rate Base has varied over the intervening 8 years as a result of planned and unplanned capital investments, the gradual recognition of deferred

revenue relating to the DeBeers Victor Mine, and the transition of long-term land leases to finance leases under IFRS, all as further described in Exhibits 2 and 3.

- Other Revenue: Over the period of 2019 through 2022 FNEI annually recognized deferred revenue associated with the Debeers Victor Mine capital contribution. Effective 2023 no such deferred revenue remains to be recognized, and miscellaneous transmission services revenue has gradually reduced to \$0 in the 2025 Bridge Year. The only remaining Other Revenue forecast by FNEI in the 2026 Test Year is \$0.08 million in Interest and Dividend Income, as further discussed in Exhibit 5.
- Cost of Capital: FNEI's weighted average cost of capital in 2026 is 6.33%, declining slightly from 2018 Board-approved of 6.55%, as described in Exhibit 7.

### 3.4 Revenue Cap Index

For the purpose of establishing 2026 Test Year revenues, FNEI requests approval to recover its Transmission Revenue Requirement, less Other Revenue, on the basis of a cost-of-service methodology. From 2027 to 2030, FNEI proposes the use of a Revenue Cap Index ("RCI"), as described in the OEB's Transmission Filing Requirements. Under an RCI, FNEI's Base Revenue Requirement will be escalated each year, by an Inflation Factor ("I"), less a productivity and stretch factor ("X"). FNEI proposes the following inputs for I and X, respectively:

- I – the OEB's Inflation Factor for electricity transmitters, as published annually; and,
- X – 0.3%.

FNEI has included within this Application a Performance Scorecard (Exhibit 4) and a Transmission System Plan (Exhibit 2); both of which are required to support an RCI request, and both of which were not previously included in FNEI's 2017 and 2018 Revenue Requirement application, EB-2016-0231. The balance of this Application provides substantiating evidence that FNEI has, and continues to, engage in robust planning, which supports FNEI's ability to manage within the set envelope of funding provided by an RCI.

1 FNEI has not completed third-party benchmarking specific to its operations relative to the  
2 operations of other transmitters. FNEI is a small and unique transmitter operating in a challenging  
3 physical environment, which raises two distinct challenges for external benchmarking. First, as a  
4 small transmitter, the cost of completing thorough and credible third-party benchmarking is  
5 material relative to the size of the utility, and likely does not provide value commensurate with  
6 expenditure. Second, in light of FNEI's operating environment, the identification of directly  
7 comparable transmitters is challenging.

8  
9 Though third-party benchmarking has not been provided as part of this application, FNEI has  
10 compared its performance to that of other single-asset transmitters, where possible, in Exhibit 4  
11 of this Application. For the purpose of establishing an X-factor for FNEI's RCI, FNEI proposes a  
12 productivity factor of 0.0% and a stretch factor of 0.3%, for a combined X-factor of 0.3%.

13  
14 In its Decision and Order in EB-2020-0150, the OEB noted that a "productivity factor of 0.0% is  
15 consistent with the productivity factor for Ontario transmitters..." and further noted that no party  
16 in that proceeding objected to the use of this value. Further, the OEB approved a stretch factor of  
17 0.3% in this same proceeding, on the basis that Pacific Economics Group's "Empirical Research in  
18 Support of Incentive Rate-Setting" applicable to Ontario distributors ("PEG Report"), was  
19 informative for stretch factors applicable to transmitters. The OEB went on to note that a 0.3%  
20 stretch factor was established for Hydro One Sault Ste. Marie's RCI from 2019 to 2026 referencing  
21 the PEG Report, and that it is "appropriate to establish parity and fairness to the extent possible  
22 among transmitters in Ontario."<sup>5</sup>

23  
24 FNEI submits that the use of a 0.3% stretch factor, which represents the mid-point of efficiency in  
25 the PEG Report, is appropriate for FNEI's RCI, and represents the consistent and fair application of  
26 stretch factors to Ontario transmitters, including FNEI.

27  
28 With respect to consumer protections from earnings above OEB-approved ROE, FNEI proposes to  
29 rely on the OEB's 300bps threshold, above which OEB review of financial results and reasons is

---

<sup>5</sup> EB-2020-0150, Decision and Order, pages 14-15

1 triggered. As noted, FNEI is a relatively small transmitter, and as such is more sensitive than larger  
2 entities to swings in expenditures. Under these circumstances, the 300bps operates as an  
3 appropriate safeguard for ratepayers from earnings above OEB-approved ROE.

### 4 **3.5 Budgeting Assumptions**

5 In developing its budget for the Test Year, FNEI assumed 2% as a generic inflation amount for both  
6 construction costs and OM&A expenses, subject to material and labour costs for which more  
7 certain 2026 costs are known. In terms of load growth, FNEI has three small electricity distributor  
8 customers ("LDCs"). The three LDC loads, and peak demand has remained relatively flat over the  
9 past few years, and FNEI is not anticipating near-term material changes to their demand or  
10 consumption patterns.

### 11 **3.6 Load Forecast**

12 FNEI's peak demand over the past three years (as compared to the OEB-approved demand) is  
13 detailed in Exhibit 5. FNEI's demand forecast has declined substantially from the OEB's prior  
14 approvals for 2017 and 2018, driven by the ceasing of operations at the DeBeers Victor Mine.  
15 Adjusting for the removal of the DeBeers Victor Mine in historical years, peak demand has  
16 remained flat over several years. Relative to the OEB's 2018 approved charge determinants, FNEI's  
17 forecast 2026 charge determinants have declined 57%.

18  
19 FNEI's only customers are its three owner LDCs, which have all indicated they expect little load  
20 growth in the coming years. FNEI is proposing to use the sum of three-year monthly average peak  
21 demand (2022 – 2024) to set the charge determinants for the Test Year, consistent with the OEB  
22 approved methodology in EB-2016-0231.  
23

### 24 **3.7 Transmission System Plan**

25 FNEI has planned three capital projects over the 5 year term of its Transmission System Plan as  
26 detailed in Exhibit 2, all of which are aimed at maintaining and improving reliability. In the 2026  
27 Test Year, FNEI's proposed in-service additions are \$1.50 million, which is within range of variances  
28 over the 2017 to 2025 period, during which in-service additions have ranged from a high-water

1 mark of \$6.18 million in 2019 (\$2.94 million of which relates to capitalization of finance leases) to  
2 a low of \$0.76 million in 2022.

3  
4 FNEI's Investment Planning Process is explained in Exhibit 2. FNEI's strategy in terms of system  
5 planning remains the same as the rationale for FNEI's creation in the mid-1990s – namely, to  
6 provide for the reliable supply of electricity to the western coast of James Bay. Given the cold  
7 climate and reliance on electric heating, this means trying to minimize the frequency and duration  
8 of outages. As noted throughout this Application, inflation has increased the cost of all materials  
9 and labour required to maintain and improve FNEI's system relative to historical experience.

10  
11 Despite of FNEI's small size, its limited number of customers, and uniformity of equipment age,  
12 FNEI retain Kinectrics Inc. to conduct an Asset Condition Assessment ("ACA") which is filed as an  
13 appendix to Exhibit 2. As further described in Exhibit 2, FNEI's investment planning is focused on  
14 optimizing governance processes in light of the utility's limited physical and financial resources  
15 and prioritizes expenditures that are allocated prudently to ensure reliability of service. FNEI has  
16 identified capital projects over its next rate term (i.e. 2026 to 2030) on the basis of need,  
17 ascertained through its Asset Management Plan, the Kinectrics ACA, as well as general  
18 technological developments and evolving industry practice. Capital projects above \$50,000  
19 require approval by FNEI's Board of Directors (or its Finance Committee) prior to implementation.

20  
21 FNEI's Asset Management Plan is set out in Exhibit 2 and is broken down by FNEI's asset categories  
22 (i.e. lines, stations, and telecommunications). Transmission lines are surveyed semi-annually and  
23 monitored in real-time via a SCADA system. Transformer stations are reviewed on an ongoing  
24 basis via visual inspections, functional tests, infra-red inspections, oil sampling and dissolved gas  
25 inspections. Telecommunication assets are monitored via real-time data and regularly scheduled  
26 inspections.

### 27 **3.8 Rate Base**

28 FNEI's Rate Base for 2026 is forecasted to be \$36.53 million, being the average of FNEI's net fixed  
29 assets (\$36.31 million) and an allowance for working capital (\$0.22). This represents an increase

Rate Base of \$1.06 million, or 3.00%, relative to 2018 Board-approved of \$35.47 million. An explanation of FNEI's material capital expenditures since its last rate proceeding are set out in Exhibit 2.

### 3.9 Performance and Reporting

FNEI has provided a Performance Scorecard for the 2026 to 2030 rate term in Exhibit 4. In so doing, FNEI has relied on the OEB-approved scorecards of other single-asset transmitters, with a focus on reliability, safety, maintenance costs, vegetation management, and financial viability. FNEI's Performance Scorecard relies on the following metrics, as fully described in Exhibit 4.

- Average System Availability<sup>6</sup>
- Transmission System Average Interruption Frequency (T-SAIFI)<sup>7</sup>
- Transmission System Average Interruption Duration (T-SAIDI)<sup>8</sup>
- Recordable Injuries per Year
- Maintenance Cost per Circuit Kilometer
- Compliance with FNEI's Vegetation Management Policy
- Achieved Return on Equity Equivalent

FNEI is not aware of any outstanding areas of non-compliance.

### 3.10 OM&A Expenses

FNEI's OM&A expenses are estimated to be \$6.19 million for the 2026 Test Year, relative to 2018 Board-approved of \$4.38 million. This represents an increase of \$1.82 million, or 41.5% over the 8 intervening years at a CAGR of 4.44%.

Explanation of FNEI's increasing OM&A expenses is provided in Exhibit 6. The increase in FNEI's OM&A expense is driven by high levels of inflation, ongoing maintenance cycles, cost impacts from closing the previously connected DeBeers line, and staffing changes. Consistent with FNEI's overall

---

<sup>6</sup> FNEI contribution

<sup>7</sup> FNEI contribution

<sup>8</sup> FNEI contribution

budgeting processes, base inflation has been assumed to be 2% for the purpose of budgeting OM&A expenditures, subject to the use of known costs for budget line items where available.

Total salaries and benefits for FNEI have increased from \$1.06 million in 2018 to \$1.43 million in the 2026 Test Year; an increase of 18.64% at a CAGR of 3.90% over 8 years.

### 3.11 Cost of Capital

FNEI is proposing the Board's deemed capital structure of 60% debt (56% long-term and 4% short-term) and 40% equity. FNEI also proposes use of the OEB's 2026 cost of capital parameters for the establishment of a return on equity rate and short-term debt rate. For the purpose of preparing this Application, FNEI has relied on the OEB's 2025 cost of capital parameters (i.e., return on equity of 9.00% as a placeholder, short-term debt rate of 3.91%). FNEI's long-term debt rate has been established on the basis of a weighted average of its actual long-term debt, as described in Exhibit 7 and detailed in tab 2-OB of Attachment FNEI\_2026RR\_Appendices\_20250704.

### 3.12 Cost Allocation and Rate Design

FNEI's evidence regarding the allocation of costs across the network, line connection, and transformation connection transmission pools is provided in Exhibit 9, while derivation of Uniform Transmission Rates and the calculation of typical bill impacts are provided in Exhibit 10. FNEI has maintained consistency with the approach approved by the OEB in EB-2016-0231, wherein FNEI's costs are assigned to the three transmission pools in the same proportion as Hydro One Networks Inc.'s most recently approved cost allocation.

### 3.13 Deferral and Variance Accounts

Exhibit 8 of this Application provides FNEI's proposals with respect to the establishment and use of deferral and variance accounts. FNEI does not have any existing utility-specific deferral or variance accounts and has not historically made use of any generic OEB deferral or variance accounts.

Looking forward, FNEI is requesting establishment of a utility-specific deferral account; the Environmental Remediation Deferral Account (ERDA). Contaminants of concern have been



identified at several sites within the Attawapiskat First Nation community. FNEI is anticipated to bear a portion of the cost of environmental remediation of contaminants and has reason to believe such costs will be material to FNEI, as further described in Exhibit 8. In light of the prospect of material costs during the 2026 to 2030 rate term which cannot reasonably be forecast by FNEI at this time, the utility is requesting a deferral account to record such costs and seek disposition in a future rate proceeding. FNEI submits the ERDA meets the OEB's 3-part test for new deferral and variance accounts of Causation, Materiality and Prudence.

In addition, FNEI is proposing use of the OEB's generic Incremental Cloud Computing Implementation Costs Deferral Account, to facilitate the procurement of an upgrade to FNEI's current asset management system. FNEI began the early stages of procurement in Q1 of 2025 and anticipates finalizing selection of a vendor and solution in Q3 or Q4 of 2025, with implementation planned for 2026. Due to the timing of procurement, FNEI is not able to establish an operational or capital budget for these investments within this Application.

### 3.14 Bill Impacts

As shown at Exhibit 10, approval of FNEI's 2026 Test Year Revenue Requirement will have an immaterial impact on typical customers in Ontario due to FNEI's small size relative to the broader provincial transmission system. Approval of this Application as filed is anticipated to increase typical residential and small commercial bills by 0.02%, as shown below:

**Table 2 - Typical Residential Customer Bill Impact**

|                                | Current       | Proposed      | Change (\$) | Change (%)   |
|--------------------------------|---------------|---------------|-------------|--------------|
| Distribution                   | 43.94         | 43.94         |             |              |
| RTSRs                          | 18.87         | 18.90         |             |              |
| <b>Total Delivery</b>          | <b>62.81</b>  | <b>62.84</b>  | <b>0.03</b> | <b>0.05%</b> |
| Regulatory Charges             | 5.01          | 5.01          |             |              |
| Cost of Power                  | 74.90         | 74.90         |             |              |
| <b>Total Bill Before Taxes</b> | <b>142.71</b> | <b>142.74</b> | <b>0.03</b> | <b>0.02%</b> |

**Table 3 - Typical Small Commercial Customer Bill Impact**

|                                | Current       | Proposed      | Change (\$) | Change (%)   |
|--------------------------------|---------------|---------------|-------------|--------------|
| Distribution                   | 108.51        | 108.51        |             |              |
| RTSRs                          | 40.76         | 40.83         |             |              |
| <b>Total Delivery</b>          | <b>149.27</b> | <b>149.35</b> | <b>0.07</b> | <b>0.05%</b> |
| Regulatory Charges             | 13.05         | 13.05         |             |              |
| Cost of Power                  | 199.72        | 199.72        |             |              |
| <b>Total Bill Before Taxes</b> | <b>362.04</b> | <b>362.12</b> | <b>0.07</b> | <b>0.02%</b> |

#### **4 Customer Engagement**

FNEI conducted customer engagement in advance of filing this Application. A summary of the customer engagement surveys that were issued to each of its three member communities and the three survey responses can be found in Exhibit 2.

Overall, the three member communities stated they were pleased with FNEI's service and reliability, were interested in better monitoring and grid modernization investments and two of the three community survey responses recommended more frequent communications with FNEI.

#### **5 Financial Information**

##### **5.1 Audited Financial Statements**

FNEI's audited financial statements for the years 2022 to 2024 are set out in Appendix 3 to this Exhibit.

## 5.2 Reconciliation of Regulatory Financial Results with Audited Financial Statements (2023)

The table below reconciles FNEI's 2023 audited financial statements, attached as Appendix 2, with the regulatory financial results presented for historical year 2023 in this Application.

**Table 4 - 2023 Financial Statement Reconciliation**

| \$ (millions)                         | 2023 Audited            |              | Utility<br>Income |
|---------------------------------------|-------------------------|--------------|-------------------|
|                                       | Financial<br>Statements | Adjustments  |                   |
| Transmission Revenue                  | 8.55                    | 0.00         | 8.55              |
| Other Revenue                         | 0.49                    | 0.00         | 0.49              |
| <b>Total Revenue</b>                  | <b>9.04</b>             | <b>0.00</b>  | <b>9.04</b>       |
|                                       |                         |              |                   |
| OM&A                                  | 5.40                    | -0.05        | 5.35              |
| Depreciation & Amortization           | 1.98                    | -0.04        | 1.95              |
| Interest / Deemed Interest            | 0.59                    | 0.50         | 1.09              |
| <b>Total Costs &amp; Expenditures</b> | <b>7.98</b>             | <b>0.41</b>  | <b>8.38</b>       |
|                                       |                         |              |                   |
| <b>Utility Net Income</b>             | <b>1.06</b>             | <b>-0.41</b> | <b>0.66</b>       |

As shown above, three adjustments are made to reconcile FNEI's audited financial statements to regulatory net income in this Application. First, the portion of 2024 Actual OM&A which are one-time regulatory expenses have been removed from Audited Financial Statements, to be included with 2025 one-time regulatory costs for amortized recovery over the 2026 to 2030 period. Second, depreciation and amortization is reduced to account for assets disallowed for recovery in EB-2016-0231. Third, actual interest expense in the audited financial statements is replaced with deemed interest expense for the purpose of calculating regulatory net income.

### 5.3 Administration

The *Filing Requirements for Electricity Transmission Applications* dated February 11, 2016, establishes a default materiality threshold of 0.5% of transmission revenue requirement for transmitters with revenue requirement between \$10 million and \$200 million.

The FNEI Service Revenue Requirement for 2026 is \$10.52 million, and as a result this Application has been prepared using a materiality threshold of \$52,588.

### 5.4 Parties Affected by the Application

The approach to transmission rate-setting in Ontario is on a pooled basis. As such, the parties affected by this Application are all Ontario electricity customers connected to the IESO-controlled grid either directly as a market participant, or indirectly through a distributor or embedded distributor. No specific customers, including FNEI's three customers, or customer groups will be uniquely affected by this Application.

Given FNEI's small size, this Application will have minimal impact on the existing Uniform Transmission Rates.

### 5.5 Internet Address

FNEI's internet address is <http://www.fivenations.ca>.

This Application has been posted to FNEI's website and can be accessed at <https://fivenations.ca/services/regulatory-filings>

### 5.6 Contact Information

The Applicant:

Five Nations Energy Inc.

#725-Highway 655

Timmins, ON

1 P4N 0B7

2  
3 Attention:

4 Chris Chilton, Chief Executive Officer

5 chris.chilton@fivenations.ca

6 Telephone: (705) 268-0056

7 Fax: (705) 268-0071

8  
9 - and -

10  
11 Dorothy Kioke, Chief Financial Officer

12 doroathykioke@fivenations.ca

13 Telephone : (705) 268-0056

14 Fax : (705) 268-0071

15  
16 Applicant's Counsel:

17  
18 Osler, Hoskin & Harcourt LLP

19 1 First Canadian Place

20 100 King Street West

21 Suite 6200, P.O. Box 50

22 Toronto, ON M5X 1B8

23  
24 Attention:

25  
26 Mr. Richard King

27 rking@osler.com

28 Telephone: (416) 862-6622

29 Fax: (416) 862-6666

30

- and -

Mr. Cole Tavener

ctavener@osler.com

Telephone: (416) 862-5972

Fax: (416) 862-6666

## 5.7 Requested Effective Date

FNEI requests that the Order of the Board approving FNEI's Revenue Requirement for 2026 have an effective date of January 1, 2026.

## 5.8 Bill Impacts

This Application, as demonstrated in Exhibit 10, will have an immaterial impact on the three provincial transmission charges for 2026 (i.e., the Network charge, the Line Connection charge, or the Transformation Connection charge), and an immaterial bill impact of 0.02% for typical residential and small commercial customers.

## 5.9 Form of Hearing

FNEI requests that this Application be processed by way of a written hearing. The OEB has demonstrated the effectiveness of written hearings in numerous electricity distribution and transmission cost-of-service proceedings. Given the immaterial impact that this Application will have on Ontario electricity ratepayers, FNEI believes this approach is warranted.

## 5.10 List of Specific Approvals

FNEI applies to the Ontario Energy Board (the "OEB" or "Board") for an order or orders made pursuant to section 78 of the *Ontario Energy Board Act, 1998* (the "OEB Act") approving a five-year incentive rate-setting plan ("IR Plan") which:

- establishes a base transmission Revenue Requirement of \$10.44 million for the 2026 Test Year (effective January 1, 2026) using a cost-of-service methodology;

- adjusts the base transmission Revenue Requirement over the remaining four years of the IR period (ending December 31, 2030) by an inflation factor (“I”), less a stretch factor (“X”);
- incorporates a Z-factor for prudently incurred material costs beyond the control of FNEI.
- incorporates a regulatory review in the event of a 300 basis point variance in normalized earnings from the Board approved ROE; and,
- incorporates a new deferral account for anticipated but presently unforecastable environmental remediation costs, as well as use of the OEB’s generic deferral account for cloud computing implementation costs.
- updated Uniform Transmission Rates for Ontario that allow FNEI to recover its forecasted Test Year (2026) Revenue Requirement; and
- such final and interim Orders, accounting orders and deferral and variance accounts as may be necessary in relation to the approving or fixing of just and reasonable rates for the transmission of electricity effective January 1, 2026, including the establishment of a deferral account as needed to track Revenue Requirement deficiencies incurred from January 1, 2026, until FNEI’s proposed 2026 Revenue Requirement is approved.

### 5.11 Length Of Term

FNEI requests that the Order of the Board, issued pursuant to section 78 of the OEB Act, establish a term of five years, commencing on January 1, 2026, and ending on December 31, 2030. The Revenue Requirement for 2026 will be established using a cost-of-service methodology, which will be adjusted in each of years 2027 to 2030 in accordance with FNEI’s proposed IR Plan.

### 5.12 Tax Status

There has been no change to FNEI’s tax status since the time of its last transmission rate application (EB-2016-0231). FNEI remains exempt from federal and provincial income tax by virtue of its status as a not-for-profit corporation, pursuant to paragraph 149(1)(l) of the Income Tax Act (Canada), RSC 1985, c.1 (5th Supp).

### 5.13 Accounting Orders

Attached as FNEI\_2026RR\_EX8\_Att1\_DAO\_20250708 is a Draft Accounting Order for FNEI's proposed Environmental Remediation Deferral Account.

### 5.14 Service Area Description

#### Overview

FNEI's transmission system is located along the western coast of James Bay in northern Ontario and consists of the following:

- a 138 kV three-phase line approximately 270 km in length beginning at Moosonee and running northwest along James Bay by way of Fort Albany and Kashechewan and terminating at Attawapiskat (the "Original Line").
- a second 138 kV three-phase line approximately 170 km in length beginning at Moosonee and running northwest along James Bay, parallel to the Original Line, terminating in Kashechewan (the "Twinned Line"); and
- three step-down substations, one in each of Fort Albany, Kashechewan and Attawapiskat.

### 5.15 Physical Location

FNEI's transmission system is located entirely on Treaty No. 9 lands in the coastal wetlands of the James Bay Lowlands. As a result, most of FNEI's transmission system is inaccessible by ground transportation, with the exception of a few weeks in the coldest part of winter. A map of FNEI's system is included as Appendix 1 to this Exhibit.

The coastal wetlands of the James Bay Lowlands are comprised of a mix of forested areas (balsam, fir, white and black spruce, tumbling aspen and paper birch) and less well-drained areas, where the dominant vegetation consists of sedge, mosses, and lichens with or without stunted black spruce and tamarack.



1 The service area is cold, with a mean annual temperature of -2°C. The mean summer temperature  
2 is 11.5°C and the mean winter temperature is -16°C. The terrain and climate present challenges  
3 to FNEI with respect to various aspects of its operations and maintenance, including vegetation  
4 management.

## 5 **5.16 Communities Served**

6 The Original Line was constructed in 2000 and 2001, and connected the First Nation communities  
7 of Attawapiskat, Fort Albany and Kashechewan to the provincial transmission grid. Prior to then,  
8 these three communities were electrically isolated, with each being powered by separate diesel  
9 generators and local distribution systems. Attawapiskat and Fort Albany were served by Hydro  
10 One Remote Communities Inc. ("HORCI") prior to the FNEI transmission line coming into service.  
11 Beginning in 1997, Kashechewan was served by an independent Band-run distribution authority.

12 In early 2000, the southernmost 80 km of the Original Line (i.e., the first 80 km of transmission  
13 line heading north out of the Moosonee station) was sold to Hydro One Networks Inc. ("HONI").  
14 FNEI reserved the right to repurchase the 80 km, at net book value, on an as-is basis. On October  
15 15, 2015, FNEI exercised this right and purchased the 80 km from HONI for \$4.9 million plus HST.  
16 As a result, all high voltage transmission assets north of Moosonee are owned by FNEI.

## 17 **5.17 Corporate and Utility Organization**

18 FNEI's key personnel and board of directors are listed below:  
19

1

Table 5 — FNEI Board of Directors

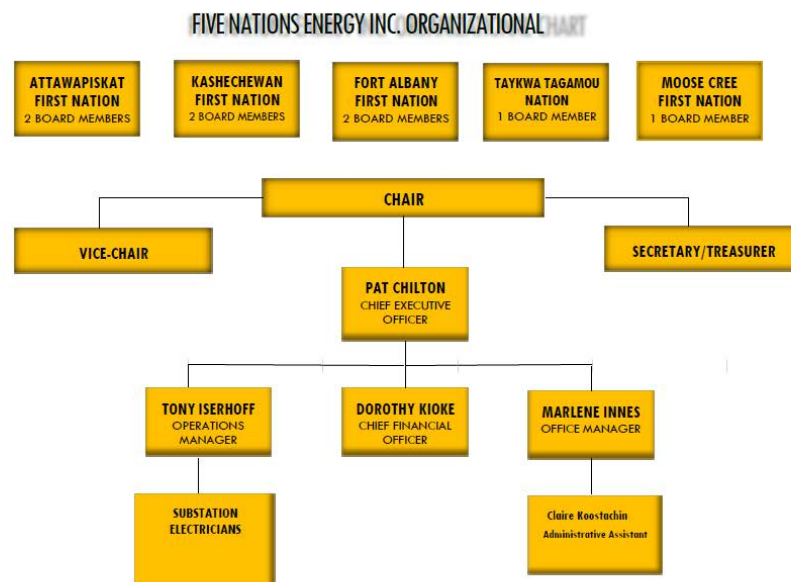
| Board Member      | Position/Function   |
|-------------------|---------------------|
| Lawrence Martin   | Chairperson         |
| Edward Sutherland | Vice Chairperson    |
| Shashia Nakogee   | Secretary/Treasurer |
| George Koostachin | Director            |
| Louis Shisheesh   | Director            |
| Henry Koosees     | Director            |
| Christine Friday  | Director            |
| David Sutherland  | Director            |
| Ricky Nakogee     | Director            |
| Robert Echum      | Director            |
| Derek Archibald   | Director            |

2

Figure 1 below shows FNEI's corporate structure and entity relationship chart:

3

Figure 2 Corporate Entities Relationship Chart



4

## 5.18 Accounting Standards

FNEI operates under International Financial Reporting Standards (“IFRS”).

## 5.19 Changes in Accounting Methodology

The changes in FNEI’s methodology, as compared to FNEI’s previous rate application (EB-2016-0231), are limited to the recognition of long-term land leases as finance leases, and their inclusion in rate base via Account 2005 – Property Under Finance Lease. Concurrent with the recognition of the long-term value of FNEI’s finance leases as assets, FNEI adopted notes payable to the long-term lessors and has included these liability in the derivation of its long-term debt rate. Please see Exhibits 6 and 7 for further detail.

FNEI has included as Appendix 2 to this Exhibit, its current Finance Policy and Procedure Manual.

## 5.20 Non-Utility Operations

The core business of FNEI is the regulated transmission of electricity. To the limited extent, if any, that FNEI has engaged or expects to engage in any non-utility activity, such activities and their financial impact have been and will be segregated from the financial results contained in this Application for the purposes of establishing the base Revenue Requirement.

## 5.21 Status of Board Directives

Of the Board directives set out in the OEB’s Decision and Order pertaining to FNEI’s most recent rate application (EB-2016-0231), only one was not self-contained within FNEI’s subsequent draft rate order process and implementation of the Board’s Decision. The OEB directed FNEI to close out its Capital and Operating Reserves, and to maintain its Insurance Reserve.<sup>9</sup> FNEI has complied with both directives.

---

<sup>9</sup> EB-2016-0231, Decision and Order, page 5

1

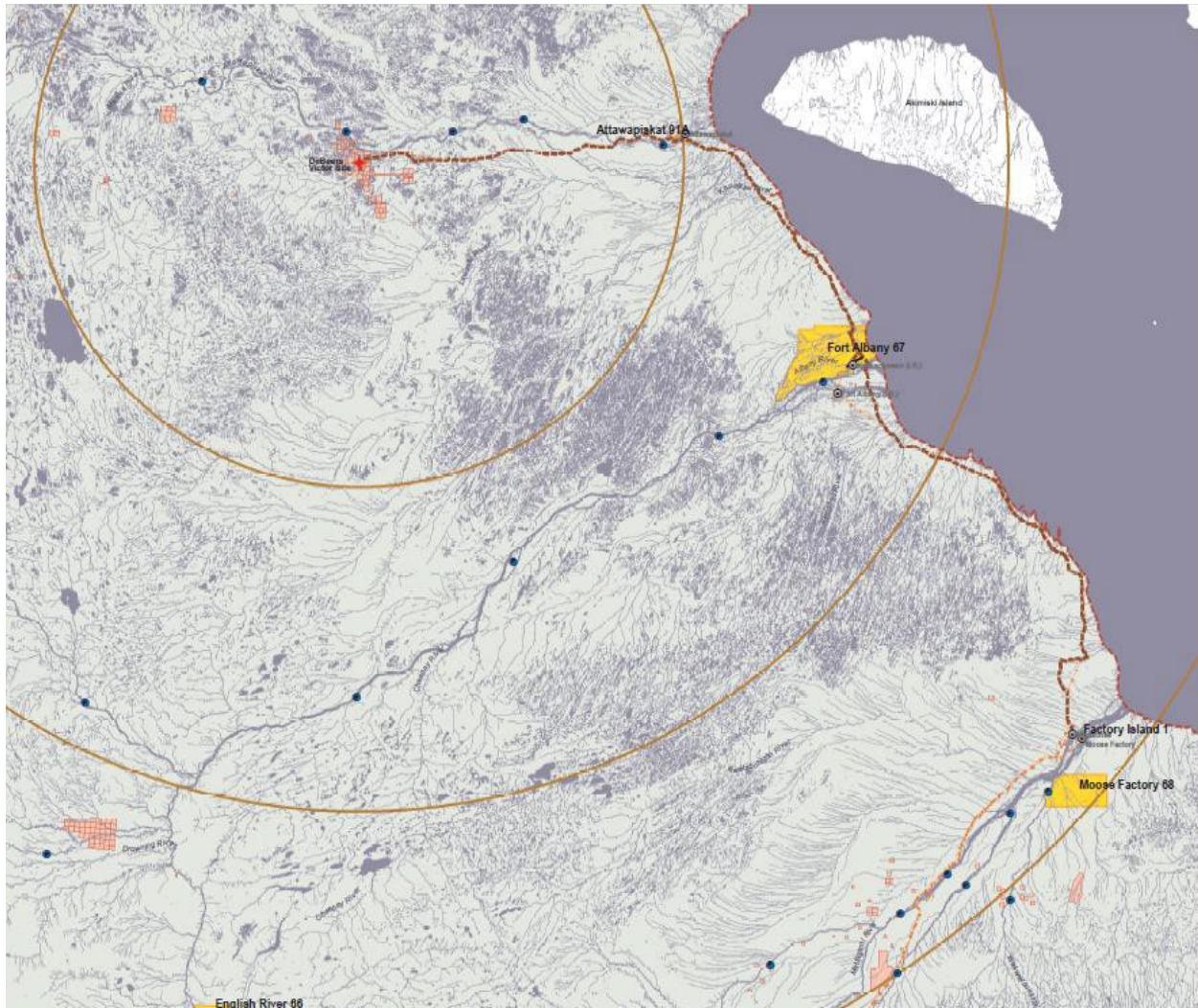
2

3 **5.22 Responses to Letters of Comment**

4 FNEI commits to responding to any letters of comment received during the course of the  
5 proceeding.

6

1 **Appendix 1 – FNEI System Map**



2

3

1     **Appendix 2 – FNEI Finance Policy and Procedure Manual**

2

3

4



Five Nations Energy Inc.

# **Finance Policy and Procedure Manual**

Approved on: December 15, 2022

Version: December 14, 2022

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## Preamble

Five Nations Energy Inc. (FNEI) is a licensed transmitter in the Province of Ontario. It is licensed by the Ontario Energy Board and must comply with the terms and conditions of its license, Ontario's *Transmission System Code*<sup>1</sup>, a Connection Agreement with the Independent Electricity System Operator (IESO) and the *Affiliates Relationship Code*<sup>2</sup>. FNEI's transmission rates are approved by the Ontario Energy Board and form the basis of FNEI's budgets.

The following guidelines will assist FNEI to regulate its financial administration and will provide guidelines regarding financial policies and procedures.

---

<sup>1</sup> <https://www.oeb.ca/regulatory-rules-and-documents/rules-codes-and-requirements/transmission-system-code-tsc>

<sup>2</sup> <https://www.oeb.ca/regulatory-rules-and-documents/rules-codes-and-requirements/affiliate-relationships-code-electricity-arc>

# 0. Introduction

## 0.1. Purpose and Intent

This Finance Policy and Procedure Manual is intended to provide for the effective and efficient operation of Five Nations Energy Inc. (hereinafter referred to as FNEI).

This Finance Policy and Procedure Manual is intended to provide a high-level services and stewardship of assets by trained and competent employees within a framework of transparency, accountability, prudent and ethical financial management throughout all the operations and activities of FNEI. FNEI's fiscal year will end December 31st of each year.

Books of account, records in relation thereto, and financial and management control shall be established and maintained in such a manner as to provide reasonable assurance that:

- Assets are safeguarded, accounted for, and controlled;
- The transactions of FNEI are in accordance with International Financial Reporting Standards; and
- The financial, human, and physical resources of FNEI are managed economically and efficiently and the operations of FNEI are carried out effectively.

Internal controls shall be established. Internal controls include all policies, procedures, systems, and practices which:

- Maintain reliable reporting systems;
- Safeguard assets;
- Prevent and detect error and fraud; and
- Optimize the use of resources.

FNEI shall establish and maintain a system of policies, procedures, and other safeguards to ensure that financial transactions are properly authorized, executed and recorded and to ensure that resources are managed and used to best effect. As part of the system of internal controls, lines of authority shall be established, and duties shall be segregated to the greatest extent possible.

FNEI's financial duties shall be segregated (distributed) among multiple people and lines of authority to protect against fraud and error to the extent feasible. The distribution of duties aims for maximum protection of FNEI's assets while also considering efficiency of operations.

## 0.2. Definitions

**“Affiliate Contract”** means a contract between FNEI and an affiliate, and includes a Services Agreement;

**“Allocation”** means a specific sum of funding with specific purposes, terms and conditions attached;

**“Amendments”** are changes to the original contract and must be within the period of the active contract. Amendments may include but are not limited to changes to amounts payable, goods, services, due dates, or time extensions.

**“Annual financial statements”** means the annual financial statements of FNEI

**“Arrears”** refers to an unpaid, overdue debt, or an unfulfilled obligation.

**“Assets”** is a resource owned or controlled by FNEI. FNEI assets include financial, intangible and Tangible Capital Assets (such as equipment, buildings and land that have been purchased or constructed by FNEI). Assets are reported on FNEI balance sheet.

**“Auditor”** means the auditor of FNEI

**“Best Value”** refers to the optimal combinations of experience, knowledge, expertise, geographic location, performance, quality, time, initial costs, operation and maintenance, cost, life cycle costs, service, performance characteristics, spare parts availability, warranties and guarantees etc.

**“Budget”** means the annual budgets (i.e., Capital Budget and Operational Budget) of FNEI

**“Cash”** is currency, cheques, money orders, and equivalent financial instruments (e.g., bank certificates of deposit, banker’s acceptances, etc.).

**“Conflict of Interest”** is a situation in which an employee or Officer has private interests that could improperly influence the performance of his or her official duties and responsibilities or in which the FNEI employee uses his or her office for personal gain. A real conflict of interest is one that exists at the present time, an apparent conflict of interest could be perceived by a reasonable observer to exist, whether or not it is the case, and a potential conflict of interest could reasonably be foreseen to exist in the future. Employees are required to follow FNEI’s policy on *Conflict of Interest, Code of Conduct, and Ethics Policy*, which is available under separate cover and provides much greater detail.

**“Contract”** means a legal, written agreement between two or more parties to complete specific deliverables and outcomes which can involve certain services or provide goods in exchange for money or other remuneration. This includes creating an obligation, receipt of an asset, memorandums of understanding or sharing of information.

**“Cost”** is the gross amount of consideration given up acquiring, construct, develop or better a Tangible Capital Asset, and includes all costs directly attributable to acquisition, construction, development, or betterment of the Tangible Capital Asset, including installing the asset at the location and in the condition necessary for its intended use. The cost of a contributed Tangible Capital Asset, including a Tangible Capital Asset in lieu of a developer charge, is considered to be equal to its Fair Value at the date of contribution. Capital grants would not be netted against the cost of the related Tangible Capital Asset.

**“Fair Value”** is the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

**“Fairness”** refers to giving qualified firms and individuals an equal opportunity to compete for the contract work; and to evaluating tenders and proposals in accordance with accepted practices.

**“Financial administration”** means the management, supervision, control, and direction of all matters relating to the financial affairs of FNEI.

**“Financial Institutions”** means a bank, credit union or caisse populaire.

**“Financial Reporting Risk”** is the possibility of an undetected material misstatement in financial information due to the existence of ineffective Internal Control or fraud resulting from manipulation or alteration of accounting records, misrepresentation or intentional omissions of transactions, or intentional misapplication of accounting principles.

**“Fiscal year”** means January 1 in one year and ending on December 31 in the same year.

**“Fraud Risk”** is the potential for an employee, agent or other person connected to the financial administration of FNEI to use deception to dishonestly make a personal gain for oneself or a loss for another. This commonly includes activities such as theft, corruption, embezzlement, or bribery etc.

**“Fraudulent Financial Reporting”** means an intentional act in financial reporting that is designed to deceive users of financial reports and that may result in a material omission from or misstatement of financial reports.

**“Fraudulent Non-Financial Reporting”** means the intentional act in non-financial reporting that is designed to deceive users of non-financial reports.

**“IFRS”** means International Financial Reporting Standards, as revised or replaced from time to time.

**“Indemnity”** refers to the right of a person to recover the amount of a financial loss or a liability to a third party.

**“Internal Assessment”** is a review of an activity/process by an independent FNEI staff member (i.e., an individual not responsible for or involved in the activity) to determine the effectiveness and sufficiency of controls related to the specific activity or process.

**“Internal Control”** is a process, effected by FNEI’s Senior Leadership Team, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- effectiveness and efficiency of operations;
- reliability of reporting; and
- compliance with applicable laws and regulations.

**“Life-Cycle Management Program”** means the program of inspection, review, and planning for the management of FNEI’s Tangible Capital Assets as described in this Finance Policy and Procedure Manual.

**“Life-Cycle Planning”** is a key component of a Life-Cycle Management Program as it provides information for understanding the condition and assessing the performance of capital assets, anticipates the needs for replacements in the short and long term, and assesses the cost and sustainability of existing programs.

**“Misappropriation of Assets”** means the theft of FNEI assets in circumstances where the theft may result in a material omission or misstatement in financial reports.

**“Net Book Value”** of a Tangible Capital Asset is its cost, less both accumulated amortization and the amount of any write-downs.

**“Procurement”** means buying, purchasing, renting, leasing, leasing with an option to purchase, or otherwise acquiring any good, service, or construction. It also includes all activities pertaining to procurement including determination of procurement requirements (e.g., business needs), method of procurement, preparation and award of a contract and all phases of contract administration.

**“Renewal”** is another contract issued at the completion of the original for a new period and as defined in the original contract.

**“Replacement”** includes substitution, in whole or in part, with another of FNEI’s Tangible Capital Assets.

**“Residual Value”** is the estimated net realizable value of a Tangible Capital Asset at the end of its Useful Life to FNEI.

**“Restricted Investments”** are investments made with funds the source of which is either government transfers, local revenues, or other revenues with restrictions on use.

**“RFx”** is an acronym for Request for [x], where x stands for Information (RFI), Proposal (RFP), Tender (RFT), or Quotation (RFQ). RFx processes are generally followed before awarding a major

service contract. RFX's identify the need and leave it up to the prospective contractors to make a proposal that is appropriate.

**"Risk Tolerance"** means the degree of uncertainty FNEI is willing to accept in the achievement of its goals.

**"Risk"** is defined as anything of variable uncertainty and significance that interferes with the achievement of FNEI's strategies and objectives. In insurance terms is the possibility of a loss or other adverse event that has the potential to interfere with FNEI's ability to fulfill its mandate, and for which an insurance claim may be submitted.

**"Signing Authority"** as defined in in this Policy (and as may be amended from time to time) means authority delegated to specific positions within FNEI. This encompasses various types of authority including commitment and approval authority.

**"Single Source"** purchases are completed when a particular supplier is purposefully chosen by FNEI, even when other suppliers are available.

**"Sole Source"** purchases are completed where there is only one vendor capable of providing an item or service, and therefore it is not possible to obtain competitive bids.

**"Tangible Capital Assets"** are non-financial assets having physical substance that:

- are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance, or repair of other Tangible Capital Assets;
- have useful economic lives extending beyond an accounting period;
- are to be used on a continuing basis; and
- are not for sale in the ordinary course of operations.

**"Tender Process"** refers to the process where documents outlining the requirements and specifications of a project are put in the hands of prospective contractors or suppliers interested in submitting bids.

**"Terms of Reference"** is a documented statement of the mandate, objectives, purpose, scope, functions, and rules under which a committee is expected to operate.

**"Unrestricted Investments"** are investments made with funds the source of which is not government transfers or local revenues.

**"Useful Life"** is the estimate of either the period over which a Tangible Capital Asset is expected to be used by FNEI, or the number of production or similar units that can be obtained from the Tangible Capital Asset by FNEI. The life of a Tangible Capital Asset may extend beyond the Useful Life of a Tangible Capital Asset to FNEI. The life of a Tangible Capital Asset, other than land, is finite, and is normally the shortest of the physical, technological, and commercial life.



### **0.3. Scope**

The purpose of this Finance Policy and Procedure Manual is to provide the overall direction in policy areas for financial accountability, transparency, and consistency for FNEI. This Finance Policy and Procedure Manual is to be applied to the finance operations of FNEI. This Finance Policy and Procedure Manual does not apply to any affiliate organizations, such as the Five Nations Development Incorporation (FNDI), which operates under its own financial policy and procedures. Additional information on inter-affiliate conduct can be found in the *Regulatory Handbook*, available under separate cover.

Boards, including Committees, should from time to time review their processes and procedures to ensure consistency to overall direction and parameters as set out within this Finance Policy and Procedure Manual.

This Finance Policy and Procedure Manual is intended to comply with International Financial Reporting Standards (IFRS) and accounting requirements applicable to FNEI. FNEI's fiscal year will end December 31st of each year.

## 0.4. Authority

Within this Finance Policy and Procedure Manual, the authorities, roles, and responsibilities of stakeholders are identified. Additional authority and governance considerations in relation to FNEI's administration are included in this section.

### POLICY

#### ***Board of Directors and Chief Executive Officer***

The Board of Directors of FNEI is appointed by the Members of FNEI, two each from the Attawapiskat Power Corporation; the Kashechewan Power Corporation; and the Fort Albany Power Corporation; at the Annual Members' Meeting as set out in FNEI's *Bylaw #1*. In addition, Moose Cree First Nation and Taykwa First Nation each shall appoint one Director who will have voting privileges at FNEI Board of Directors meeting. The Director from Moose Cree First Nation and the Director from Taykwa First Nation shall be appointed by their Chiefs and Councils via a Resolution.

In addition to the responsibilities defined within this Finance Policy and Procedure Manual, the Board of Directors of FNEI and the Chief Executive Officer have the following responsibilities with respect to the administration of FNEI:

- Planning, estimating, and budgeting, for the funds and resources required for the operations of FNEI;
- Ensuring sound financial management including accountability to lenders;
- Initiating or conducting investigations and taking the required disciplinary action that may be required where an Employee does not comply with these conditions or other applicable regulations;
- Permitting access to Community Members at reasonable times, the minutes of all meetings of the Board of Directors, Bylaws, and resolutions of FNEI; and
- Ensuring the appointment of a person or persons who will:
  - o Record all resolutions, decisions, and other proceedings of the Board of Directors in a prescribed manner;
  - o Keep the books, records, and accounts, of FNEI in accordance with established procedures;
  - o Maintain a filing system to maintain all minutes of the Board of Directors, all Bylaws, and copies of vouchers, bank statements, canceled cheques, and correspondence relating to the business of FNEI;
  - o Receive, record, and deposit all monies received by FNEI and pay those monies in accordance with established procedures; and

- o Prepare monthly statements to be presented at the regular meetings of the Board of Directors or in any event, at least once a month showing:
  - Income and expenditure statements;
  - Comparison of budgeted and actual operating results; and
  - Other information as required by FNEI.

### ***Executive Committee***

The Executive Committee will have five (5) Members, and shall be made up of the Chair, Vice Chair, Secretary/Treasurer, and two FNEI Board of Directors.

Quorum of the Executive Committee will constitute a minimum 50% plus 1, to hold an official meeting.

The Executive Committee will meet quarterly unless more frequent meetings are necessary. The remuneration of the Executive Committee Members is as per [Section 9.2 Board & Officer Remuneration and Bonuses](#) of this Financial Policies and Procedures Manual; as set by the Board of Directors from time to time plus allowable travel costs to attend Executive Committee meetings.

The Executive Committee shall review the Personnel Policies and Procedures, recommend on issues of salaries and benefits, assist as needed with hiring and retention issues and protect FNEI by ensuring compliance with all laws related to personnel issues.

The Executive Committee shall conduct an annual review of the Terms of Reference and recommend any proposed changes to the Board of Directors for approval.

When a Board Director, who sits on the Executive Committee, is removed, or resigns, from the Board of Directors, their position on the Executive Committee also becomes vacant until another sitting Board Director can be appointed.

### ***Selection of Committee Members***

The Committee Members will be selected as required at the next meeting of the Board of Directors following the Annual General Meeting of the Members. The suggested term for Committee Members is two years, and Members of the Committee can be reappointed.

### ***Qualifications of Committee Members***

All Committee Members shall, to the satisfaction of the Board of Directors, be financially literate (i.e., will have the ability to read and understand a balance sheet; an income statement; a cash flow statement and the notes attached thereto).

### ***Executive Committee Duties and Responsibilities***

The Executive Committee's duties and responsibilities for financial matters are:

- Monitor financial reporting processes and internal control systems. This will involve reviewing the detailed financial transactions' listings (i.e., summaries of all disbursements made, a summary of the budget to actual listings and any other relevant documents) on a monthly basis to ensure compliance with FNEI's financial policies and procedures;
- Assist in the preparation of annual budgets (i.e., Capital Budget and Operational Budget);
- Oversee the integrity of FNEI's financial statements;
- Ensure FNEI's compliance with legal and regulatory requirements;
- Review and appraise the audit activities of FNEI for financial reporting and control matters;
- Review with the independent auditors and management, the adequacy and effectiveness of the financial and accounting control of FNEI;
- Make recommendations to the Board of Directors regarding the selection, the appointment, evaluation, fees, if necessary, the replacement of the independent auditors;
- Establish procedures for receiving, handling, and retaining of complaints received by FNEI regarding accounting, internal controls, or auditing matters;
- Establish procedures for Employees to submit confidential anonymous concerns regarding questionable accounting or auditing matters;
- Review with the independent auditors any audit problems or difficulties and management's response, and resolving disagreements between management and auditors;
- Make inquiries of management and the independent auditors to identify significant business and financial risks and exposures and assess the steps that management has taken to minimize such risk to FNEI;
- Review with management and the independent auditors' interim financial information for the purpose of recommending approval by the Board of Directors prior to its release;
- Subject to the Board of Director's approval, engage independent counsel and other advisors if the Committee determines such advisors are necessary to assist the Committee in carrying out its duties;
- Annual review of the FNEI Financial Policies and Procedures and the confirmation of compliance with FNEI's policies on internal controls;
- Make recommendations to the Board of Directors regarding the financial transactions and reports of FNEI; and
- Make recommendations to the Board of Directors regarding the remuneration of the Board of Directors and Officers as required.

### Executive Committee Duties and Responsibilities – Personnel

- The Committee reviews all FNEI job descriptions and makes recommendation to the Board of Directors for approval;
- The Committee shall review Employees' compensation, including incentive compensation programs and shall make recommendations to the Board of Directors on such;
- The Committee shall make a recommendation to the Board of Directors on an annual cost of living increase equivalent to change to the consumer price index as determined by Statistics Canada on January of each year for all FNEI Employees;
- The Committee will provide ongoing support and advice to the Board of Directors regarding all personnel issues and make recommendations on hiring practices;
- The Committee shall review all proposed employment/consultant contracts, and/or severance agreements, and make recommendations to the Board of Directors on such agreements;
- The Committee shall review all Senior Management candidates for employment with FNEI and shall make recommendations to the Board of Directors regarding such candidates; for all other employment positions, Senior Management will review and bring forth to the Committee and Board of Directors on selection of a candidate for employment;
- Ensure FNEI's compliance with legal and regulatory requirements with respect to personnel issues;
- Establishing procedures for receiving, handling, and retaining of complaints received by FNEI regarding personnel matters; and
- Subject to the Board of Directors' approval, engaging independent counsel and other advisors if the Committee determines such advisors are necessary to assist the Committee in carrying out its duties.

### **Management**

- The Chief Executive Officer, Operations Manager, and the Secretary/Treasurer, have spending authority up to the budgeted amounts approved by the Board of Directors. In the case of an emergency, the Chief Executive Officer, the Operations Manager, Secretary/Treasurer, and the Chair, in consensus, have the authority to spend funds as required. In such a case, a report will be prepared for the next Board of Directors meeting. Additional information on authorities for expenditures is found in [Appendix A: Delegation of Authority Table](#);
- The Board of Directors may authorize up to five FNEI Signing Authorities from Senior Management and Officers to be named by resolution to sign cheques on its accounts. All cheques are to be signed by at least two of these authorized persons, one of whom is

the Secretary/Treasurer or the Chief Executive Officer or the Operations Manager. Other specific signing Officers for special accounts will be named by resolution;

- The authorized Bank Signing authorities will be deemed to have the authority to bind FNEI up to budgeted amounts as approved by the Board of Directors. The Board of Directors will need to approve and authorize all other agreements that bind FNEI. Additional information on bank signing authorities is found is [Appendix A: Delegation of Authority Table](#);
- All efforts will be made to collect amounts owing to FNEI. The approval of designating accounts as uncollectible will require a Board of Directors motion; and
- Expenditures or costs not directly related to the operations and maintenance of the transmission system will require Board of Directors approval.

## **0.5. Orientation & Acknowledgement**

The purpose of this section is to ensure all employees are aware of the processes and guidelines approved by FNEI's Board of Directors with respect to finances.

### **POLICY**

The following policies and procedures are to be followed when orienting new staff. Finance Managers and Supervisors are to ensure that their staff members receive an orientation to all applicable policies and procedures as part of their regular orientation.

### **PROCEDURES**

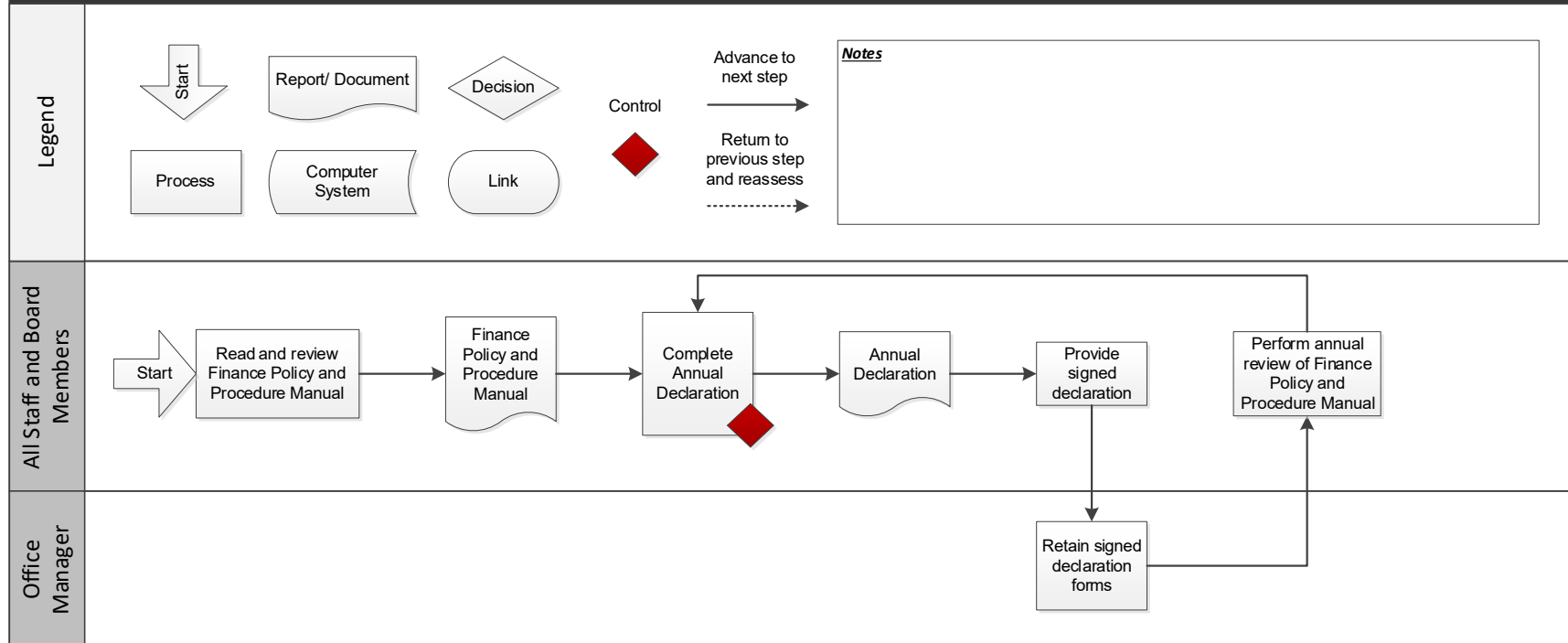
- Finance Managers and supervisors are to ensure that their staff members are aware of the current version of policies and procedures; and
- Board Members and employees must maintain familiarity with and abide by the policies and procedures in this manual.

All staff, including Managers, Executives, Officers and Board Members shall sign an annual declaration, confirming that they have read and understand FNEI's current financial policies and procedures. Copies of the completed annual declaration will be retained by the Office Manager.

Refer to [\*Appendix B: Annual Declaration Template\*](#).

## PROCESS MAP

### Five Nations Energy Inc. – Orientation & Acknowledgement





## **0.6. Approvals and Amendments**

The financial policies and procedures contained in this Financial Policy and Procedures Manual should be reviewed and amended periodically.

### **POLICY**

Amendments to these financial policies and procedures require the quorum approval of the Board of Directors as per FNEI's *Bylaw #1*. Any such amendments shall be stated in a formal motion and shall appear in the meeting minutes of the Board Meetings.

### **PROCEDURES**

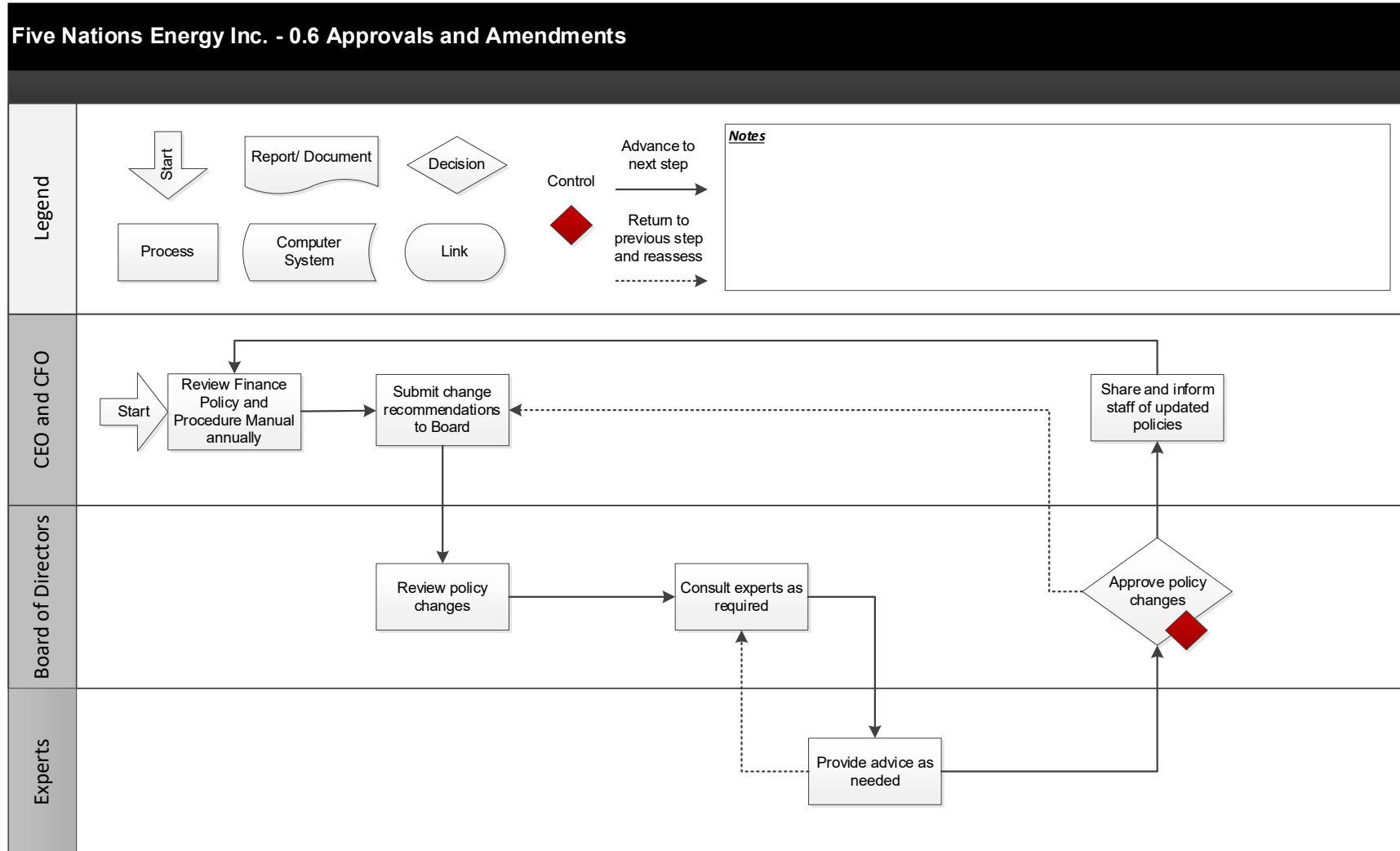
The Board of Directors, with the Chief Executive Officer and Chief Financial Officer, shall review these financial policies on an annual basis. A summary of the review and report shall be made back to the Board of Directors on any financial policies that require modification or change.

Recommendations to amend any part of these financial policies and procedures must be submitted in writing to the Board of Directors and recorded in the Meeting Minutes. The Board of Directors reserve the right to consult outside experts to review the impact or financial implications.

The financial policies in the Finance Policy and Procedure Manual shall not supersede any new legislative or regulatory statutes or directives that may legally impact the financial administration and operations of FNEI.

## PROCESS MAP

### Five Nations Energy Inc. - 0.6 Approvals and Amendments



# 1. Financial Administration

## 1.1. Financial Disclosure

### POLICY

Financial records may need to be released for various reasons. This could include a request made by an employee to be included in a report, or a request by an entity (internal or external entity).

All disclosures of financial records must be approved by the Chief Financial Officer. The Chief Financial Officer shall respond to the request in a timely manner.

### PROCEDURES

Any requests for financial disclosure shall indicate:

- Whether or not the requestor is entitled to have the financial record or part thereof disclosed to them; and
- That the requestor may request a review of the Chief Financial Officer's decision by the Chief Executive Officer.

If it is determined that the requestor is entitled to have the financial record or part thereof disclosed to them, and it can be reasonably reproduced, a copy of the financial record shall be provided within a timely manner.

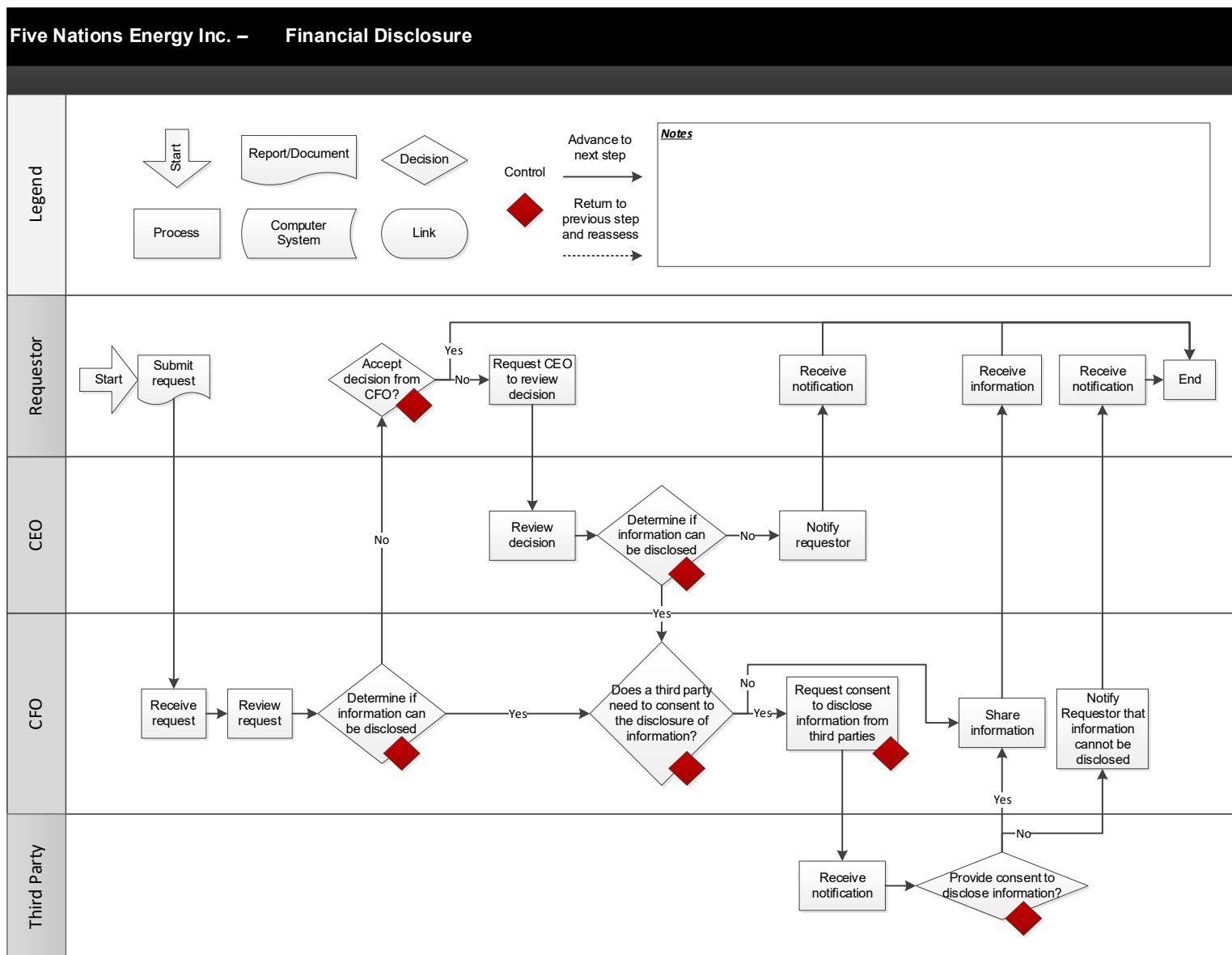
Any request for a record containing financial information relating to a third party shall require that the third party be advised in writing of the request and given reasonable opportunity to respond to the Chief Financial Officer. The Chief Financial Officer shall thereafter decide whether or not to disclose the record or part thereof and give written notice of the decision to the person to whom the information relates and the requestor.

The Chief Financial Officer / Chief Executive Officer shall refuse to disclose financial information that:

- Would reveal the deliberations of FNEI or any of its committees, including any advice, recommendations, or policy considerations submitted or prepared for submission to the FNEI Board of Directors or any of its committees unless those deliberations concerned the requestor;
- Legal opinions which are subject to solicitor client privilege;
- Other privileged documents which could reasonably expect to reveal information received in confidence from a Government, Society, Corporation, or harm the conduct of negotiations relating to indigenous self-government or treaties;

- Could reasonably be expected to harm the financial economic interests of FNEI; or
- Would be an unreasonable invasion of a third party's personal privacy, including but not limited to personal financial information.

## PROCESS MAP



## 1.2. Information Technology and Bookkeeping Application

### POLICY

FNEI's information systems will support its operational requirements and have appropriate safeguards and monitoring processes in place to adequately protect FNEI's financial information.

The purpose of this section is as follows:

- To safeguard the financial information assets of FNEI;
- To prevent the loss of data in the case of an accidental deletion or corruption of data, system failure, or disaster;
- To permit timely restoration of information and business processes, should such events occur; and
- To manage and secure backup and restoration processes employed in the process.

This section relates to data and information of the FNEI Finance Department.

FNEI's *Social Media Policy*, *Confidentiality Policy* and *User Access Control Policy* available under separate cover for additional information technology related information.

A computerized double entry bookkeeping system is to be maintained to record all financial transactions.

The system is to include the facility to record:

- All receipts and disbursements;
- All accounts receivable and other assets;
- All commitments for services or benefits received, but not immediately; and
- Paid for details of Employee earnings and payroll deductions.

Access to data residing in administrative systems of FNEI is to be granted only to those individuals who must, in the course of exercising their responsibilities, use the specific information.

It is the responsibility of the Chief Executive Officer to ensure adequate physical security over FNEI's computer equipment, restrict equipment access to authorized personnel only, and adequately assure that output containing confidential information is properly safeguarded. Responsibilities also include maintenance of operating system-level security specific to the computing equipment.

## ***Bookkeeping System***

Operating Systems used for FNEI's information technology (IT) systems must comply with FNEI's IT Policies, including the:

- Information Security Policy;
- Acceptable Use Policy;
- Password Policy;
- User Access Control Policy; and
- Business Continuity Plan Policy

These policies are available under separate cover and include the following activities that should be followed:

- Discretionary access controls, where individual users can be included/excluded from accessing files and other objects or from achieving certain forms of access;
- Notification to the data owner/computer operator/data security officer of security breaches (unauthorized attempts to access certain files or the system);
- Maintenance of an audit record of security events, as well as authorized or unauthorized file access;
- Ability to audit changes to user identification files;
- Ability for idle terminals logged into applications to be disconnected after a 15-minute period;
- An encryption system to provide a high level of security for sensitive data transmission files;
- Login features such as automatic disconnection on multiple login failures;
- Break-in detection and disabling user identifications for a period of time after detection;
- Automatic identification expiration - Access restrictions based on user identification, time of day and day of week;
- Control over dial-up or network access to restricted data and systems; and
- Backup and recovery procedures must be developed and maintained for all computing systems and data.

The following requirements must be met:

- Provision for regular backup of data residing on the system;
- Storage of backup media at a location remote from the FNEI office; and

- An approved Disaster Recovery Plan written and implemented to cover situations in which hardware and/or software cannot run in its normal environment.

The Chief Executive Officer should periodically review backup and recovery procedures to ensure their continued applicability.

### ***Accessing Data***

In the course of accessing data or information, an FNEI Employee might access restricted information. It is the responsibility of the Data Owner to ensure that all individuals with access to restricted data are aware of the confidential nature of the information and the limitations, in terms of disclosure, that apply.

All individuals requiring access to FNEI Finance Department information systems will have unique user identification. Shared user identifications or passwords will not be permitted.

Requests for access to FNEI's network, accounting system, or other access to restricted information systems must include a description of an employee's role and rationale for the level of access required. Documented approval must be obtained from the Chief Executive Officer.

Individuals will be given access privileges only to the extent necessary to fulfill their individual job function. Systems and applications should not be configured with unrestricted access to all data.

When accessing restricted information, the FNEI Employee is responsible for maintaining its confidentiality. The granting of a user identification and password requires that the employee will maintain confidentiality over appropriate information without exception.

The release of restricted data without the expressed approval of the Chief Executive Officer or outside the guidelines established for such data, will not be tolerated.

Unauthorized release of restricted information may result in appropriate disciplinary action, including possible dismissal. All matters involving FNEI Employees will be reviewed by the Board of Directors. Matters involving individuals not affiliated with FNEI will be reviewed with the FNEI counsel.

Passwords are a critical component to any computer security program. To properly control passwords and maintain their integrity, the requirements of the *Password Policy* must be followed, and include but are not limited to the following:

- Passwords will automatically expire every 90 days, or potentially more frequently in cases of user identifications with access to very sensitive data;
- Users must never give out their personal password to anyone; sharing of passwords are a violation of this section;
- As part of the educational process, the Chief Executive Officer will provide users with guidelines for selecting and changing their passwords; and



- Generic user identifications should not exist, except as the source for the production, maintenance, and development of application systems. In cases where many people log in under a single user identification, audit trails and system statistics become ineffective in assigning responsibility.

When an individual or contractor is terminated or ends employment with FNEI, their user identifications must be disabled immediately. The requirements of the *User Access Control Policy* must be followed. These requirements include:

- Immediately change or remove the passwords for those user IDs to which an Employee leaving FNEI has had access or update capabilities. This standard practice serves to protect the Employee in the event of any problems and the FNEI systems against possible tampering;
- Monitoring such user IDs is the responsibility of the Chief Executive Officer; and
- When an Employee leaves or is terminated, all laptops, cell phones, and other FNEI property, must be turned in to FNEI immediately. Failure to return FNEI property could result in criminal charges being brought against the former Employee.

In the course of accessing data or information, an FNEI Employee might access restricted information. It is the responsibility of the Data Owner to ensure that all individuals with access to restricted data area aware of the confidential nature of the information and the limitations, in terms of disclosure, that apply.

When accessing restricted information, the FNEI Employee is responsible for maintaining its confidentiality. The granting of a user ID and password assumes that you will maintain confidentiality over appropriate information without exception.

The release of restricted data without the expressed approval of the Chief Executive Officer or outside the guidelines established for such data, will not be tolerated.

Unauthorized release of restricted information will result in appropriate disciplinary action, including possible dismissal. All matters involving FNEI Employees will be reviewed by the Board of Directors. Matters involving individuals not affiliated with FNEI will be reviewed with the Corporation's attorney.

### 1.3. Delegation of Authority

#### POLICY

This section applies to the Board of Directors, Executive Committee, officers, and employees of FNEI and any other persons with authority to conduct activities in connection with the Financial Administration of FNEI.

The Board of Directors may authorize the Chief Executive Officer to delegate any Board duties or functions related to FNEI's financial administrative system to an officer, employee, committee, contractor, or agent except:

- The approval of policies and procedures or the giving of directions respecting any financial administration matter;
- The approval of budgets, significant or multiple Program level budget amendments, borrowings, and financial statements;
- The approval of the Delegation of Authority Table found in [Appendix A: Delegation of Authority Table](#); and
- Any matter relating to the employment or authorities of the Chief Executive Officer and the Chief Financial Officer.

The Chief Financial Officer can assign any or all of his or her financial management activities or functions except:

- Maintaining and revising [Appendix A: Delegation of Authority Table](#);
- Ensuring those with delegated authority understand their responsibilities and have the skill and knowledge necessary for the effective exercise of the authority;
- Establishing protocols for delegation and temporary assignments to deal with absences due to illness, vacation, or other extended leaves;
- Monitoring performance of individuals' delegated authorities on a regular and periodic basis, to ensure that the delegated authority is being exercised in the manner intended and that there is no delegation of authority when specifically precluded under this section.

All officers, employees, committees, contractors, or agents of FNEI are responsible when acting under delegated authority to ensure the activity or function is within the authority and limitation of their delegation and that they have followed other relevant policies and procedures.

Officers, employees, committees, contractors, or agents of FNEI may reassign functional authorities and responsibilities as long as it is made in accordance with [Appendix A: Delegation of Authority Table](#).

Officers, employees, committees, contractors, or agents will ensure that decisions or transaction approval falling outside of their scope of authority are referred to the Chief Financial Officer or otherwise as appropriate.

Regardless of the delegation of any financial administration authority by the Board, the Board remains responsible for overseeing the financial affairs of the FNEI.

## **PROCEDURES**

### ***Procedures for Delegation***

The Chief Financial Officer is responsible for preparing and updating [Appendix A: Delegation of Authority Table](#) in accordance with this Finance Policy and Procedure Manual for FNEI.

The Chief Financial Officer will ensure an appropriate level of documentation, including a signed delegation of authority statement or agreement, accompanies and is maintained with [Appendix A: Delegation of Authority Table](#).

The Chief Financial Officer will ensure that the delegation of authorities is communicated to each business unit manager and other persons as appropriate to ensure the delegated responsibilities can be carried out effectively.

The Board, Committees, officers, employees, contractors, or agents delegate authority only when there is assurance that the control objectives of authorization of the decision or transaction will be effectively served.

### ***Procedures for the Delegation of Authority Table***

[Appendix A: Delegation of Authority Table](#) will include components of the financial management system that require decisional and approval authority to carry out activities, make commitments, collect, and disburse funds on behalf of FNEI.

Any delegation of authority granted will be aligned with the hierarchical organizational chart structure.

The Chief Financial Officer shall review [Appendix A: Delegation of Authority Table](#) at least annually or during significant or material organizational change. The Chief Financial Officer will submit [Appendix A: Delegation of Authority Table](#) to the Chief Executive Officer for review and approval. The Chief Executive Officer will submit the [Appendix A: Delegation of Authority Table](#) to the Board for approval and the Board will, with a motion duly recorded in the minutes, approve [Appendix A: Delegation of Authority Table](#).

### ***Temporary delegation of responsibility***

Short-term – Each Department with authority under [Appendix A: Delegation of Authority Table](#) will establish a protocol for delegation of responsibility to deal with absences due to illness, vacations, and other forms of temporary leave. Delegations of assignment are to be documented and distributed to the Chief Financial Officer.

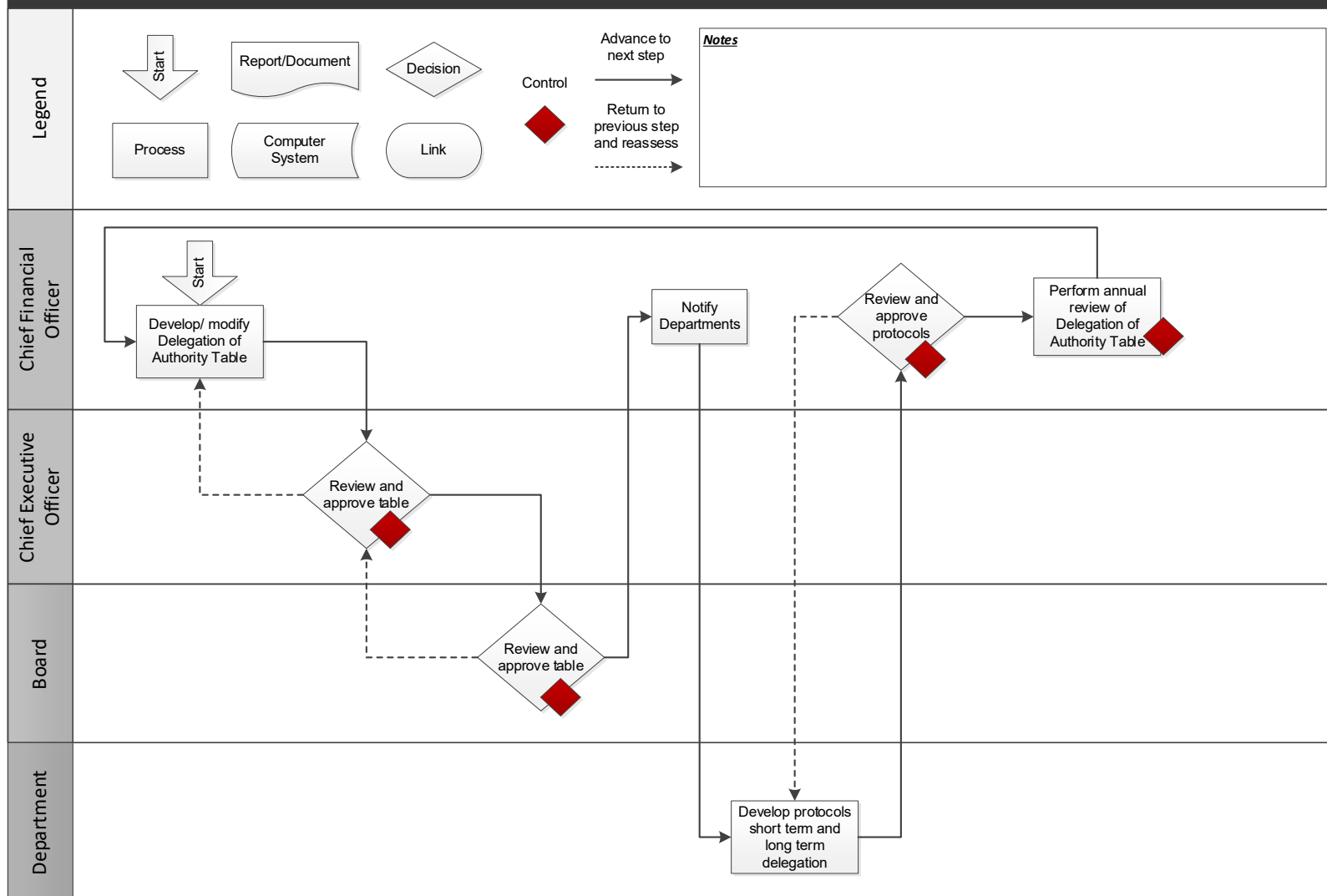
Long-term – Any delegation of responsibility of a long-term nature will be approved by the Chief Executive Officer and appropriately documented.

### ***Procedures for monitoring and evaluation***

The Chief Financial Officer will at least annually monitor and evaluate the performance of the delegated duties and functions and, if necessary, make recommendations to the Chief Executive Officer for amendments to [Appendix A: Delegation of Authority Table](#). Refer to the *Procedures for the Delegation of Authority Table* (found above) for procedures to amend [Appendix A: Delegation of Authority Table](#).

## PROCESS MAP

### Five Nations Energy Inc. – Delegation of Authority



## **1.4. Conflict of Interest**

### **POLICY**

No officer, employee, or agent of FNEI shall use their office, employment, or relationship for personal gain or to the detriment of the interests of FNEI.

Refer to FNEI's on *Conflict of Interest, Code of Conduct, and Ethics Policy* for more detailed information.

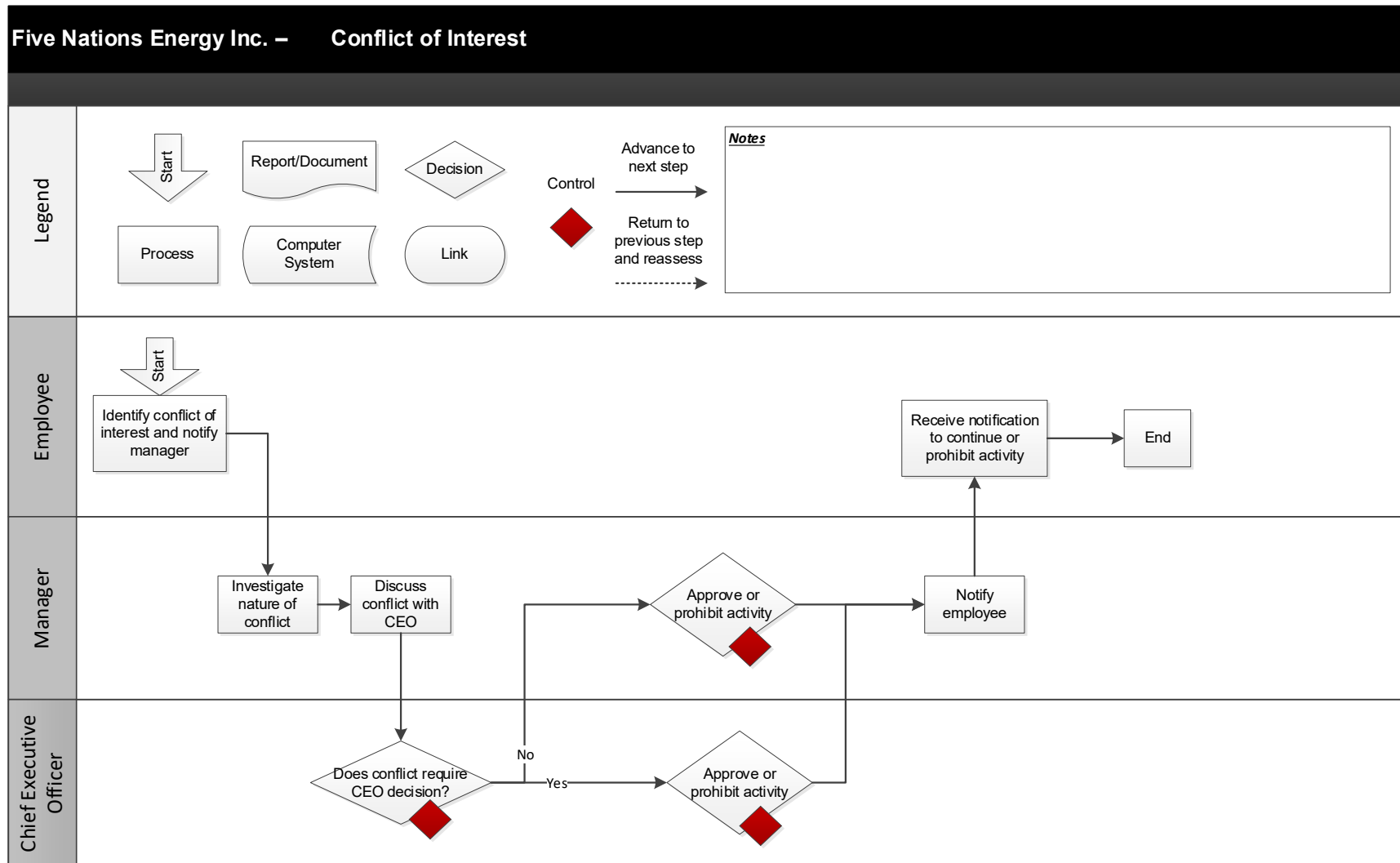
### **PROCEDURE**

Employees are to notify their Managers of any actual or perceived financial conflicts of interest.

Managers will investigate the nature of potential conflict. Investigations should include discussion with the Chief Executive Officer.

Depending on the nature of the conflict, Managers or the Chief Executive Officer will determine if the activity should be approved or prohibited and notify the employee.

## PROCESS MAP



## 1.5. Code of Conduct

### POLICY

FNEI's has a *Conflict of Interest, Code of Conduct, and Ethics Policy*, available under separate cover. This section focuses on conduct as it relates to FNEI's financial activities.

It is the duty of the Board, Officers, Management, and all employees to conduct all financial matters in a manner that reflects positively upon themselves and FNEI.

It is the responsibility of the Board, Officers, Management, and all employees to assist in safeguarding FNEI assets (including cash, investments, and property), supplier accounts, funding arrangements and financial information. All incidents of a suspicious nature and all questionable situations must be reported immediately.

The Board, Officers, Management, and all employees are expected to observe and carry out the requirements of all policies and procedures established to ensure the efficient, transparent, and ethical operation of FNEI and compliance with all regulations and agreements.

Personal use of FNEI property or accounts is expressly prohibited.

The Board, Officers, Management, and all employees shall not in any circumstances solicit, proposition, or agree to receive from any third party any form of gift, hospitality, or other inducement in return for doing or not doing something in relation to the discharge of their duties and responsibilities on behalf of FNEI or for showing favour or not showing favour in relation to such duties and responsibilities. Notwithstanding, it is accepted that in some circumstances, it may be perfectly appropriate for Board, Officers, Management, and employees to receive modest gifts or accept hospitality which arises out of the conduct of normal Organization business where it can reasonably be regarded as being in FNEI's best interests.

Acts to create misleading or false financial information (e.g., on invoices, cheque requisitions, purchase orders, contracts, reports, or other financial documents) or to alter (including the unauthorized destruction or removal of) financial records are serious violations of this Financial Policy and Procedures Manual and will not be tolerated.

FNEI shall conduct its business in alignment with the requirements set out in the Ontario Energy Board's *Affiliate Relationship Code for Electricity Distributors and Transmitters*<sup>3</sup>. The *Affiliate Relationship Code* sets out rules that govern the conduct of utilities as that conduct relates to their respective affiliates, with the objective of:

- Protecting ratepayers from harm that may arise as a result of dealings between a utility and its affiliate;

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<sup>3</sup> <https://www.oeb.ca/regulatory-rules-and-documents/rules-codes-and-requirements/affiliate-relationships-code-electricity-arc>



- Preventing a utility from cross-subsidizing affiliate activities;
- Protecting the confidentiality of information collected by a utility in the course of provision of utility services;
- Ensuring there is no preferential access to utility services;
- Preventing a utility from acting in a manner that provides an unfair business advantage to an affiliate that is an energy service provider; and
- Preventing customer confusion that may arise from the relationship between a utility and its affiliate.

## 1.6. Records Management

### POLICY

The Chief Financial Officer shall implement a system of safe keeping for all FNEI financial files. Files must be retained in hard copy or electronically. Files must be stored securely so that they may not be accessed by unauthorized personnel.

Refer to [Section 1.2 Information Technology and Bookkeeping System](#) which provides additional guidelines regarding information technology systems.

The Ontario Energy Board has a guideline for *Reporting and Record Keeping Requirements*<sup>4</sup>(RRR). The Ontario Energy Board requires FNEI to maintain the following financial records:

- Detailed records of all economic evaluations conducted to comply with the requirements of the Transmission System Code, Each record must show the details of the economic evaluation and include, as applicable, the determination of the customer's risk classification and the resulting economic evaluation period, the load forecast, the project capital costs, the ongoing operation and maintenance costs, the project after tax incremental cost of capital, and the justification for all of the study parameters;
- Records on corporate relationships, specifically the FNEI's specific costing and transfer pricing guidelines, tendering procedures and all Services Agreement(s) as defined in the *Affiliate Relationships Code for Electricity Distributors and Transmitters*;
- Where the total cost of all transactions with a particular affiliate exceeds \$100,000 on an annual basis, FNEI shall maintain and provide at such times as may be requested by the Ontario Energy Board, separate records showing:
  - o The name of the affiliate;
  - o The product, service, resource or use of asset in question;
  - o The dollar value of each transaction and the form of price or cost
  - o determination; and
  - o The date of each transaction and/or the start and completion dates for project-type transactions.
- Separate records substantiating all review(s) complying with the provisions of CSAE 3416 for any affiliates.

Additional information on record keeping (including non-financial records) can be found in the *Regulatory Handbook*, available under separate cover.

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<sup>4</sup> <https://www.oeb.ca/regulatory-rules-and-documents/reporting-and-record-keeping-requirements-rrr>

## **PROCEDURES**

### ***Accountability***

The Chief Financial Officer is the designated steward that ensures the recordkeeping framework outlined in this section is applied to all financial records. All employees, contractors, or volunteers that are in custody of financial records must ensure it is managed in accordance with this section.

### ***Creation and Collection***

All important activities and decision-making processes of FNEI should be identified, including the records required to support those processes, to ensure accountability, preserve an audit trail, and protect FNEI from liability.

### ***Organization and Classification***

Financial records should be subject to a method of classification and organization to ensure they records can be located and that they are associated with the correct information.

### ***Maintenance, Protection and Preservation***

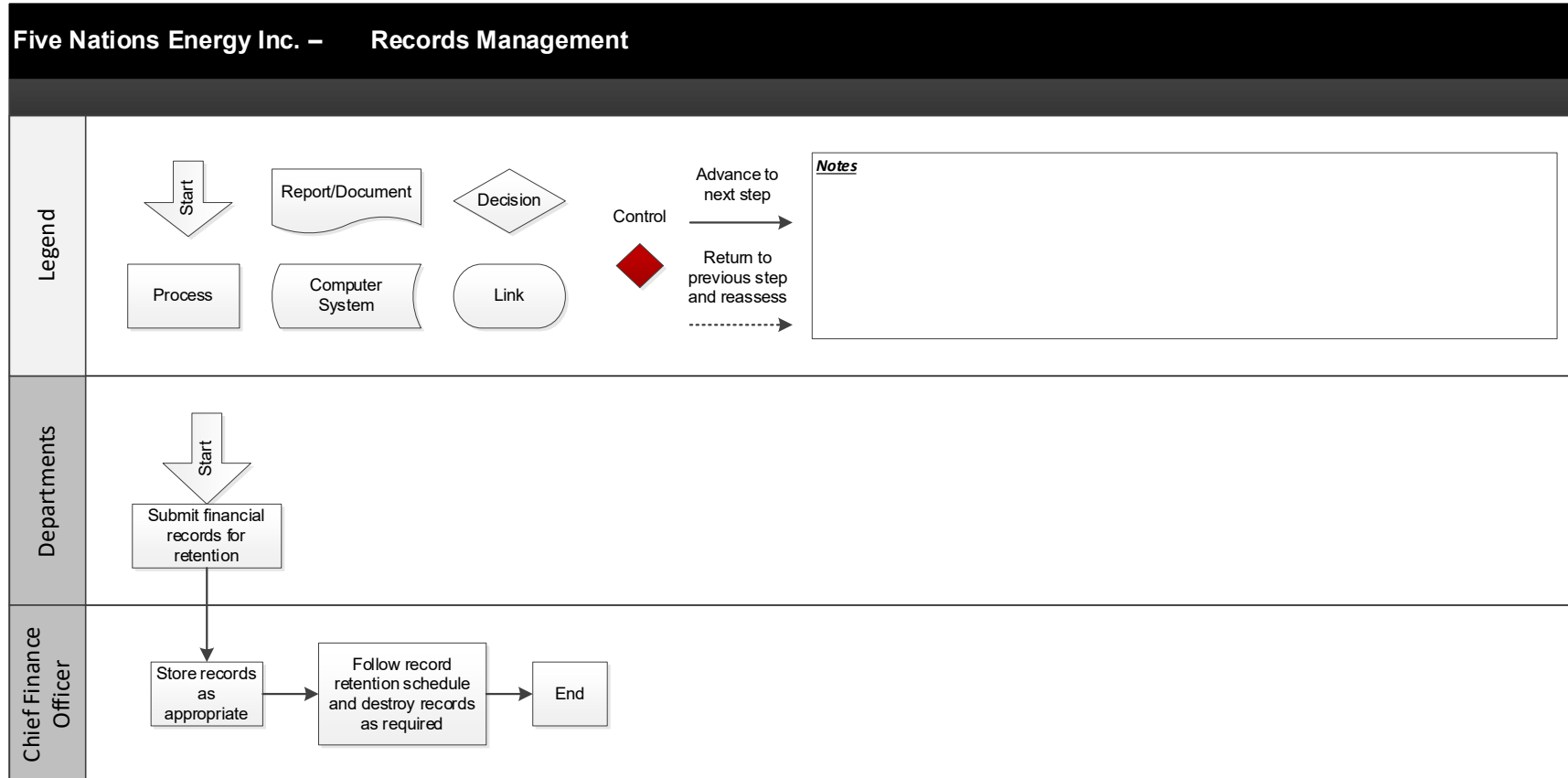
Records must be protected and stored in the appropriate repositories in a way that preserves their long-term availability, understandability, and usability.

Records that contain personal information or information of a confidential nature related to the Board, or a third party, such as the confidential financial information related to a business, should be kept confidential. Confidential records should be protected with appropriate safeguards to ensure only those with appropriate approval have access to the records.

### ***Retention and Disposition***

FNEI financial records shall be retained for the period as determined by the Chief Financial Officer, in accordance with IFRS accounting standards.

## PROCESS MAP



## 1.7. Contract Management

### POLICY

FNEI is required to keep accurate record of contracts. Contracts must have all signatures and required approvals to be considered valid.

Each contract entered on behalf of FNEI must include terms and conditions including rates, insurance requirements, confidentiality provisions, and identification of potential liability, termination clauses, and the duties for which the contract is in effect.

### PROCEDURES

When a Department determines that a contract is required to be prepared by FNEI for third party signature, the Manager will work with FNEI's Legal Counsel to draft the contract.

Once the contract has been drafted, the contract shall be reviewed by the Chief Financial Officer (with focus on financial implications) and the Chief Executive Officer for approval. Refer to [Appendix A: Delegation of Authority Table](#) for additional details on contract signing authorities.

The approved contract will then be sent to the third party for review and signature. Upon return of the signed contract, the contract will be signed in accordance with [Appendix A: Delegation of Authority Table](#).

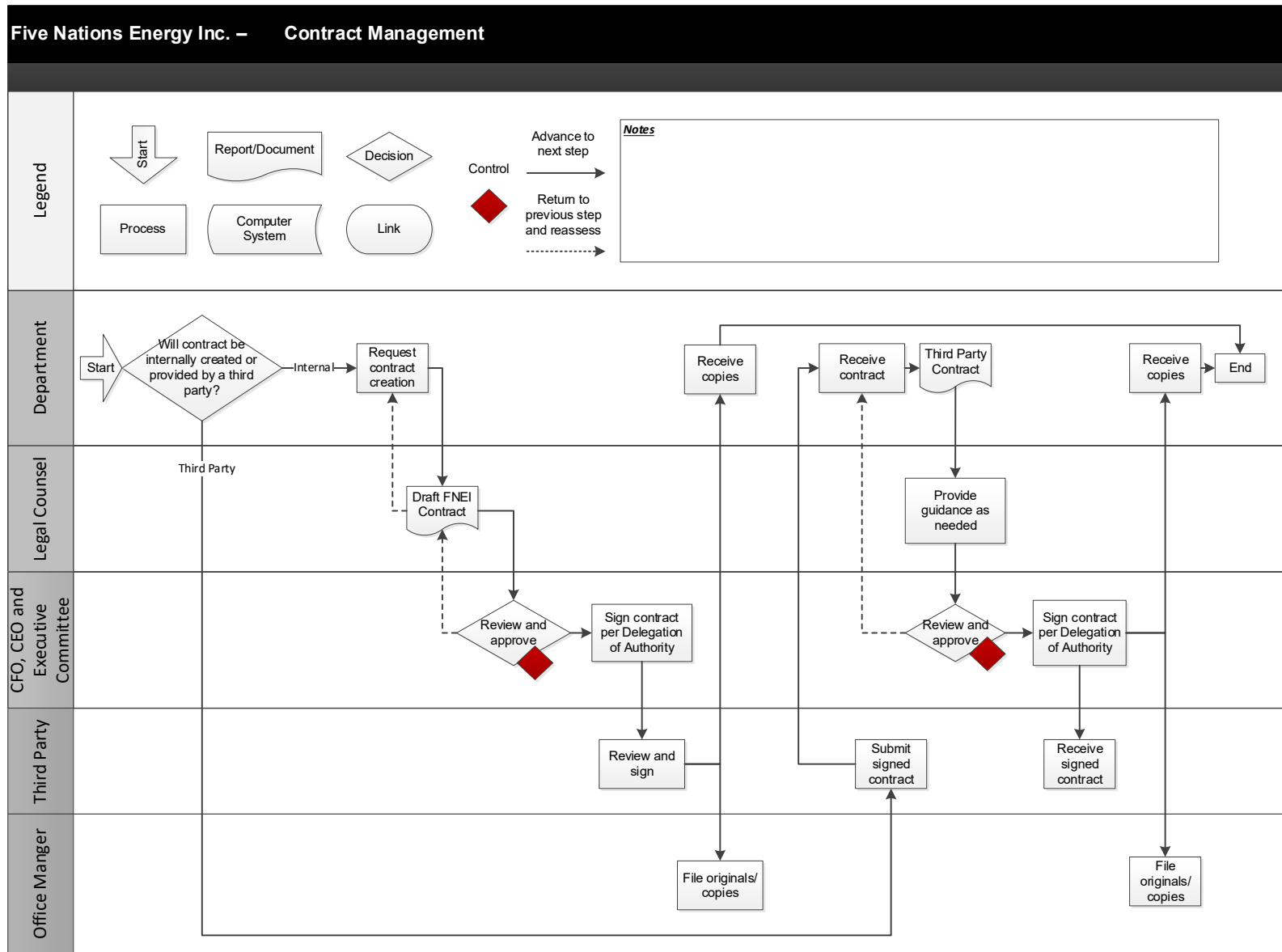
Any negotiations to the FNEI contract will involve the FNEI's Legal Counsel.

If a third-party contract is received, it must be forwarded to Chief Executive Officer for review and approval, prior to any additional signatures by the Chief Financial Officer and/or Executive Committee, in accordance with [Appendix A: Delegation of Authority Table](#). The Chief Executive Officer may reach out to FNEI's Legal Counsel for additional support as needed.

Original signed contracts will be retained by the Office Manager. The Department will also retain a copy of the signed contract to monitor contract deliverables/milestones and overall vendor management. Refer to [Section 1.8 Vendor Management](#).

Any changes/amendments to original contracts must be drafted and/or reviewed and approved by the Chief Executive Officer, who may request expertise and support from FNEI's Legal Counsel. The Chief Financial Officer will also be required to review and approve any financial changes to ensure any financial implications from the contract amendments are known. Refer to [Appendix A: Delegation of Authority Table](#) for additional details on contract signing authorities.

## PROCESS MAP



## **1.8. Vendor Management**

### **POLICY**

All vendors that provide goods or services to FNEI are to be qualified with respect to safety, quality, and performance before contractually engaged by FNEI. FNEI will manage vendors as per agreed upon terms and conditions (i.e., as identified in contracts, purchase orders, etc.).

Vendor / contract management is often initiated at the initial meeting between the responsible Department Managers and Members, and Vendor Representatives. From that point, the Department Manager can exercise control through a series of progress reports or meetings. Ensuring results and cost control within the project schedule are chief objectives of vendor management. These objectives are to be documented in FNEI contract documents and purchase orders, etc.

Any issues noted will be documented in the contractor/supplier file and resolved by the Chief Executive Officer and considered in future procurement.

### **PROCEDURES**

Due diligence needs to be exercised in managing all vendor contracts to ensure that the parties fully meet their respective obligations as efficiently and effectively as possible. Once the contract has been awarded, the responsible Department controls and monitors performance to ensure all work is completed within the requirements of the contract.

The areas of control include:

- Safety;
- Environment;
- Cost control;
- Schedule control;
- Compliance with specifications, terms of reference, statement of work (quality assurance and control); and,
- Compliance with terms and conditions, deliverables, paperwork requirements and administrative aspects of the performance.

Problem areas are to be acted upon promptly and corrective action taken, as applicable, by the Department Manager. The Department Manager may request the Chief Executive Officer for additional guidance as needed to resolve issues.

The Department Manager should maintain vendor/contract files which should include copies of letters, meeting notes, and documentation of phone conversations as evidence that vendor management has occurred during the period of the contract.

FNEI will evaluate the performance of its vendors on an ongoing basis to:

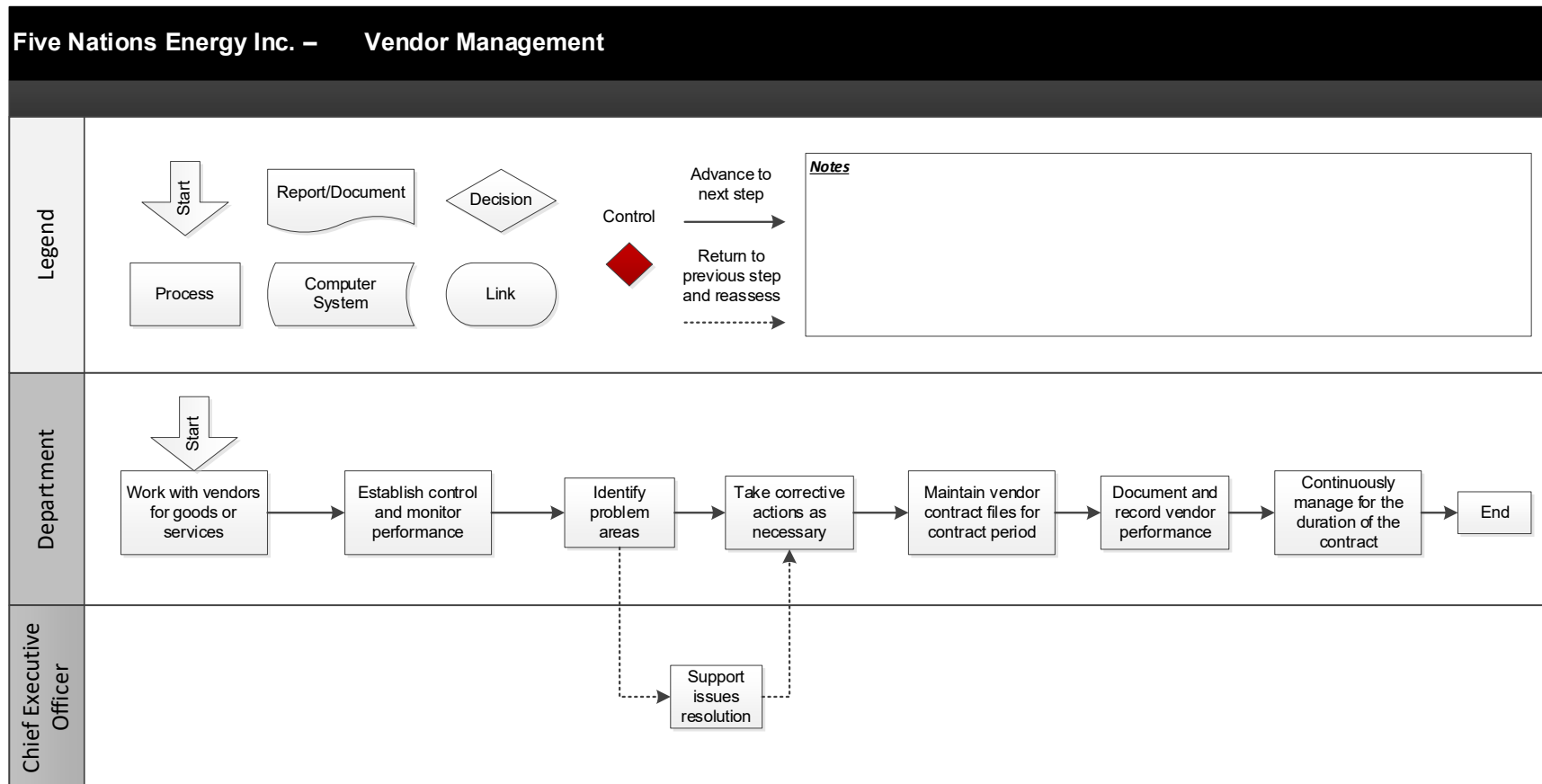
- Ensure that all contract requirements and technical specifications are met;
- Identify performance problems early and correct them with all contracting parties involved; and,
- Provide information on a supplier's performance when considering the supplier for future contracts.

Vendor performance evaluation ensures that all parties fully meet their obligations as efficiently and effectively as possible.

The Department Manager will document and record the vendor's performance. This record shall be reviewed and considered by all personnel when purchasing goods and services.



## PROCESS MAP



## **1.9. Risk Management**

### **Policy**

FNEI will identify, manage, and monitor risks related to the financial management system and the achievement of its goals.

The FNEI Finance Department will provide input and feedback into the Risk Management process, supporting overall activities including risk assessment, mitigation, treatment, etc. The FNEI Finance Department shall focus on finance related considerations (e.g., fraud, loans, financial reporting, investments, etc.).

### **PROCEDURES**

#### ***Annual Risk Assessment***

On an annual basis, the Chief Financial Officer will assess financial risks. Risks identified will include any risks that could impact FNEI's achievement of its strategic goals or its operations in general. The Chief Financial Officer will analyze the potential impact and likelihood of each risk identified and develop an appropriate Risk Mitigation Plan.

The Risk Mitigation Plan must ensure that risks related to specific business activities, loans, guarantees, indemnities, investments, general operations, and financial reporting risks are separately addressed, managed, and monitored. The Risk Mitigation Plan shall be approved by the Chief Executive Officer.

#### ***Fraud Risk Assessment***

On an annual basis, a Fraud Risk Assessment will be performed by the Chief Financial Officer.

#### ***Investment Risk Assessment***

Monitoring, reporting and approval of investment strategy and performance is detailed in [Section 6.5 Investments](#).

#### ***Financial Reporting Risks***

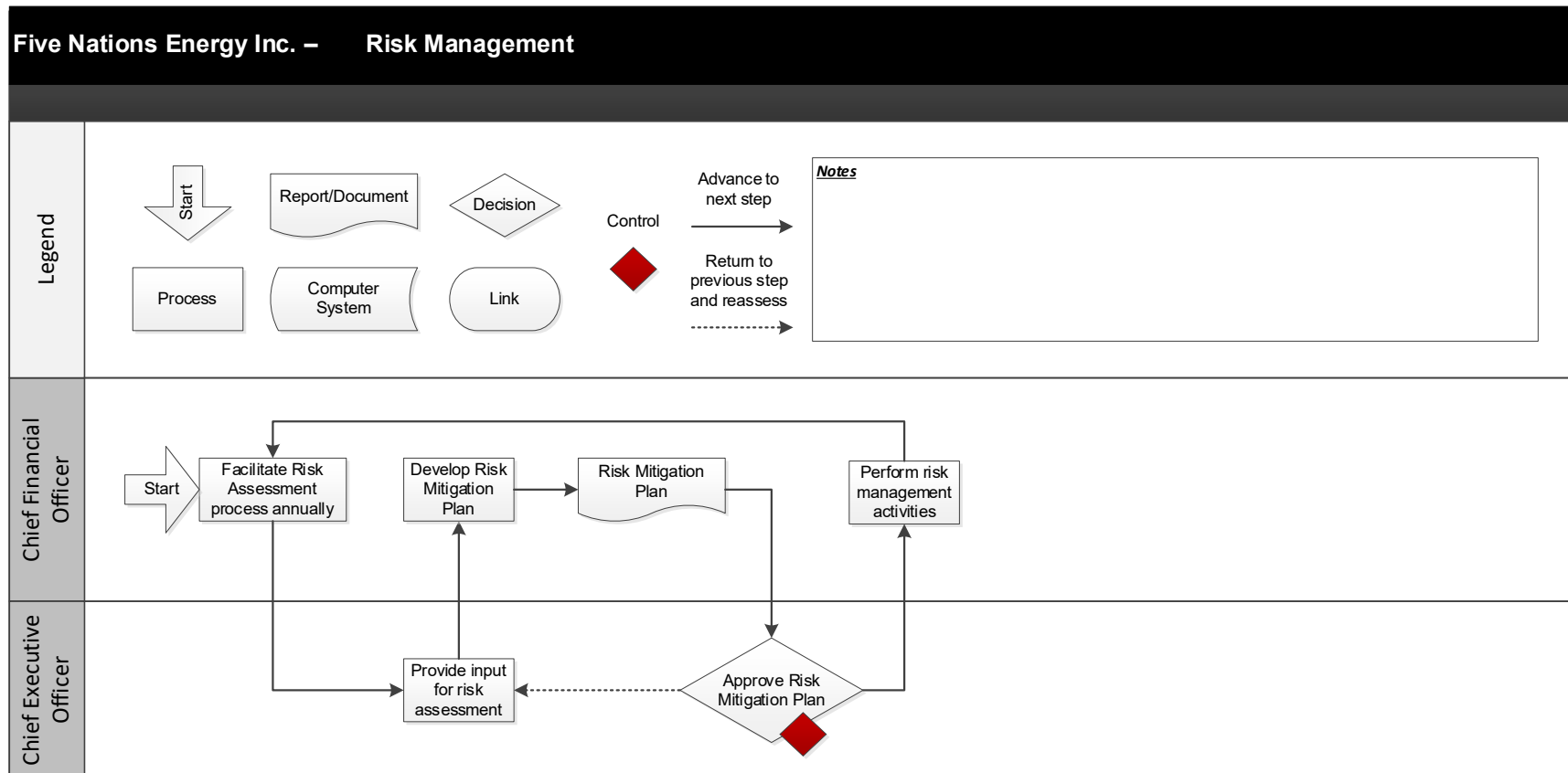
FNEI will follow the documented procedures in [Section 4.3 Monthly and Quarterly Reporting](#) to identify and mitigate the risk of a material misstatement in the quarterly and annual financial statements.

#### ***Insurance***

A separate section has been developed to provide guidance on management of insurance. Refer to [Section 1.10 Insurance](#).

Additional details related to Risk Management can be found in the *Regulatory Handbook*.

## PROCESS MAP



## 1.10. Insurance

### POLICY

FNEI will obtain sufficient insurance coverage for its operations, staff, and directors as part of its overall risk management strategy.

FNEI will procure and maintain in force all insurance coverage that is appropriate and commensurate with the risks under the care or control of FNEI.

These will include, at a minimum, the following insurance:

- Property;
- Boiler and Machinery;
- Non-owned aircraft;
- General Liability Insurance;
- Umbrella Liability;
- Directors and Officers Liability Insurance;
- Vehicle Insurance; and
- Accident Insurance.

An annual review of the insurance requirements will be undertaken to ensure that adequate coverage is in place.

The amount(s) set aside into FNEI's self-insurance reserve shall be approved by the Board of Directors based on recommendations from the Executive Committee and must be in line with the amounts stipulated under the financial covenants between FNEI and its lenders. Refer to [\*Section 6.3 Reserves and Restricted Funds\*](#) for additional information.

Withdrawals from the self-insurance reserve will only be permitted by a resolution of the Board of Directors.

The Ontario Energy Board currently requires FNEI to have a self-insurance reserve of \$4million. The maximum amount in the insurance reserve shall be reviewed annually with the amount to be recommended by the Executive Committee and approved by the Board of Directors.

### PROCEDURES

#### ***Identify significant material risks***

The Chief Executive Officer, with input from members of the management team, Executive Committee and Board of Directors, will develop a list of potential significant material risks to FNEI's financial assets, Tangible Capital Assets, and the operations of FNEI. This will include an examination of:

- Potential sources of liability of FNEI arising from its operations;
- Values and use of property and equipment;

- Values and use of assets under control of FNEI;
- Potential sources of liability for individuals such as officers, and staff members of FNEI; and
- Other risk areas that could result in a loss to FNEI and could be insured.

### ***Identify and procure insurance products***

Based on the risk analysis performed, the Chief Executive Officer will identify the risks where insurance coverage is appropriate.

In accordance with the [Section 8.2 Procurement](#), every three years the Chief Executive Officer will review options from several different insurance providers, as provided by the FNEI insurance broker, and will make a recommendation to the Executive Committee on which to accept. The Chief Executive Officer's determination of a recommended option will take into consideration the following:

- Cost of the coverage;
- Attributes and features of the proposed coverage including what is and is not covered and any gaps or exclusions; and
- Independent advice on the reputation and strength of proposed insurance providers.

Where appropriate, legal advice will be sought as required to ensure that the terms and conditions of coverage sought are appropriate for FNEI.

### ***Approval for insurance coverage***

The Board of Directors will review the proposed option presented by the Executive Committee and the Chief Executive Officer and document their approval.

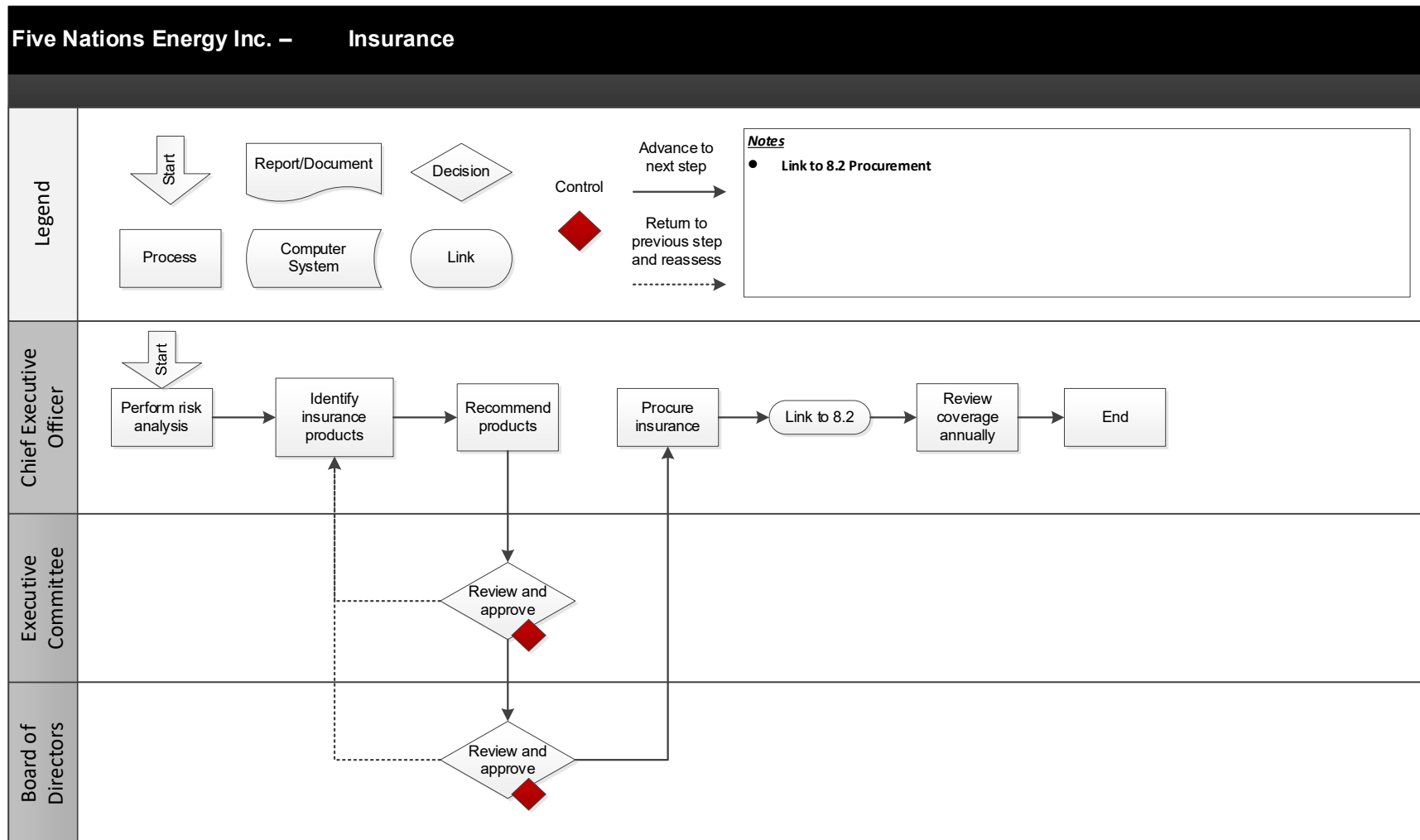
Once approved by the Board, procurement of the insurance coverage will follow [Section 8.2 Procurement](#).

### ***Maintenance of insurance coverage***

The Chief Executive Officer will maintain a Policy Schedule that includes policy expiration dates and payment dates and monitor on a regular basis to ensure that coverage does not lapse.

The Chief Executive Officer will review insurance coverage on an annual basis to ensure that it continues to adequately address the risks and meet the needs of FNEI.

## PROCESS MAP



## 2. Master Data Management

### 2.1. Chart of Accounts

#### **POLICY**

FNEI will align the Chart of Accounts to the Ontario Energy Board's Uniform System of Accounts, as prescribed in the *Accounting Procedures Handbook*<sup>5</sup>.

The Chief Financial Officer is to monitor any changes to the Uniform System of Accounts and will incorporate updates with any significant or material change. The Chief Executive Officer will approve any changes to the Chart of Accounts.

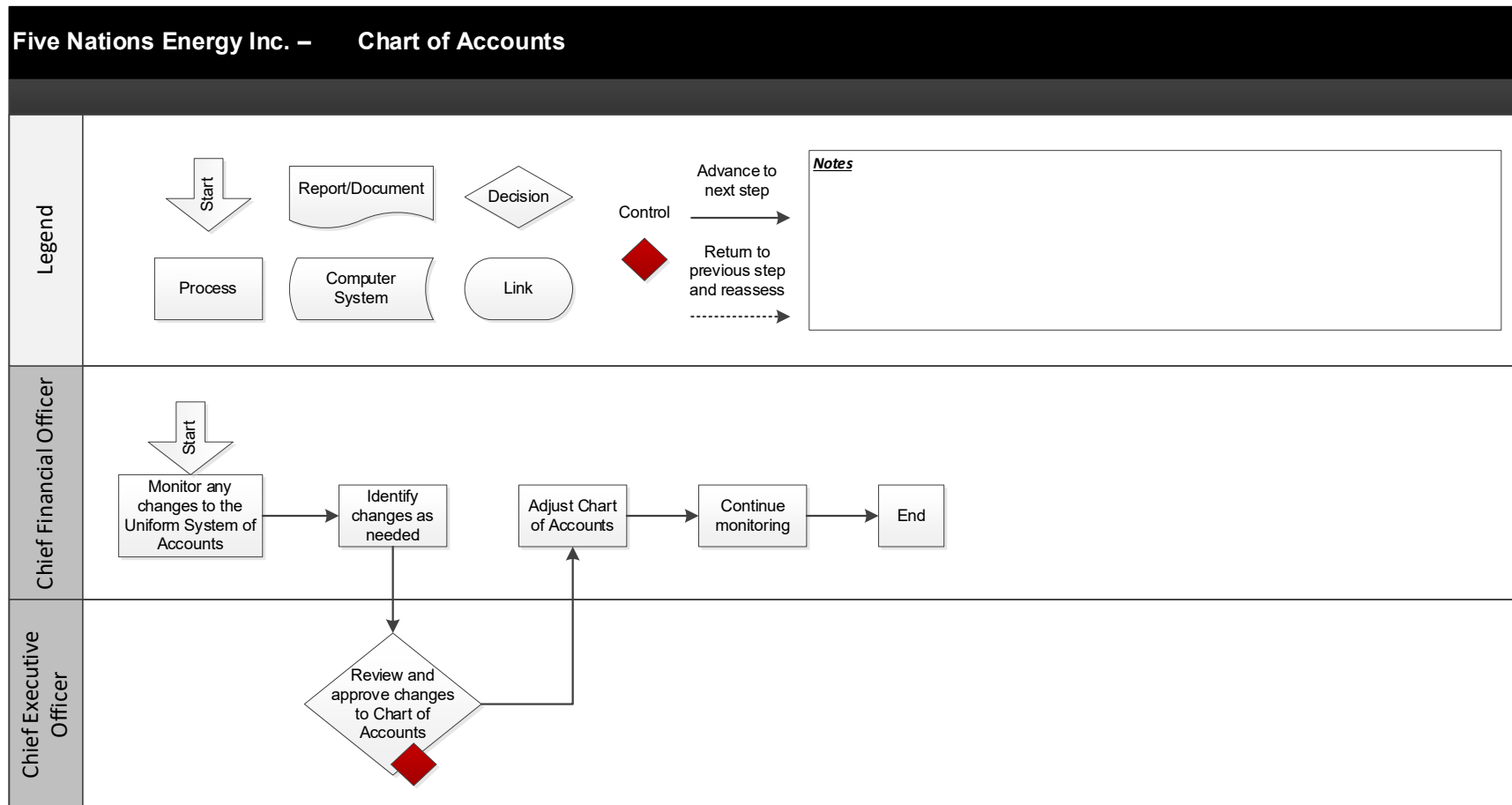
#### **PROCEDURES**

The Chief Financial Officer shall monitor any changes to the Ontario Energy Board's Uniform System of Accounts. If there are any material changes, the Chief Financial Officer shall identify the updates to the Chart of Accounts. A memo with the changes to the Chart of Accounts will be provided to the Chief Executive Officer for review and approval. Once approved, the Chief Financial Officer shall adjust the Chart of Accounts. Once the change has been completed, the Chief Financial Officer shall notify the Chief Executive Officer.

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<sup>5</sup> <https://www.oeb.ca/sites/default/files/uploads/documents/regulatorycodes/2019-01/Accounting-Procedures-Handbook-Elec-Distributors-20120101.pdf>

## PROCESS MAP





## **2.2. Vendor Master File**

### **POLICY**

Any vendors that require set up within the financial system will submit a request to the Office Manager. All requests submitted will include appropriate supporting documentation. The Office Manager will ensure that all appropriate documentation is gathered before vendor set up.

Access to make changes to the Vendor Master File is restricted to the Office Manager with approval provided by the Chief Executive Officer.

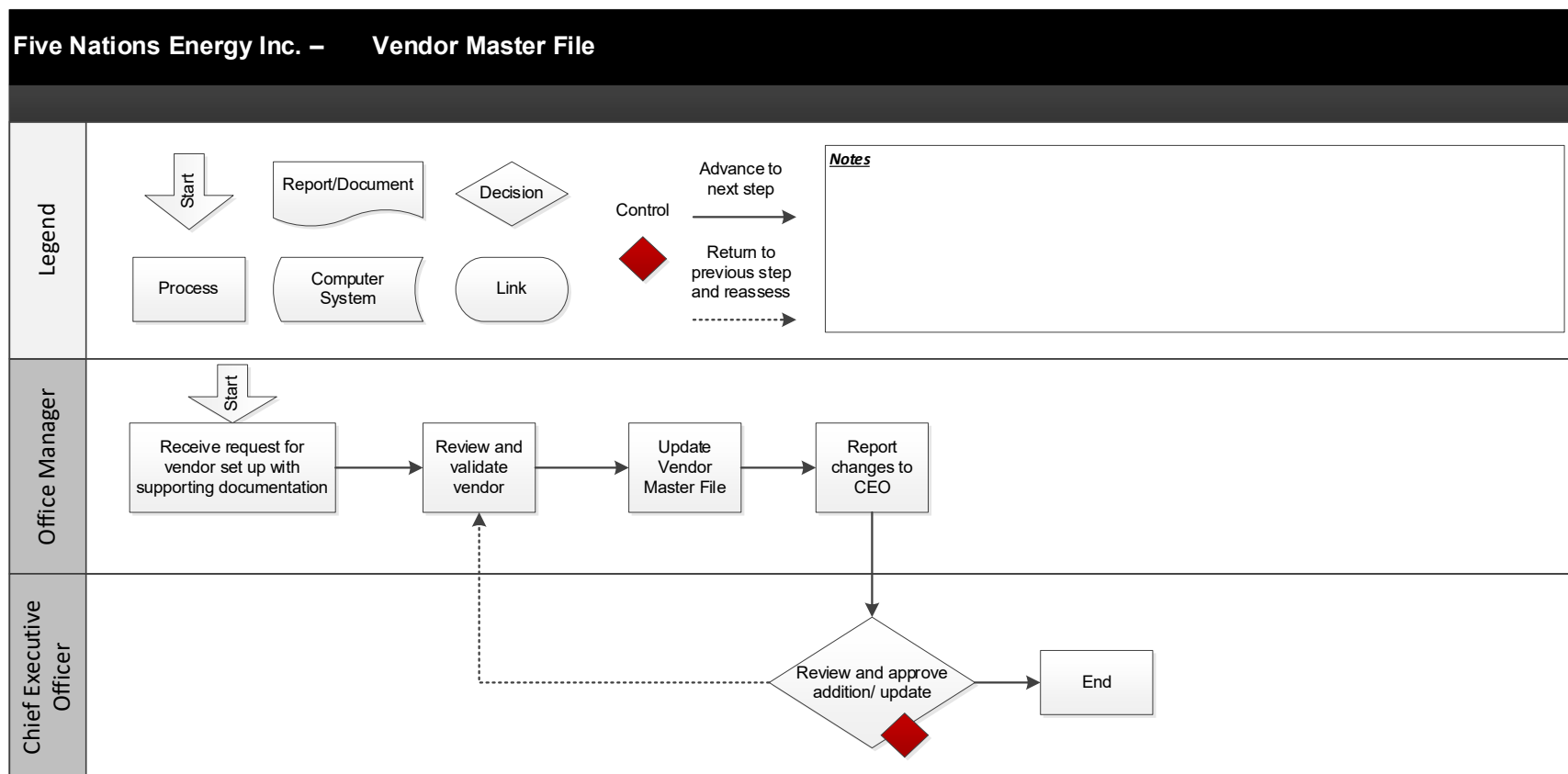
### **PROCEDURES**

All requests to set up a vendor in the financial system are to be provided to the Office Manager. Requests must be made in writing and must be accompanied by supporting documentation. The supporting documents should include a copy of a void cheque to validate the accuracy of vendors payment details and copy of any business certificate or tax certificate to validate the vendor's identity. The Office Manager shall take appropriate steps to validate the vendors by reviewing the documents and/or by contacting the vendor directly.

Once the vendor is verified, the Office Manager will add or update the vendor master file in the financial system and provide the changes for the Chief Executive Officer's review.

The Chief Executive Officer will review the adequacy of the change against supporting documents and approve the changes in the financial system. The Chief Executive Officer will specifically confirm the accuracy of the vendor's bank account details, net pay terms and confirm the identity of the vendor through business or tax certificate.

## PROCESS MAP



## **2.3. Customer Master File**

### **POLICY**

Requests for customer set up within the financial system shall be submitted to the Office Manager. All requests shall include supporting documentation. The Office Manager will ensure that all appropriate documentation is gathered before customer set up.

Access to make changes to the Customer Master File is restricted to the Office Manager with approval provided by the Chief Executive Officer.

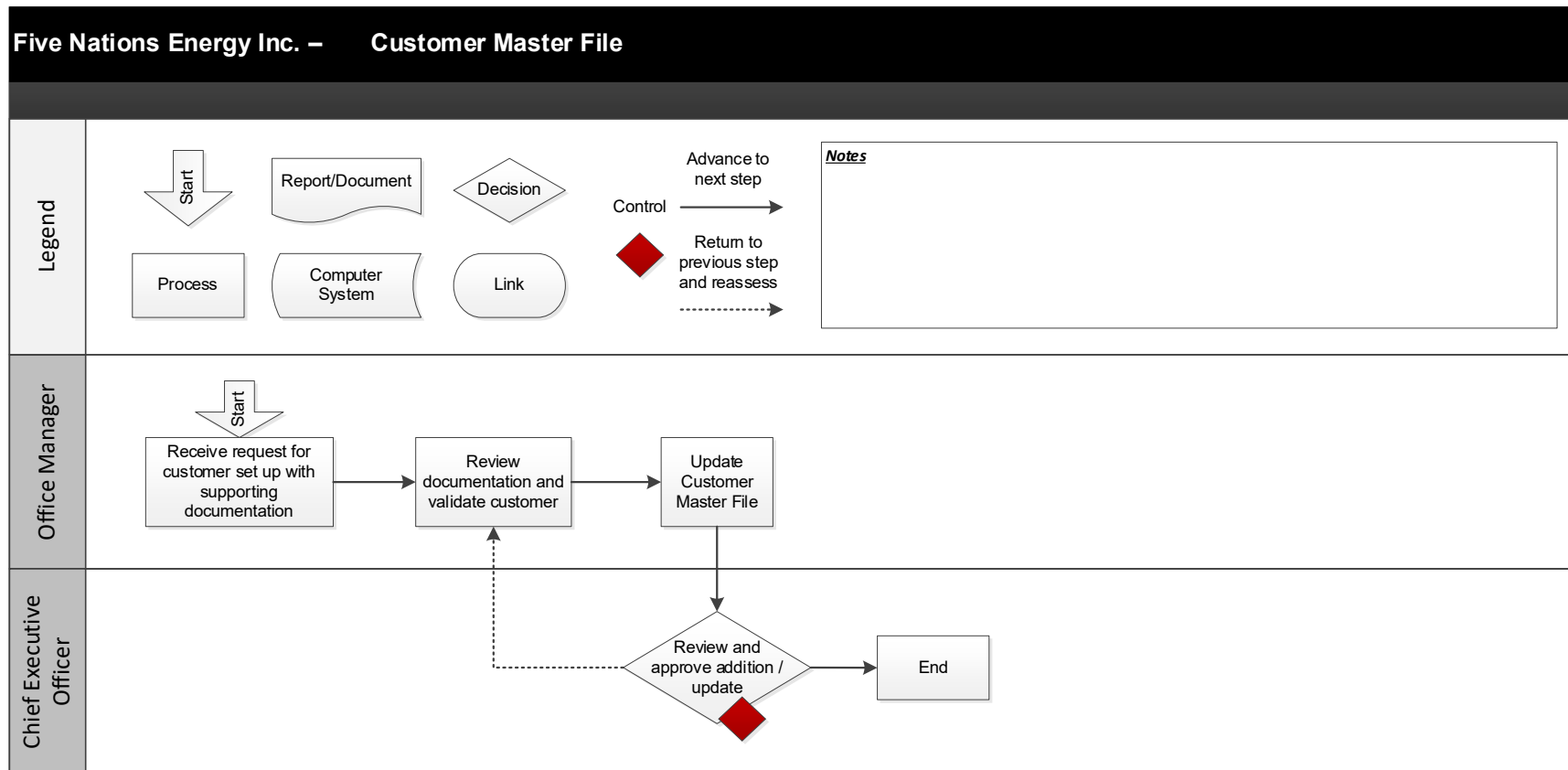
### **PROCEDURES**

All requests to set up a customer in the financial system are to be provided to the Office Manager. Requests must be made in writing and must be accompanied by supporting documentation, appropriate to evidence the validity of the customer.

Once the information is verified, the Office Manager will add or update the Customer Master File in the financial system and provide the changes for the Chief Executive Officer's review.

The Chief Executive Officer will review the adequacy of the change against supporting documents and approve the changes in the financial system.

## PROCESS MAP



## **2.4. Payroll Master File**

### **POLICY**

The Office Manager is responsible for maintaining the Payroll Master File. The Chief Executive Officer will submit a request to the Office Manager for new employee set up or update. All requests submitted will include any supporting documentation, including all appropriate approval from the Chief Executive Officer and/or Board of Directors.

The Office Manager will ensure timely updates to the Payroll Master File as part of the onboarding / off-boarding process. The Office Manager will ensure that all appropriate documentation is gathered before employee set up.

Access to make edits to the Payroll Master File is restricted to the to the Office Manager with approval provided by the Chief Executive Officer.

FNEI has an arrangement with Mushkegowuk Council to process payroll on behalf of FNEI. All changes to payroll are to be promptly communicated to Mushkegowuk Council.

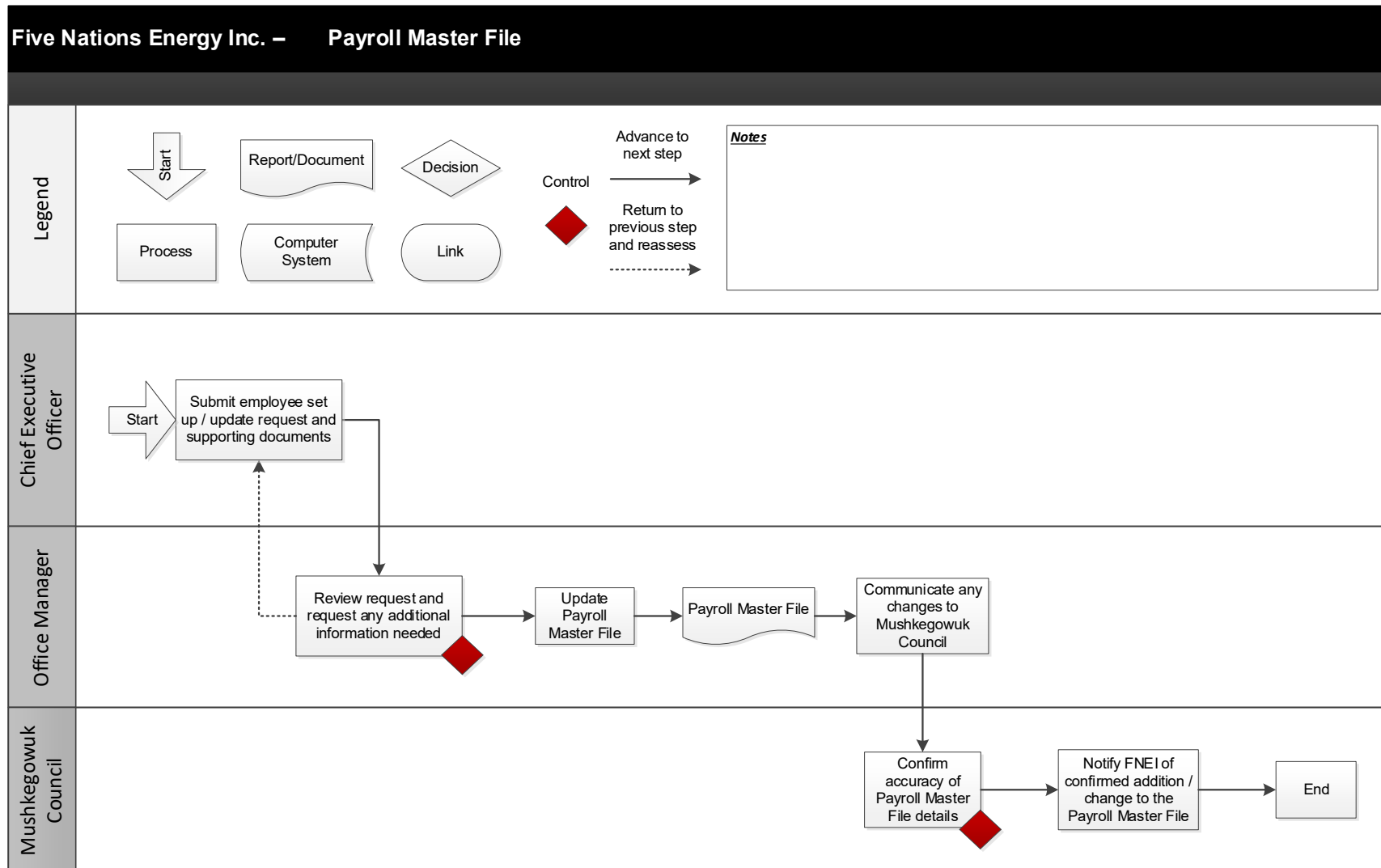
### **PROCEDURES**

The Chief Executive Officer will submit requests for employee set up or update to the Officer Manager, along with supporting documentation and approvals with their request.

The Office Manager will review the request and the supporting documentation and either add or update the Payroll Master File. Once updated the Payroll Master File will be sent to Mushkegowuk Council, along with any supporting documentation.

Mushkegowuk Council will review the information provided and update their payroll systems accordingly. Mushkegowuk Council will specifically confirm the accuracy of the salary details and related approvals. Once set up is complete, Mushkegowuk Council will notify the Office Manager of the change/addition.

## PROCESS MAP



## **3. Financial Planning and Analysis**

### **3.1. Five-Year Capital Plan**

#### **POLICY**

FNEI shall prepare a Five-Year Capital Plan that has a planning period comprised of five concurrent fiscal years. A new Five-Year Capital Plan shall be developed once the current cycle has lapsed. The Five-Year Capital Plan shall be based on FNEI's strategic objectives and is based on projections of revenues and expenditures.

The Five-Year Capital Plan shall be created in alignment with requirements set out by the Ontario Energy Board (e.g., alignment with the Uniform System of Accounts).

FNEI's Board of Directors must approve the Five-Year Capital Plan.

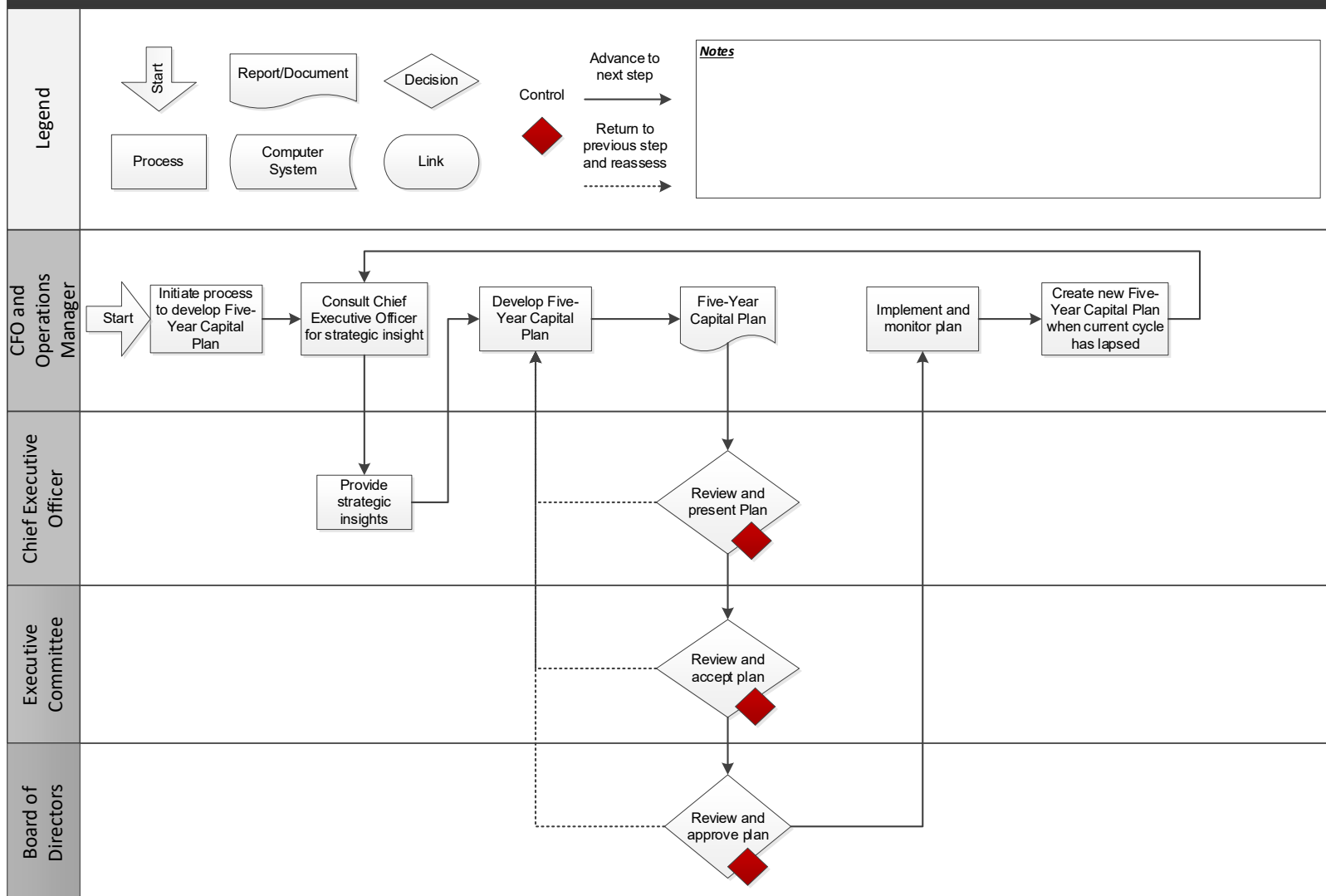
#### **PROCEDURES**

The Chief Financial Officer and Operations Manager shall initiate the process to develop the Five-Year Capital Plan. The Chief Financial Officer and Operations Manager shall consult with the Chief Executive Officer on the strategic objectives of FNEI to integrate into the planning process. Chief Financial Officer and Operations Manager shall compile the information into a draft Five-Year Capital Plan. This information is packaged and provided to the Chief Executive Officer for review.

Once reviewed, the draft Five-Year Capital Plan will be presented for discussion at an Executive Committee meeting. The Committee may accept the plan as presented or request amendments, within the context of the operating objectives and the strategic plan. The Executive Committee will recommend the Five-Year Capital Plan to the Board of Directors for approval.

## PROCESS MAP

### Five Nations Energy Inc. – Five-Year Capital Plan





## 3.2. Annual Budgets

### POLICY

An annual planning and budgeting process that is integrated with the operational and long-term strategy of FNEI must be established.

FNEI shall prepare and Operational Budget and Capital Budget.

The annual Operational Budget and Capital Budget must encompass all of the operations for which FNEI is responsible and must identify:

- Each anticipated source of revenue and estimate the amount of revenue from each of these sources, including taxes, fees and charges, transfers from Canada or a Provincial or Territorial government, grants and business operations, and proceeds from borrowing;
- Each anticipated category of expenditure and estimate the amount of expenditure for each category, including those for payments of principal and interest on debt, payments required for capital projects, payments required to address any deficits and payments for all other purposes; and
- Any anticipated annual and accumulated surplus or annual and accumulated deficit and the application of year-end surplus.

FNEI's Operational Budget shall be based upon the rates application approved by the Ontario Energy Board.

On or before November 15 of each year, the Chief Executive Officer and the Chief Financial Officer must prepare and submit to the Executive Committee draft of the annual Operational Budget for review. The Chief Executive Officer, the Chief Financial Officer and the Operations Manager must prepare and submit to the Executive Committee draft of the annual Capital Budget for review.

On or before December 15 of each year, the Executive Committee must review the draft annual Operational Budget and Capital Budget and recommend annual Operational Budget and Capital Budget to the Board for approval.

On or before December 31 of each year, the Board must review and approve the annual Operational Budget and Capital Budget for FNEI for the next fiscal year.

FNEI's Operational Budget and Capital Budget must not be changed without the approval of the Board.

## PROCEDURES

### ***Planning Process***

A planning session will be held within 3 months prior to the start of the fiscal year being planned for. The planning session will generally include:

- Board members, members of the Executive Committee, the Chief Executive Officer, the Chief Financial Officer, and other representatives as identified;
- Establishment or communication of current year and five year operational and capital goals and objectives based on priorities established by the Board of Directors;
- Establishment or update of key budgetary assumptions, budgetary constraints, and cost drivers for the current year;
- Establishment or update of the Five-Year Capital Plan schedule to ensure the effective management of capital assets which identifies and prioritizes expected needs, costs, and expected sources of financing; and
- Establishment or update of strategies, goals, and objectives for the strategic plan – the plan that details FNEI’s longer-term priorities and the plan for resources needed to meet the objectives of the plan.

### ***Budget Preparation***

For both the Capital Budget and Operational Budget, a good starting point for budgeting is an examination of the previous year’s budget and variances; this can aid in determining shortfalls and areas that could provide savings for FNEI.

The Chief Financial Officer shall initiate the preparation of the Operational Budget and shall notify the Operations Manager to initiate the preparation of the Capital Budget. The Chief Financial Officer shall prepare the Operational Budget with support from the Chief Executive Officer. The Operations Manager shall prepare the Capital Budget, with support from the Chief Executive Officer and the Chief Financial Officer.

Budgets shall include (where appropriate):

- Salaries and benefits;
- Operating costs;
- Supplies;
- Equipment;
- Training;
- Community support funds such as scholarships, donations, and amounts set aside for FNDI investments (refer to [Section 6.5 Investments](#) for additional details);
- Capital improvement projects (refer to [Section 3.1 Five Year Capital Plan](#)); and
- Capital equipment expenditures, etc.

All items must be specified according to program and account number. Exact budget line items will be dictated by the nature of each program and should align with the Uniform System of Accounts as required by the Ontario Energy Board.

The Capital Budget and Operational Budget shall be reviewed and approved by the Chief Executive Officer. The Chief Executive Officer will present the draft Capital Budget and Operational Budget for discussion at an Executive Committee meeting. The Committee may accept the estimates as presented or request amendments, within the context of the operating objectives and the strategic plan.

Where a projected deficit exists, the Executive Committee will provide recommendations to the Board on plans to eliminate the budget deficit in a future year, or transfer within from another Department.

The final draft Capital Budget and Operational Budget recommended for approval to the Board by the Executive Committee will be approved by the Board no later than December 31 of the fiscal year preceding the budget year. Once approved, the Chief Financial Officer will enter the budget into the financial system.

### ***Adjustments to Plans and Budgets***

An adjustment process is in place to adjust the Capital Budget and Operational Budget.

The circumstances to adjust the Capital Budget and Operational Budget are limited to substantial change in the forecasted revenues or expenses or in the expenditure priorities of the Board, which may include the following:

- External factors that impact revenue arrangements;
- Impacts related to capital project adjustments;
- Unforeseen changes to budget assumptions; and/or
- Board approved changes to priorities or operating objectives.

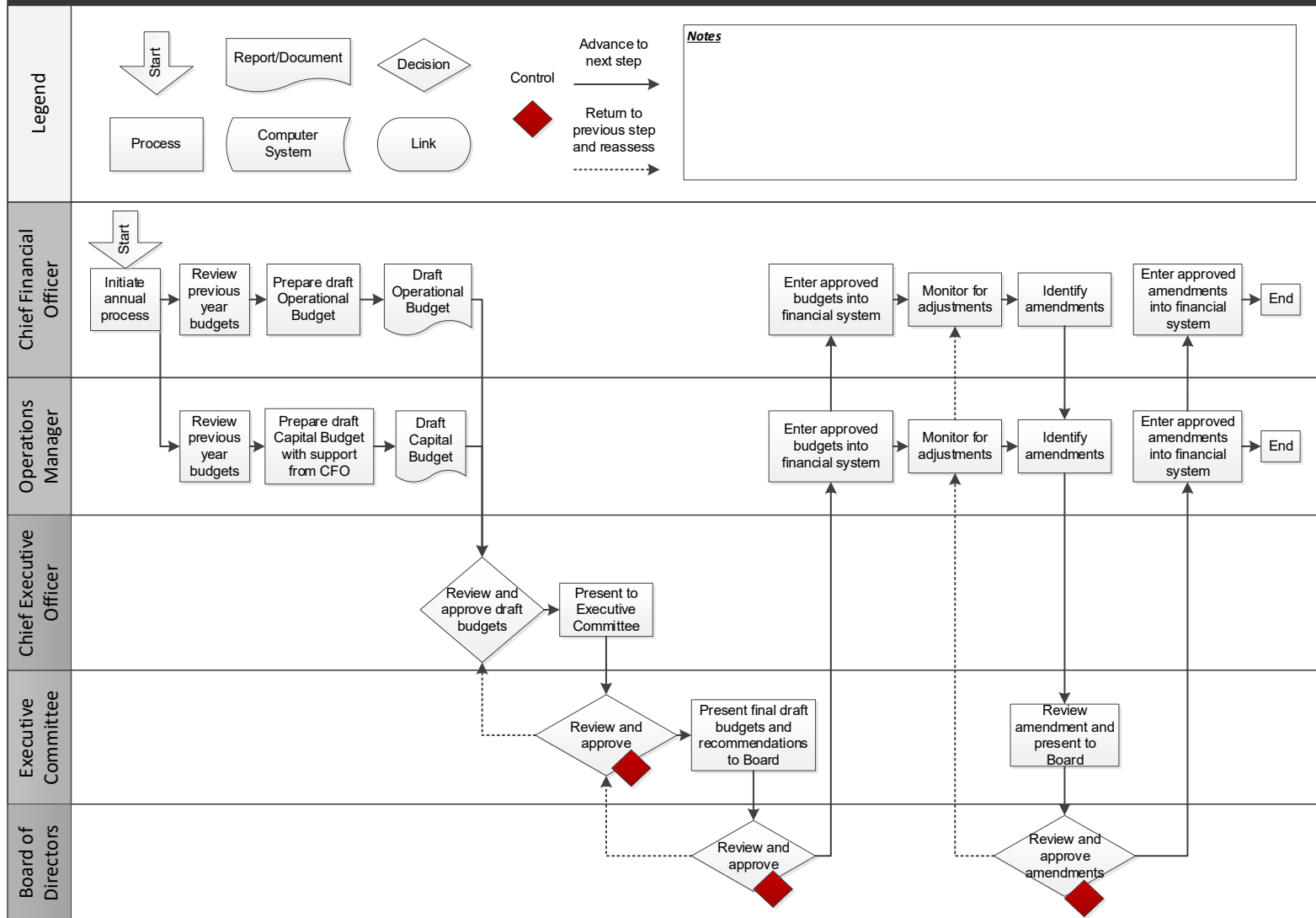
Significant time-sensitive adjustments should be promptly brought to the Executive Committee for review and recommendation to the Board.

The Chief Executive Officer must submit to the Executive Committee for review a draft amendment of the Capital Budget and Operational Budget. The Executive Committee must review the draft amendment of the Capital Budget and Operational Budget and recommend an amendment to the Board for approval. The Board must review and shall provide approvals as required to the amendment of the Capital Budget and Operational Budget.

Once approved, the Chief Financial Officer will enter the adjustments to the Capital Budget and Operational Budget into the financial system.

## PROCESS MAP

### Five Nations Energy Inc. – Annual Budgets



### **3.3. Cash Forecasting**

#### **POLICY**

To ensure FNEI has adequate cash to pay for day-to-day operations and other expenditures, the Chief Financial Officer is required to perform cash forecasting by tracking the cash inflows and outflows.

Forecasting will be completed monthly and be on a continuous basis.

#### **PROCEDURES**

The Chief Financial Officer will prepare the cash forecast. Before completing any forecasting, the Chief Financial Officer will review current bank balances. The Chief Financial Officer will also review any other supporting documentation required to complete the forecasting, such as a revenue tracker, listings of upcoming payments and receivables, and bank reconciliations.

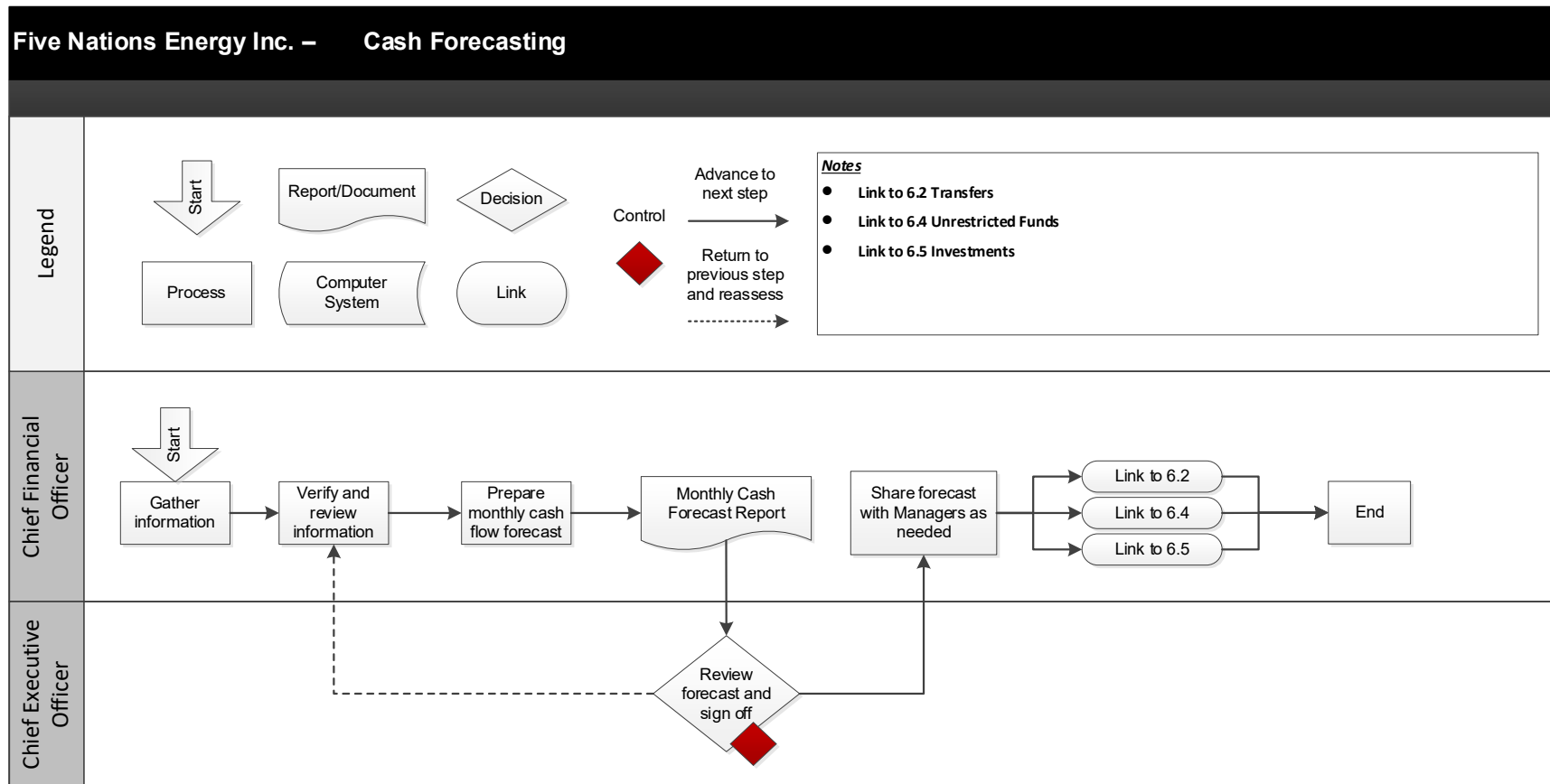
Once the proper information has been gathered, reviewed, and verified, the Chief Financial Officer will prepare the Monthly Cash Forecast Report and submit it to the Chief Executive Officer for review and sign off.

The Chief Financial Officer may share the Monthly Cash Forecast Report with Senior Management or other Managers as appropriate for their duties.

The Chief Financial Officer will ensure cash availability and may initiate the processes identified below:

- [Section 6.2 Transfers](#)
- [Section 6.4 Unrestricted Funds](#)
- [Section 6.5 Investments](#)

## PROCESS MAP



### **3.4. Budget Review / Monitoring / Variance Analysis**

#### **POLICY**

FNEI shall ensure that the Operational Budget and Capital Budget are reviewed and monitored on a frequent basis. Variance analysis against Operational Budget and Capital Budget will be completed monthly.

All variances of significance will be investigated in a timely manner. Variances of significance will be reported to the Executive Committee.

#### **PROCEDURES**

On a monthly basis, the Chief Financial Officer prints out the Budget Reports, one report against the Operational Budget, and another report against the Capital Budget. The report includes the current month's budget, actual costs, the resulting variances, as well as the year-to-date budget, actual costs, and variances. The report is submitted to the Chief Executive Officer. A copy is provided to the Operations Manager.

The Chief Financial Officer and Operations Manager should verify that all expenses/revenues contained in the general ledger are accurate and posted correctly. The Chief Financial Officer and Operations Manager should also examine the Budget Reports to monitor scheduled expenditures, revenue received, etc. The overall budget should be used as a comparison to determine if expenditures are on track, in surplus or deficit. The Chief Financial Officer and Operations Manager should be aware and watch closely the variances that are accumulating. Efforts must be made to stay within budgetary constraints at all times. The Chief Financial Officer shall collect information on Capital (as provided by the Operations Manager) and Operational budget variances into a Budget Variance Report. The Budget Variance Report will be provided to the Chief Executive Officer and will include:

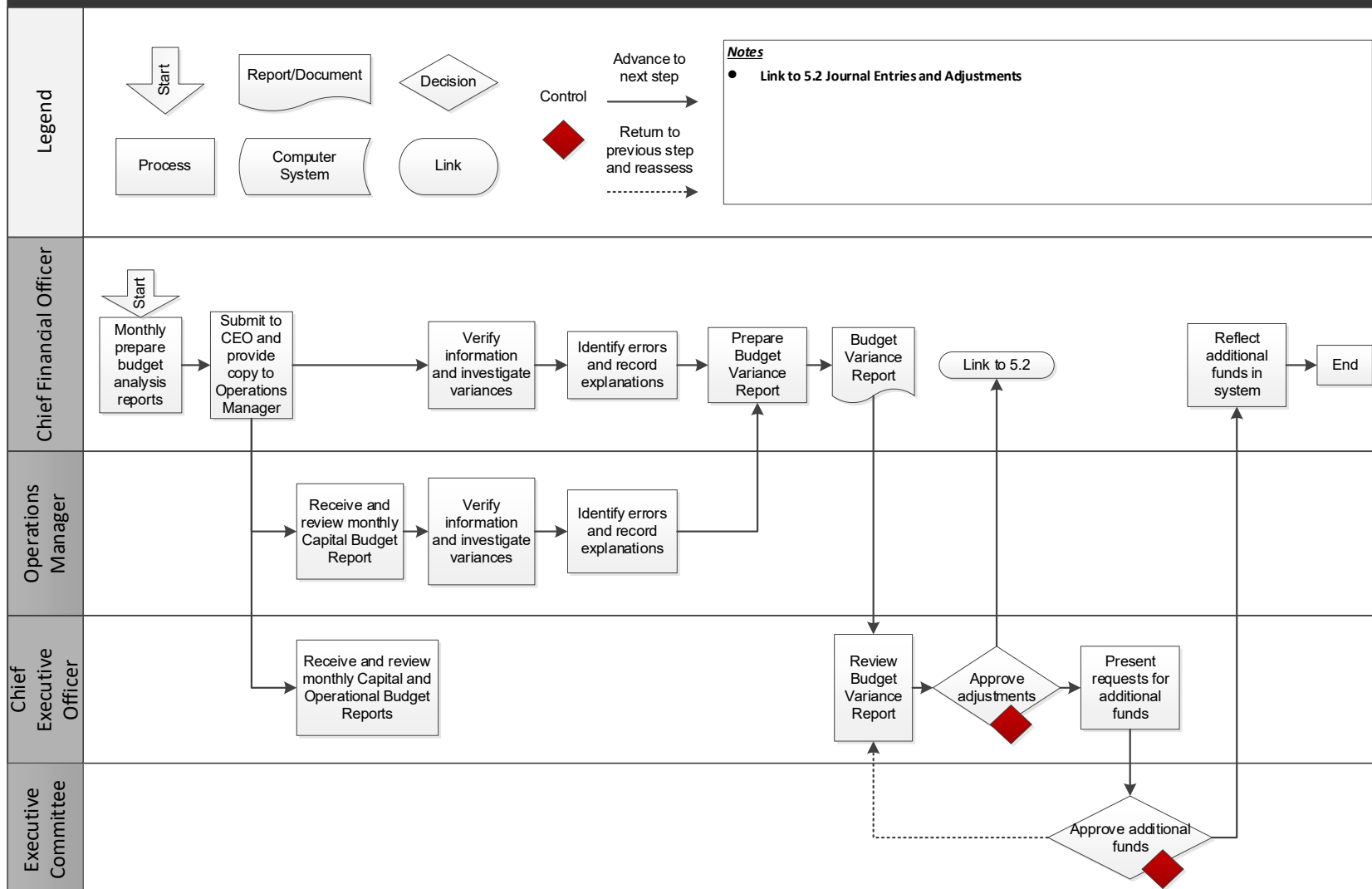
- Identification of any errors and respective explanations;
- Any adjustments to resolve errors; and
- Any requests for additional funds to manage deficits, including an explanation of why the additional funds are required.

The Chief Executive Officer will examine the Budget Variance Report and shall review and approve any adjustments to resolve errors. The Chief Financial Officer shall execute the adjustments once approved per [Section 5.2 Journal Entries and Adjustments](#).

Requests for additional funds that are required to continue to meet operating requirements will need to be presented to the Executive Committee for approval. The Executive Committee will review the budgetary request and decide as to how to deal with the deficit.

## PROCESS MAP

### Five Nations Energy Inc. – Budget Review / Monitoring / Variance Analysis





### **3.5. Project Planning**

#### **POLICY**

A Business Case and Project Plan including a budget must be developed and approved by the Executive Committee to initiate a capital project.

The budget for specific capital projects shall be approved by the Board of Directors.

Capital projects above \$50,000 are to have a detailed budget including a line item for the internal labour component if any portion of the project will be self-constructed. Refer to FNEI's *Labor Capitalization Procedures* for additional information on labour capitalization for projects, which is available under separate cover.

For capital projects with a total cost of over \$50,000, a Project Manager must be identified. The Project Manager will be accountable for ensuring the project is carried out according to the Project Plan and Budget.

Project costs will be assigned an accounting code in order that expenditures relating to the project can be tracked.

The Project Manager will inform the Chief Executive Officer, who will in turn inform Executive Committee once it is anticipated that a certain project will exceed the original approved budget or if the project will be late in its completion; and must be signed off by the Secretary/Treasurer or Chief Executive Officer.

When a project's budget variance exceeds 20%, approval is required from the Board of Directors for the project to proceed further.

The Board of Directors must take reasonable steps to ensure that capital projects for construction of transmission lines, buildings or other improvements are financed, planned, and constructed in accordance with procedures and to standards identified by the Ontario Energy Board.

The Chief Executive Officer will report to the Executive Committee on steps taken to ensure these results are met for every Capital Project.

Additional information on Project Management and Sub-Committee's for projects can be found in the *Regulatory Handbook*, available under separate cover.

#### **PROCEDURES**

##### ***Capital project planning and monitoring***

Each capital project valued over \$50,000 shall have a documented business case for the capital project, that will contain, at a minimum, the following:

- The financial viability of the project (i.e., how it will be financed, what the expected return on investment will be, etc.);
- Project operating requirements (e.g., annual operating and maintenance costs, cash flow considerations, etc.); and
- A project risk assessment.

The Operations Manager (or Project Manager where applicable), in consultation with Subject Matter Experts, will coordinate project planning, design, engineering, tendering, bid selection, and environmental requirements for each capital project. Refer to [Section 8.2 Procurement](#) for additional information on tendering. Capital project consultants, including engineers, may be engaged to carry out these obligations at the discretion of the Chief Executive Officer.

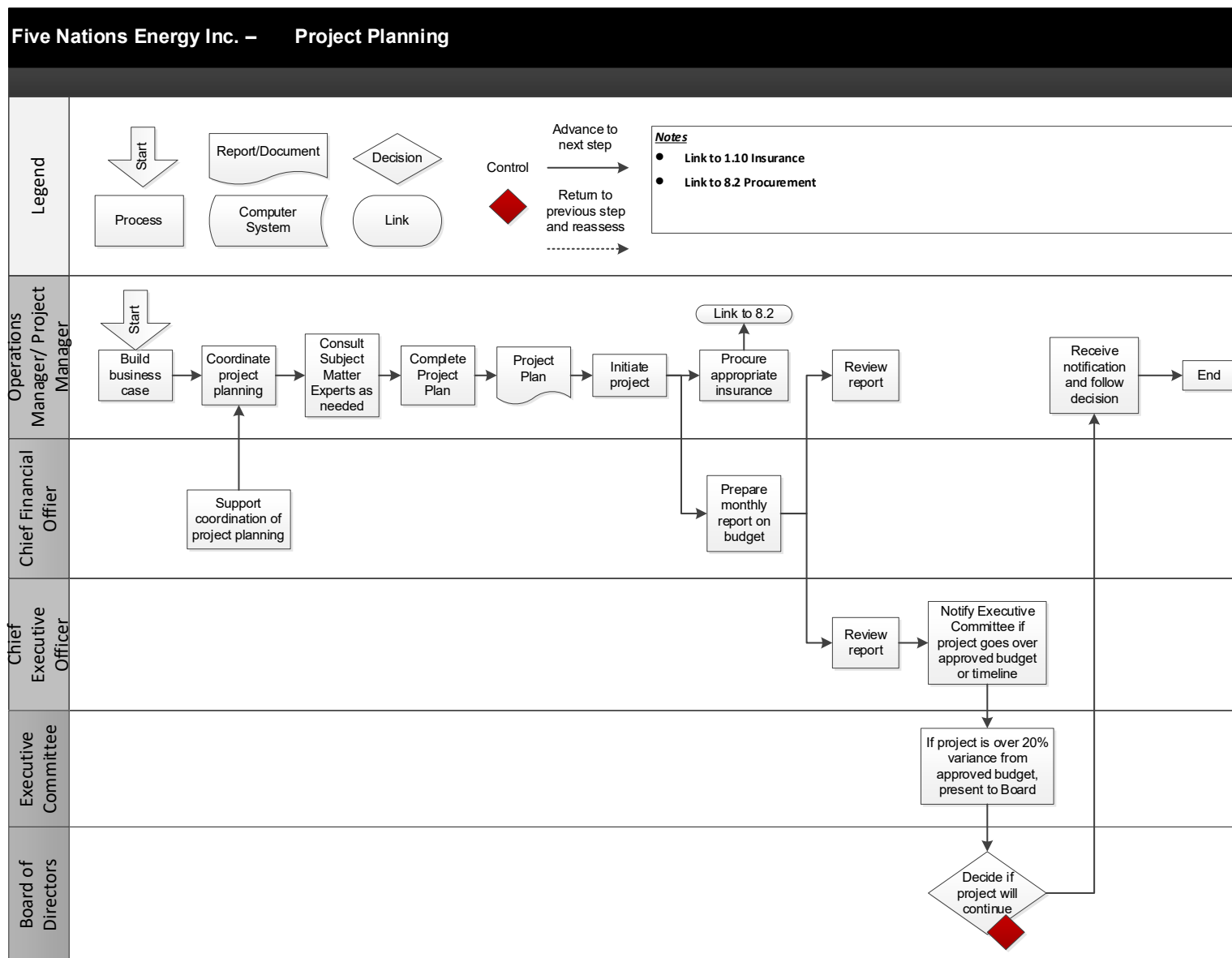
The Chief Financial Officer will support coordination project costing, budgeting, financing, and approval for each capital project. The Chief Financial Officer will prepare a report on budget to actual expenditures for capital projects and will provide the report to the Operations Manager, Project Manager (where relevant), and the Chief Executive Officer on a monthly basis. The Chief Executive Officer will inform the Executive Committee once it is anticipated that a certain project will exceed the original approved budget. Any projects exceeding a 20% overrun will be presented to the Board of Directors, who shall decide if the project shall continue.

### ***Construction management***

The Operations Manager (or Project Manager where relevant) will procure appropriate course of construction insurance for each capital project in accordance with [Section 1.10 Insurance](#).

The Chief Financial Officer will process contractor progress payments, manage construction holdbacks and payment as required and will organize audit procedures in conjunction with the annual audit.

## PROCESS MAP



## 4. Financial Reporting

### 4.1. Regulatory Reporting

#### POLICY

FNEI is required to provide reporting to the Ontario Energy Board as part of its regulatory obligations.

The Ontario Energy Board has a guideline for *Reporting and Record Keeping Requirements*<sup>6</sup>(RRR). Reporting is to be filed online using the Ontario Energy Board's *Online Filing System*<sup>7</sup>.

The Chief Financial Officer shall support the preparation for reporting to the Ontario Energy Board, providing the necessary financial information as required.

Additional information on regulatory reporting, including a schedule of reporting requirements (including non-financial reporting) can be found in the *Regulatory Handbook*, available under separate cover.

The table below identifies the financial information that FNEI is required to report to the Ontario Energy Board.

| Financial Information reported to Ontario Energy Board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Timing / Cadence     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Balances of all deferral/variance accounts, their related sub-accounts and associated information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Annually by April 30 |
| Information on affiliate arrangements and transactions for the preceding calendar year, as follows:<br><br>a) For each affiliate with which the transmitter has or had an Affiliate Contract for the provision of a service, resource, product or use of asset from the transmitter to the affiliate; (i) the name of the affiliate; (ii) the number of Affiliate Contracts with the affiliate; and (iii) the total annual dollar value of all transactions under each such Affiliate Contract;<br><br>b) For each affiliate with which the transmitter has or had an Affiliate Contract for the provision of a service, resource, product or use of asset from the affiliate to the transmitter: (i) the name of the affiliate; (ii) the number of Affiliate Contracts with the affiliate; and (iii) | Annually by April 30 |

<sup>6</sup> <https://www.oeb.ca/regulatory-rules-and-documents/reporting-and-record-keeping-requirements-rrr>

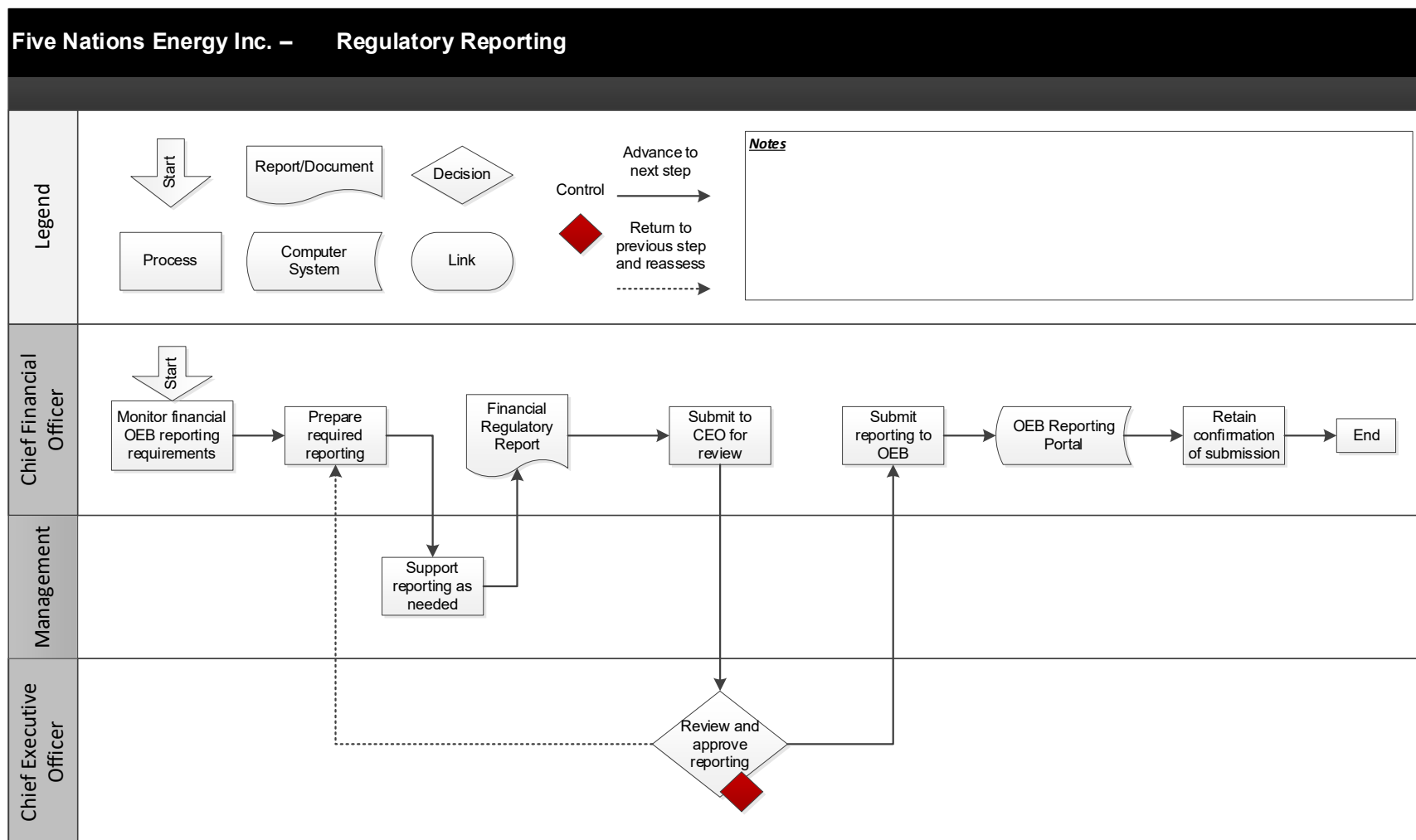
<sup>7</sup> <https://www.oeb.ca/regulatory-rules-and-documents/file-documents-online>

| Financial Information reported to Ontario Energy Board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Timing / Cadence                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <p>the total annual dollar value of all transactions under each such Affiliate Contract; and</p> <p>c) The highest total dollar value of all financial support to all affiliates outstanding at any time during the reporting period.</p>                                                                                                                                                                                                                                                                                                                                                                                     |                                        |
| <p>Audited financial statements for the preceding calendar year for the corporate entity regulated by the Ontario Energy Board.</p> <p>Where the financial statements of the corporate entity regulated by the Board contain material businesses not regulated by the Board, or where the regulated entity conducts more than one activity regulated by the Board, the transmitter shall disclose separately information about each operating segment in accordance with the Segment Disclosure provisions corporate entities are encouraged to adopt by the <i>Canadian Institute of Chartered Accountants Handbook</i>.</p> | Annually by April 30                   |
| <p>The regulatory return on equity (ROE) earned in the preceding fiscal year. The reported return is to be calculated on the same basis as was used in establishing the transmitter's base rates.</p>                                                                                                                                                                                                                                                                                                                                                                                                                         | Annually by April 30                   |
| <p>Any changes to its status with respect to having publicly traded securities or any changes to its list of affiliates that have publicly traded securities.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Within 10 days of the change occurring |

## PROCEDURES

The Chief Financial Officer is to monitor any finance related reporting to the Ontario Energy Board. When approaching reporting deadlines, the Chief Financial Officer shall prepare the required reporting, in consultation with FNEI Management where it applies. The reporting shall be presented to the Chief Executive Officer for review. Once reviewed, the Chief Financial Officer shall submit the required reporting through the Ontario Energy Board's online filing system. The Chief Financial Officer shall retain copies of past submissions for records management purposes.

## PROCESS MAP



## **4.2. Annual Report**

### **POLICY**

An Annual Report that details the progress towards the financial and operational goals of FNEI over the course of the fiscal year will be prepared within 180 days of the fiscal year end and will be presented at FNEI's Annual General Meeting (AGM).

The Chief Executive Officer will support the preparation of the Annual Report.

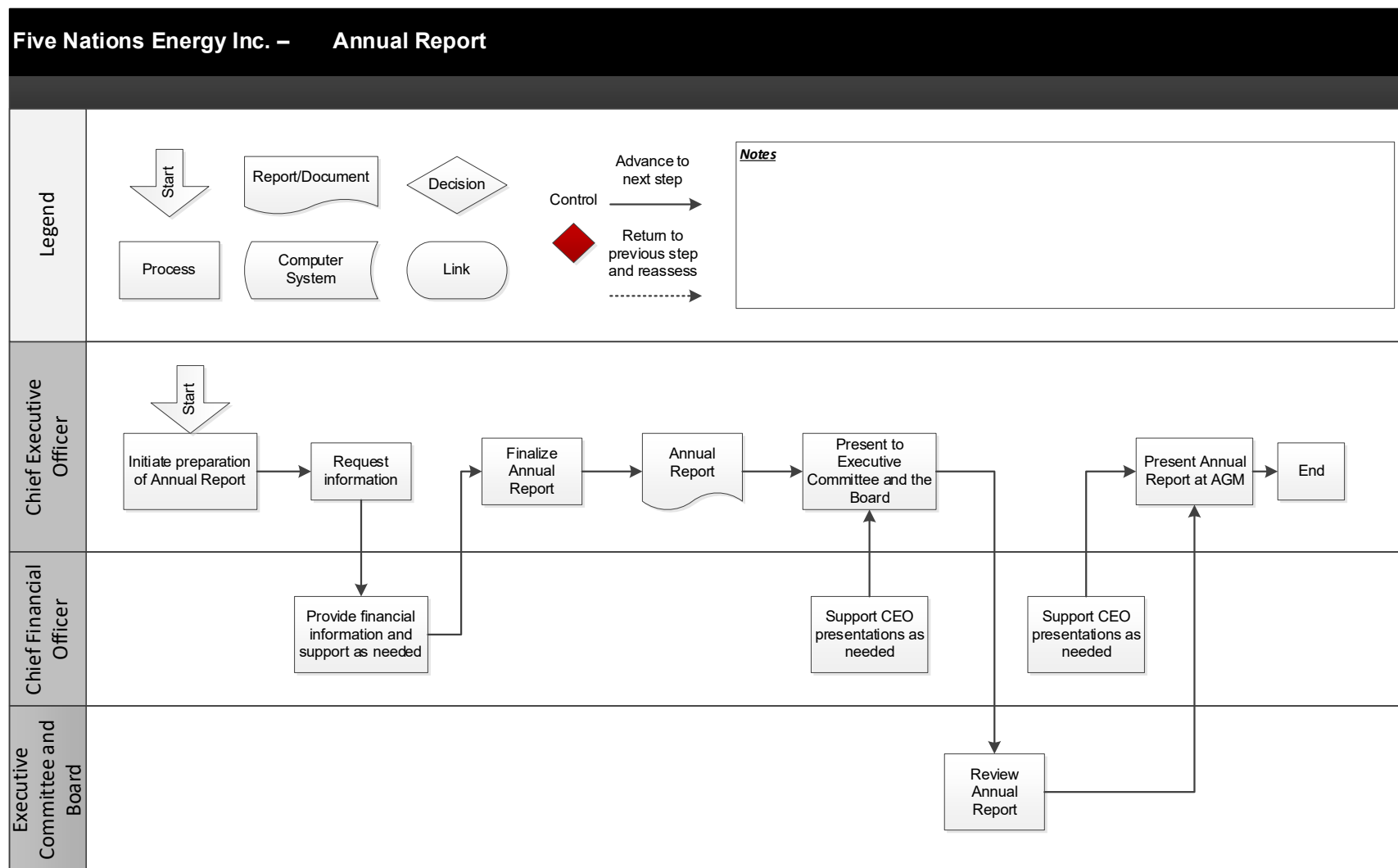
The Annual Report will contain, at a minimum, the following:

- A description of the services provided by FNEI and its operations;
- A review of FNEI's achievement towards its values, goals, and objectives;
- A progress report on any established financial objectives and performance measures of the FNEI; and
- The audited annual financial statements for the previous fiscal year.

### **PROCEDURES**

The Chief Executive Officer shall manage the completion of the Annual Report. Where financial information is required, the Chief Executive Officer will submit the request for information to the Chief Financial Officer. The Chief Financial Officer shall gather the required information and provide any additional information as required. The Chief Financial Officer shall provide this information in a timely manner, to ensure the Chief Executive Officer is able to finalize reporting within 180 days after the fiscal year end. The Chief Executive Officer shall present the Annual Report to the Executive Committee and Board of Directors prior to presenting at the Annual General Meeting. The Chief Financial Officer shall support the Chief Executive Officer in presentations as required.

## PROCESS MAP





## **4.3. Monthly and Quarterly Reporting**

### **POLICY**

Financial operational reports will be prepared on a regular basis.

#### ***Monthly Reporting***

The following reporting shall be completed and provided to the Chief Executive Officer and the Executive Committee on a monthly basis:

- A copy of FNEI's income statement and a consolidated balance sheet;
- A comparison of FNEI's budget to actual expenditures for operations;
- A detailed listing of accounts payable, including an aging report of the accounts;
- A detailed listing of accounts receivable, including an aging report of the accounts; and
- A report on budget to actual expenditures for Projects and any other capital expenditures. The Chief Executive Officer will inform the Executive Committee once it is anticipated that a certain project will exceed the original approved budget. Refer to [Section 3.5 Project Planning](#) for additional information on project budgets.

#### ***Quarterly Reporting***

The following reporting shall be completed and provided to the Executive Committee and Board of Directors a quarterly basis:

- A written report regarding the operations and maintenance of FNEI;
- A copy of FNEI's income statement, statement of cash flows, and a consolidated balance sheet;
- A comparison of FNEI's budget to actual expenditures for operations; and
- A comparison of FNEI's budget to actual expenditures for capital expenditures.

All quarterly reporting is to be provided to the Executive Committee and Board not more than 45 days after the end of the quarter.

In addition, FNEI is required to provide balances of all deferral/variance accounts, their related sub-accounts and associated information to the Ontario Energy Board. The report shall be provided in the form and manner required by the Ontario Energy Board and shall be submitted on the last day of the month following the quarter end.

#### ***Lending Institutions***

Quarterly financial reviews completed by the auditor will be forwarded to the lenders as required.

### **Other FNEI Stakeholders**

The Executive Committee shall recommend to the Board of Directors to designate from time-to-time other Stakeholders that shall be reported to.

### **PROCEDURES**

The Chief Financial Officer will develop a Financial Closing and Reporting Process Checklist for use at the end of each monthly/quarterly accounting period, which will include the procedures to complete for month/quarter end close. The Financial Closing and Reporting Process Checklist will include the following minimum procedures:

- Reconciliation of financial institution accounts. Refer to [Section 5.3 Bank Reconciliation](#);
- Review of accounts receivables, loan, and other receivable balances to identify late payments. Late payments followed up on and have been reviewed for collectability. Any necessary adjustment to the allowance for doubtful accounts has been prepared;
- Reconciliation of general ledger balances with sub-ledger balances (e.g., trade accounts receivable, trade accounts payable, etc.). Refer to [Section 5.1 Sub-Ledger Reconciliation](#);
- Search for unrecorded liabilities and preparation of accrual journal entries, including inquiries of managers for any invoices, expense reports, commitments or any other knowledge of liabilities incurred at reporting date;
- Analysis of revenue and expense accounts for budgetary variances and for reasonability. Where necessary, an account analysis will be prepared. Refer to [Section 3.4 Budget Review / Monitoring / Variance Analysis](#);
- Reconciliation of payroll expense to the payroll register and bank account balance;
- Preparation of non-recurring journal entries and journal entries not in the ordinary course of business, with supporting documentation. Refer to [Section 5.2 Journal Entries and Adjustments](#);
- The financial statements have been reviewed for accuracy, additions, and cross-references. The financial statements agree with the general ledger; and
- Draft financial statements have been provided to managers for their review, comment, and budgetary variance explanations and any issues or questions that have been resolved.

The Chief Financial Officer will prepare a highlights Memo for each Monthly and Quarterly Report prepared. The highlights memo will include:

- Financial Performance, specifically:
  - o An assessment of the overall financial situation for FNEI (i.e., surplus, deficit, adequate reserves, etc.);

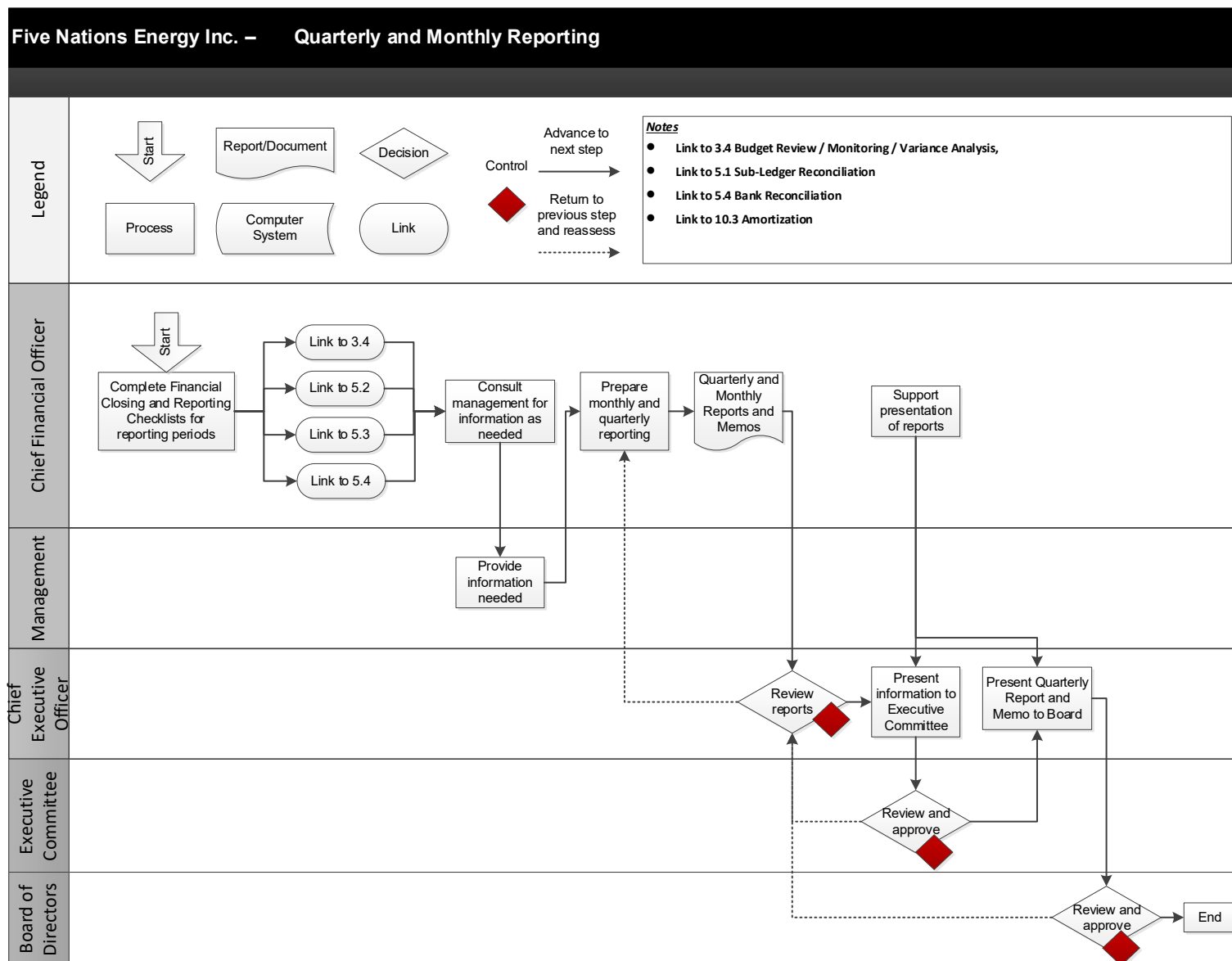
- o A review of progress towards financial and operational goals set during the planning process;
- o Identification and explanation of material budgetary variances;
- o Current ratio and any ratios required to be maintained by contract (e.g., financial covenants contained in borrowing agreements);
- o Doubtful accounts receivable, with changes since last month/quarter summarized; and
- o Remediation options where financial performance is not in accordance with plans.
- Exceptions to expected financial and system performance. Specifically:
  - o Unanticipated problems preparing the financial statements and the resolution;
  - o Unusual or unexpected accounting balances or transactions;
  - o Accounting entries not in the ordinary course of business;
  - o Explanation of transactions where measurement or accounting treatment was uncertain or where there were choices;
  - o Weaknesses in, and suggestions to improve, the financial management system; and
  - o Instances of non-compliance, fraud and / or unauthorized activities.
- Forecast to end of year. Specifically:
  - o Forecast of annual operations and budgetary performance, and annual cash flow and expected cash surplus or financing requirement;
  - o Statement of assumptions used in the budget process and any changes in assumptions that affect the budget;
  - o Identification of emerging financial performance risks and opportunities;
  - o Remediation options where forecast financial performance is not in accordance with plans.

When preparing the Memo, the Chief Financial Officer shall consult with Management to gather anecdotal information regarding variances or other concerns.

The Chief Financial Officer will prepare the Monthly and Quarterly Reports and Memos and share the information with the Chief Executive Officer who will review the information. Once reviewed, the Chief Executive Officer shall share the Monthly and Quarterly Reports and Memos with the Executive Committee. The Executive Committee shall review and approve the Monthly and Quarterly Reports and Memos. The Chief Financial Officer shall support the Chief Executive Officer to present the Quarterly Report and Memos to the Board for their review and approval.

The Chief Financial Officer shall support the Chief Executive Officer's presentation of Monthly and Quarterly Reports and Memos to the Executive Committee and Board.

## PROCESS MAP



## 4.4. Year End Close

### POLICY

Year-end close is to be completed within one (1) month of year end.

The Chief Financial Officer will oversee the year-end close process. The Chief Financial Officer will indicate when year-end is final. Once declared, additional entries are prohibited.

Draft annual financial statements are to be provided to the Executive Committee for review within 60 days following the end of the fiscal year. Draft annual financial statements are to be presented to the Board within 90 days following the end of the fiscal year. Refer to [Section 4.5 Annual Audit](#).

### PROCEDURES

The Chief Financial Officer will begin the year end close process by ensuring that all financial activity has been recorded by the year-end close deadline. Refer to the following sections which are related to year-end close:

- [Section 5.1 Sub-Ledger Reconciliation](#)
- [Section 5.2 Journal Entries and Adjustments](#)
- [Section 5.3 Bank Reconciliation](#)
- [Section 6.3 Reserves and Restricted Funds](#)
- [Section 10.2 Additions](#)
- [Section 10.3 Amortization](#)
- [Section 10.4 Disposals](#)

The Chief Financial Officer will then run trial balances and general ledgers. The Chief Financial Officer will review the information and request details from Managers as required.

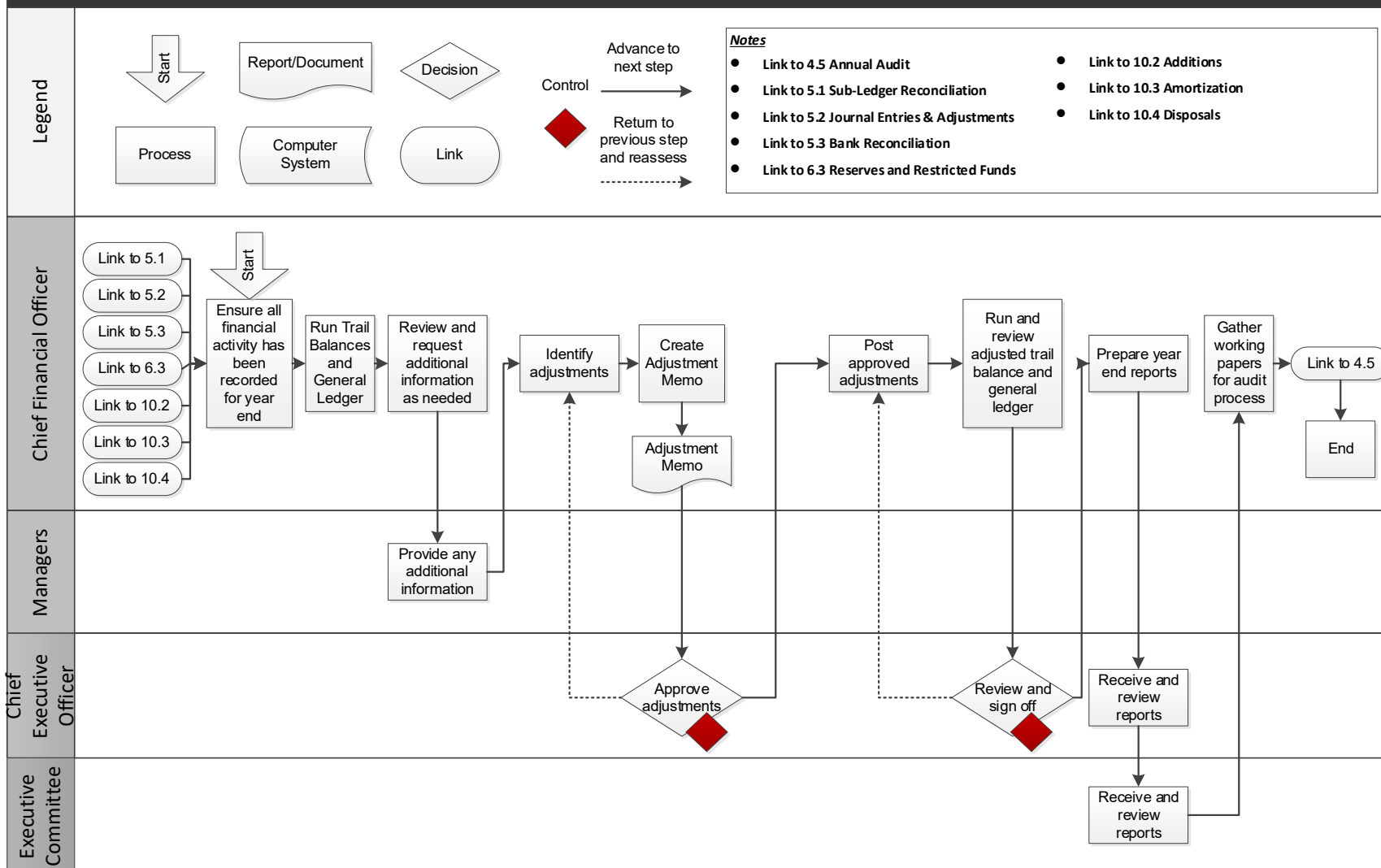
From review of the trial balances and general ledgers, the Chief Financial Officer will identify any adjustments to be made. The Chief Financial Officer will create an Adjustment Memo that details the journal entries required as a result of the year-end close review. The Adjustment Memo is submitted to the Chief Executive Officer who will approve the journal adjustments. Once approved, the Chief Financial Officer will post the journal entries.

Once any adjustments are completed, the Chief Financial Officer will run the adjusted trial balances and general ledger for final review. The Chief Executive Officer will review and sign off on the final trial balances and general ledger.

Once completed, the Chief Financial Officer shall prepare year end reports and submit to the Chief Executive Officer and Executive Committee for review. The Chief Financial Officer will gather working papers to prepare for the audit process. Refer to [Section 4.5. Annual Audit](#).

## PROCESS MAP

### Five Nations Energy Inc. – 4.4. Year End Close



## **4.5. Annual Audit**

### **POLICY**

#### ***Auditor Appointment***

FNEI shall appoint an auditor each fiscal year. The appointed auditor must be a Licensed Accountant in good standing with CPA Canada. The Board of Directors shall approve the appointment of the auditor.

The Terms of Reference for the Auditor are as follows:

- The audit will be conducted in accordance with International Financial Reporting Standards (IFRS) as required by the Ontario Energy Board.
- The auditor will have the right to access at all reasonable hours the accounting records of FNEI,
- There will be no limits placed on the scope of the Auditors investigation, and they are to be supplied with all the information requested;
- The auditor shall be provided with minutes of all meetings of the Board of Directors and its Committees;
- The auditor must be present to provide explanation during the presentation to the Executive Committee and Board of Directors and be available to answer any questions regarding the audit report; and
- The auditor shall express an opinion on whether the financial statements present fairly, in all material respects, the financial position and the results of its operations and cash flows of FNEI for the year then ended in accordance with International Financial Reporting Standards.

#### ***Financial Statements***

Detailed audited financial statements are prepared annually for FNEI.

All audits must be completed within established timelines for reporting purposes.

- Draft annual financial statements are to be provided to the Executive Committee for review within 60 days following the end of the fiscal year.
- Draft annual financial statements are to be presented to the Board within 90 days following the end of the fiscal year.
- Completed audited financial statements for the immediately preceding fiscal year are to be completed on or before April 30th.

During the Annual Audit Presentation, the Board of Directors will review and approve the audited financial statements. The audited Financial Statements will be signed by two Directors of FNEI as per the Canada Not-For-Profit Corporations Act, 2011, (CNCA) and the revised FNEI *By-Law # 1*. These signed audited Finance Statements will be included in FNEI records. The Chief



Executive Officer will sign off on each document as approved. This will be officially recorded in the meeting minutes.

The Board of Directors will ensure that recommendations resulting from the audit are implemented.

A copy of FNEI's annual audit will be forwarded to the Ontario Energy Board.

A copy of FNEI's annual Audit will be forwarded to the lenders as required.

## **PROCEDURES**

In preparation of the annual audit, FNEI must close the books on time and ensure all entries are accounted for. Refer to the following processes: [Section 4.4 Year-End Close](#).

The audit process begins with the Chief Financial Officer gathering all working papers, trial balances, and general ledger and providing it to the Auditor. The Auditor will collect the working papers, trial balances, and general ledger.

The Auditor will conduct the audit and submit questions to FNEI as required. The Chief Executive Officer and Chief Financial Officer will respond to any inquiries in a timely manner.

Once all issues are resolved, the auditor will prepare the Draft Audited Financial Statement for review by the Chief Executive Officer and Chief Financial Officer. Once the Draft Audited Financial Statement is approved by the Chief Executive Officer and Chief Financial Officer, the auditors will prepare the Final Audited Financial Statement and provide them to the Chief Executive Officer. The Auditor shall be present for Executive Committee and Board meetings, as required.

The Auditor will also provide FNEI with any audit entries and a management recommendation letter. Refer to [Section 5.2 Journal Entries and Adjustments](#).

The Chief Financial Officer will enter audit entries and close the fiscal year.

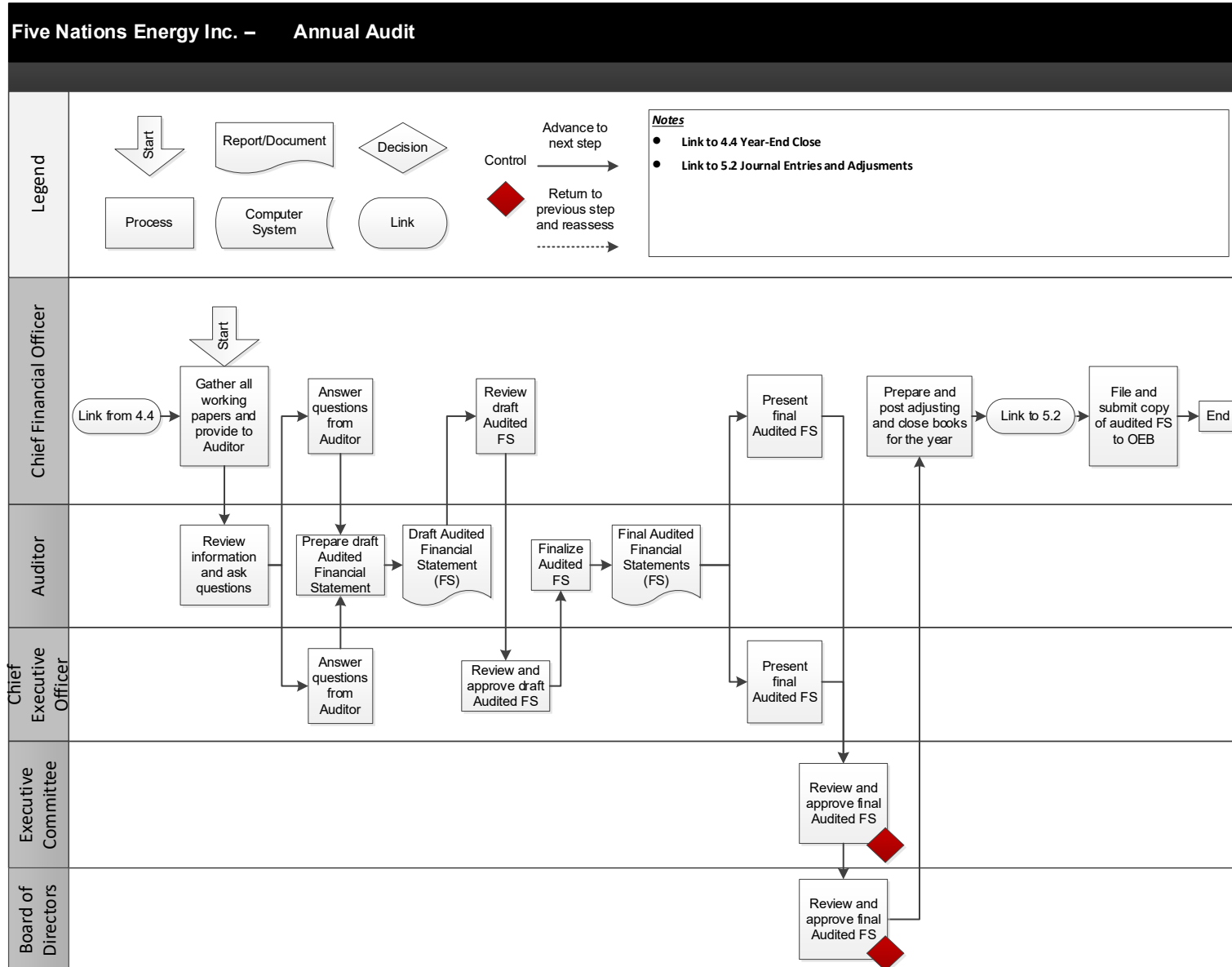
The Chief Executive Officer and Chief Financial Officer will present the Final Audited Financial Statement along with their comments and recommendations to the Executive Committee no later than 60 days following the end of the fiscal year for which they were prepared.

The Executive Committee will review the Final Audited Financial Statement and the comment(s) and recommendation(s). Once reviewed and approved, the Chief Executive Officer with the Chief Financial Officer will present the Final Audited Financial Statement, comment(s), and recommendations(s) and recommendation(s) to the Board of Directors no later than 90 days following the end of the fiscal year for which they were prepared.

The Board of Directors will review the Final Audited Financial Statement, the comment(s), and the recommendation(s) and decide to approve or not approve the Final Audited Financial Statement.

Upon Board approval of the Final Audited Financial Statement, the Chief Financial Officer will be provided with two (2) signed original Final Audited Financial Statements for record keeping purposes. The Chief Financial Officer will submit the audited consolidated statements to the Ontario Energy Board, as required.

## PROCESS MAP



## 5. General Accounting and Month End

### 5.1. Sub-Ledger Reconciliation

#### **POLICY**

Sub-ledger reconciliation with the general ledger will be completed monthly.

The Chief Financial Officer is responsible for the completion of sub-ledger reconciliation. The Chief Executive Officer will review and approve any adjustments if they are required.

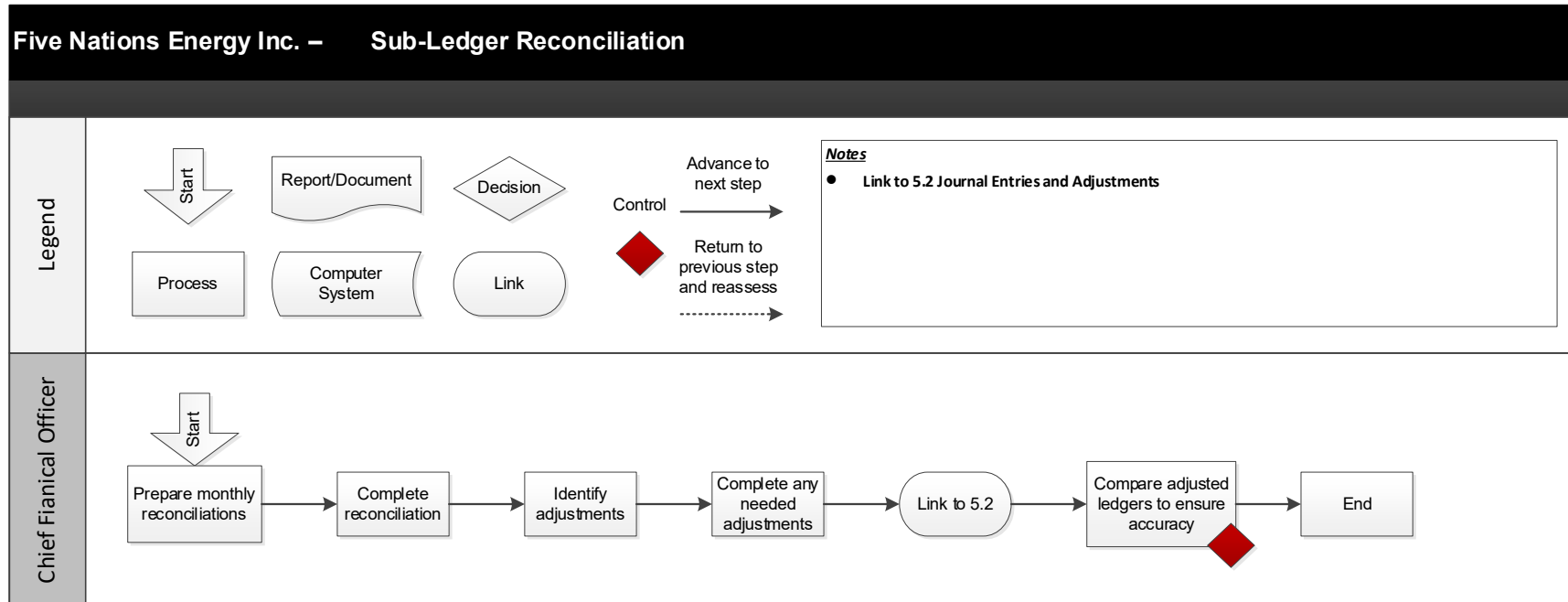
#### **PROCEDURES**

The Chief Financial Officer will prepare monthly reconciliations of FNEI's sub-ledgers, including the Accounts Payable Sub-Ledger and the Accounts Receivable Sub-Ledger.

After the initial reconciliation is complete, the Chief Financial Officer will determine if adjustments are required. Follow [Section 5.2 Journal Entries and Adjustments](#) to execute any required adjustments. The Chief Executive Officer shall perform their review of adjustments as identified in [Section 5.2 Journal Entries and Adjustments](#).

Once adjustments have been completed, the Chief Financial Officer will compare adjusted ledgers to ensure accuracy and completeness.

## PROCESS MAP



## 5.2. Journal Entries and Adjustments

### POLICY

A journal entry is used for recording transactions directly to the general ledger or to adjust entries originally entered through accounts receivable or accounts payable sub-ledger modules.

The general ledger is to be maintained and updated monthly to facilitate a continual accounting of revenue received, expenses incurred, and changes to assets, liabilities, and operating funds.

The Chief Executive Officer will review and approve adjustments to the general ledger, after completion by the Chief Financial Officer.

### PROCEDURES

Managers requesting a change to their general ledger account(s) (i.e., as a result of their budget review and monitoring) will submit a journal entry / adjustment request and any supporting information to the Chief Financial Officer. The Chief Financial Officer will review requested adjustments from Managers and provide approval.

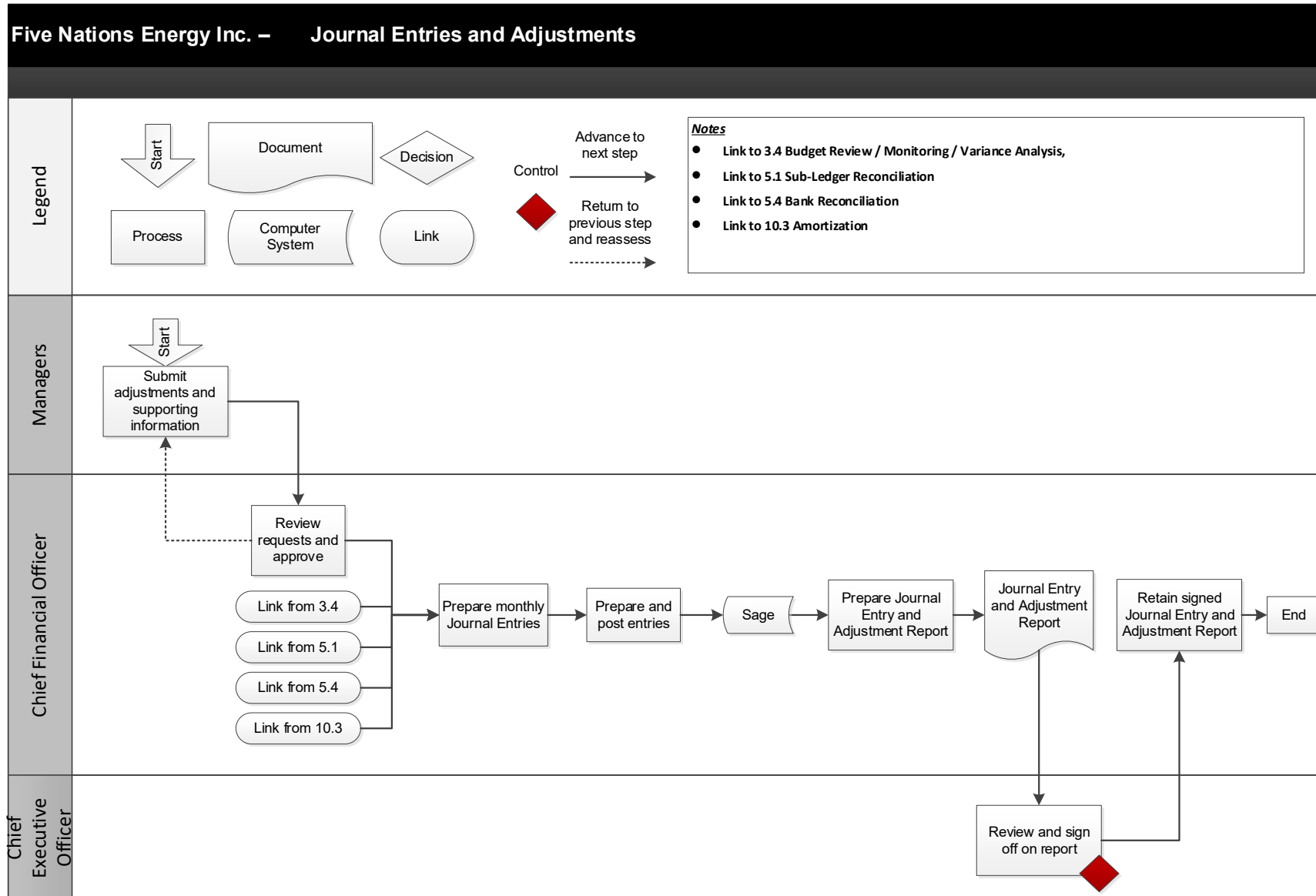
The Chief Financial Officer may also prepare journal entries for the following:

- To record bank activity on monthly bank statements (pre-authorized payments / deposits, bank transfers) – Refer to [Section 5.3 Bank Reconciliation](#);
- Corrections identified during review of reports and general ledgers – Refer to [Section 3.4 Budget Review / Monitoring / Variance Analysis](#);
- Reconciliation entries (balance sheet control accounts, revenues, etc.) – Refer to [Section 5.1 Sub-Ledger Reconciliation](#);
- Administration charges; and,
- Recurring entries (e.g., amortization) – Refer to [Section 10.3 Amortization](#).

Once the entries have been reviewed, the Chief Financial Officer will post the entries. The Chief Financial Officer will prepare a Journal Entry and Adjustment Report showing completed adjustments/entries and provide it to the Chief Executive Officer for review and signature.

All journal entries and adjustments will be completed once a month.

## PROCESS MAP



## 5.3. Bank Reconciliation

### POLICY

FNEI's bank accounts will be reconciled to the accounting system records on a monthly basis. Bank reconciliations are to be prepared upon receipt of bank statements and canceled cheques. The Chief Financial Officer shall prepare the bank reconciliation.

The Chief Financial Officer who is performing the bank reconciliations shall not have bank signing authority. Refer to [Appendix A: Delegation of Authority Table](#) for more information on individuals who have bank signing authority.

Reconciliation records will be retained. Documentation to support the amounts recorded on the reconciliation, such as accounting system general ledger reports, bank statements, outstanding cheque reports, etc., will be included in the reconciliation report and records.

Bank account reconciliations will monitor and investigate adjustments that carry over from month to month, including:

- Outstanding cheques and any cheques outstanding for more than four months will be investigated by the Chief Financial Officer to determine whether the cheques remain valid or if they should be stale dated;
- In-transit deposits will be investigated immediately if not cleared by the bank within one week; and
- Unusual, or unresolved entries that carry over for more than one month, will be reported to the Chief Executive Officer.

### PROCEDURES

Prior to preparing the bank reconciliation, the Office Manager shall obtain the bank statements. The Office Manager should print the digital bank statements (obtained through the banking website) and initial each page to verify that they are original copies as issued by the financial institution. Alternately, the Office Manager can obtain hard copy mailed statements. The Office Manager shall provide this to the Chief Financial Officer.

During reconciliation, the Chief Financial Officer shall compare the deposits listed on the bank statement with deposits shown in the accounting records and receipts book. Any discrepancies will be noted, and a list of errors or unrecorded items compiled.

All cleared cheques included with the bank statement shall be compared with the outstanding cheque listing within the accounting system. Any discrepancies or errors are to be noted and a list of errors or reconciling items compiled.

The previous month's reconciliation shall be used to determine if any cheques outstanding at the end of that month are still outstanding. The previous month's reconciliation shall also be



used to determine if any deposits that were unrecorded by the bank at the end of the previous month have been recorded. Any discrepancies or errors are to be noted.

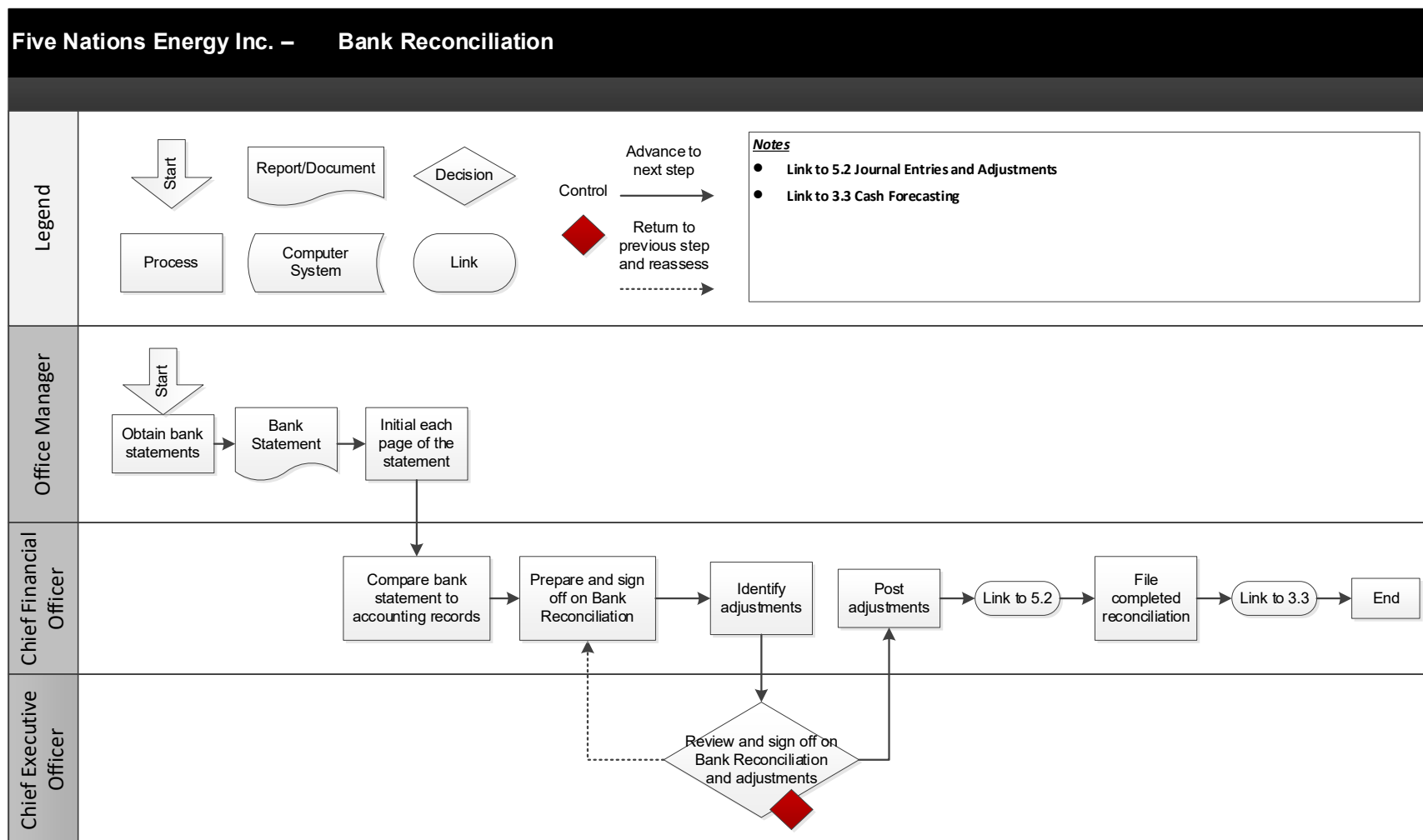
Any bank memorandum entries on the bank statement are to be verified and compared to entries in the accounting records. Any memorandums that do not appear in the accounting records are to be noted. Service charges, transfers, overdraft fees etc., will require adjustments by journal entry.

Once the Bank Reconciliation has been prepared, the Chief Financial Officer will sign it as evidence that the reconciliation was prepared, is complete and that they have carried out their duties as described in this section. Any adjusting journal entries that are required to be posted shall also be prepared and accompany the bank reconciliation. Refer to [Section 5.2 Journal Entries and Adjustments](#).

The Bank Reconciliation and journal entries will be provided to the Chief Executive Officer for sign off.

Once approved, a copy of the Bank Reconciliation will be provided to the Chief Financial Officer for filing and for monthly cash forecasting purposes. Refer to [Section 3.3. Cash Forecasting](#).

## PROCESS MAP



## **5.4.HST**

### **POLICY**

The Harmonized Sales Tax (HST) must be paid on all items purchased by FNEI.

All businesses that supply goods or services to FNEI are required to charge HST on all HST taxable items and all contracts or quotations for the supply of goods must include the HST in the total cost of the goods being supplied. Refer to *Section 8.2 Procurement*.

FNEI is a GST (Goods and Sales Tax) and HST (Harmonized Sales Tax) registrant and is required to pay the GST/HST on goods and services purchased.

## 6. Treasury and Cash Management

### 6.1. Financial Institution Accounts

#### POLICY

FNEI is to establish effective and efficient controls for all banking activities and financial service agreements with Financial Institutions.

All financial institution accounts are to be operated solely for FNEI purposes. Separate accounts may be created for specific purposes, including an operating account or a reserve account.

All funds received must be deposited intact, without undue delay at a branch of a Canadian Chartered Bank.

Funds held in trust by FNEI will be deposited in a separate trust account designated for that purpose.

The Chief Financial Officer maintains correspondence and official documents relating to the opening, maintenance, and closing of all financial institution accounts.

The Chief Financial Officer is FNEI's primary representative in dealing with Financial Institutions and at least annually provides the designated financial institution representative with necessary financial reporting information and updates on FNEI operations and forecasts in order for the Financial Institutions to respond to FNEI's financial service requirements.

The Chief Financial Officer will develop and maintain a clear description of the purpose of each financial institution account and provide it to the Board for their review.

The list of individuals with authorized bank signing authorities for financial institution accounts will be maintained within [Appendix A: Delegation of Authority Table](#). All changes to signing authorities must be approved by the Board.

Online financial institution access will be permitted and controlled as follows:

- transaction completion activities, such as electronic funds transfers, will be controlled in a similar manner as cheques. Two employees will be required to approve each transaction. Each employee will have a separate login and individual password.

A change of FNEI's banking institution accounts must be approved by the Board of Directors.

## PROCEDURES

### ***Opening a Financial Institution Account***

A written request to open a new financial institution account must be prepared by the Chief Financial Officer and reviewed by the Chief Executive Officer and must include the purpose of the account. The Board of Directors shall approve the request to open a new account.

Once the request to open a financial institution account has been approved by the Board, the Chief Financial Officer or designate prepares an Account Establishment Letter, which includes the following elements:

- o Name of account;
- o Instructions regarding purpose of account;
- o Names of signatories and authority limits;
- o Address where all statements and correspondence are to be sent; and
- o The contact person or department at the financial institution.

The Account Establishment Letter must be signed by the Chief Executive Officer and any Executive Committee Member with signing authority. Refer to [Appendix A: Delegation of Authority Table](#) for information on signing authorities.

The Chief Financial Officer shall submit the Account Establishment Letter to the financial institution to open the new account.

The financial institution accounts will be created such that all non-deposit transactions (such as cheques, electronic transfers, etc.) require two signatures for approval.

Once the financial institution account is opened, the Chief Financial Officer shall activate the account in the general ledger. Refer to [Section 2.1 Chart of Accounts](#).

### ***Closing a Financial Institution Account***

A written request to close a financial institution account must be prepared by the Chief Financial Officer and reviewed by the Chief Executive Officer. The Board of Directors shall approve the request to close an account.

Once the request to close a financial institution account has been approved by the Board, the Chief Financial Officer or designate prepares an Account Closing Letter, which includes the following elements:

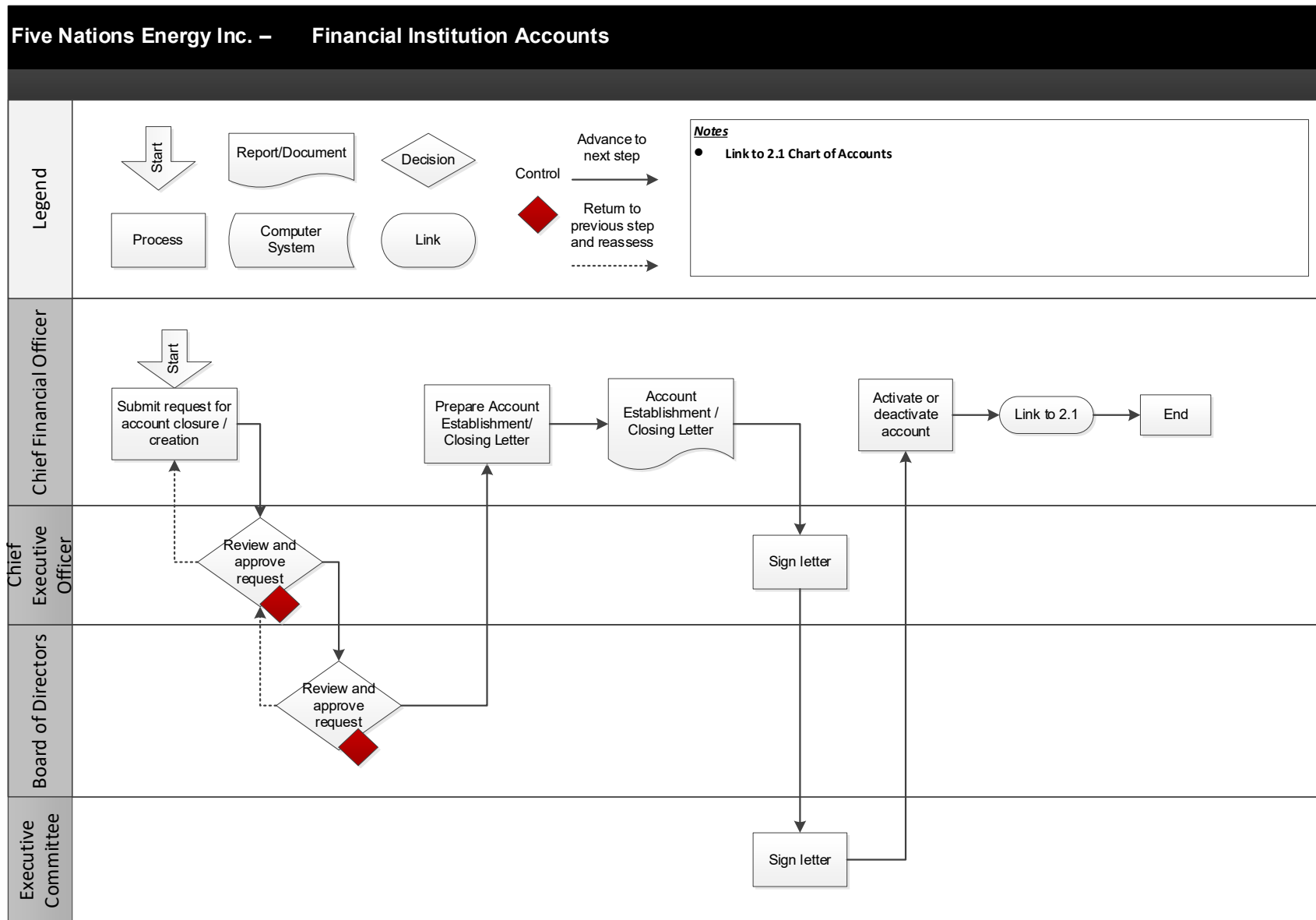
- o Name of account;
- o Financial institution account number;
- o Closing bank balance and statement; and
- o Approval by appropriate FNEI personnel.

The Account Closing Letter must be signed by the Chief Executive Officer and any Executive Committee Member with signing authority. Refer to [Appendix A: Delegation of Authority Table](#) for information on signing authorities.

The Chief Financial Officer shall submit the Account Closing Letter to the financial institution to close the new account. The Chief Financial Officer will provide instructions to transfer any remaining account balance.

Once the financial institution account has been closed, the Chief Financial Officer shall deactivate the account in the general ledger. Refer to [Section 2.1 Chart of Accounts](#).

## PROCESS MAP



## 6.2. Transfers

### POLICY

The Chief Financial Officer will be responsible for entering transfer information into FNEI's banking service. Release of funds will be completed by the two authorized individuals as per [Appendix A: Delegation of Authority Table](#).

Transfers to an FNEI affiliate account (i.e., to an FNDI account) shall be confirmed by the Executive Committee and approved by the Board of Directors prior to execution.

### PROCEDURES

The Chief Financial Officer will identify transfers that are required (e.g., between FNEI's operating bank account(s) and the reserve bank account(s), etc.). This can include identification of regular transfers (i.e., supplementing the reserve account) as well as other special request transfers from Chief Executive Officer. Transfers shall be identified as automatic, ongoing, ad hoc, or one-time.

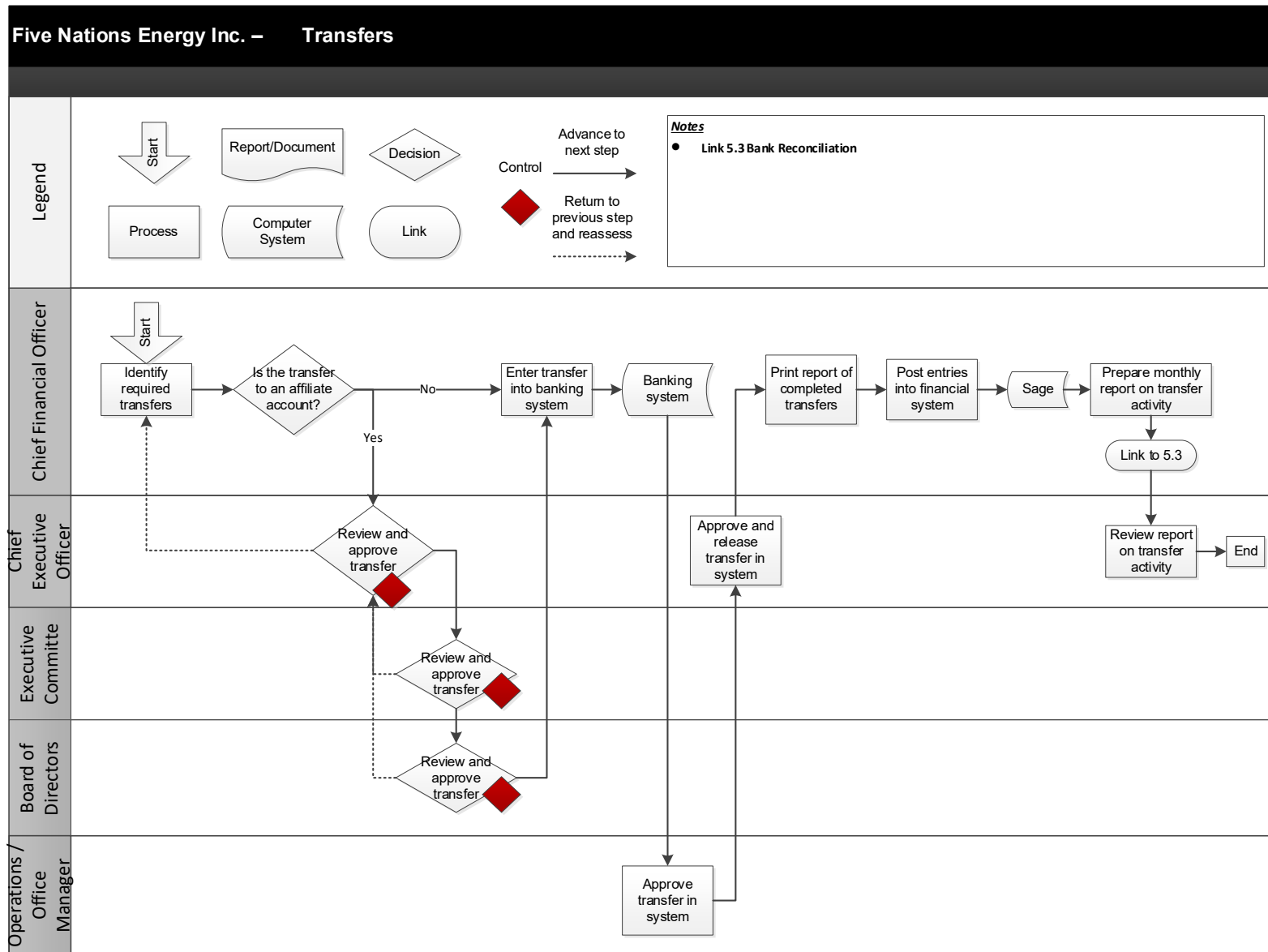
All transfer amounts will be prepared into an Transfer File and uploaded into the online banking service by the Chief Financial Officer. Once uploaded, the Chief Financial Officer shall notify the Operations Manager, Officer Manager and Chief Executive Officer who are the authorized signatories. Between the Operations Manager, Officer Manager and Chief Executive Officer, one shall review and approve and notify the other who will review, approve, and release the funds, in accordance with [Appendix A: Delegation of Authority Table](#).

Once the transfer has been complete, the Operations Manager, Officer Manager or Chief Executive Officer will notify the Chief Financial Officer of the completed transfer. The Chief Financial Officer shall print a report of the transactions and post the transactions within the financial system. The transaction report will be retained within the financial records.

The Chief Financial Officer will prepare monthly reporting on transfer activity when completing the bank reconciliations and provide to the Chief Executive Officer. Refer to [Section 5.3 Bank Reconciliation](#).



## PROCESS MAP



## 6.3. Reserves and Restricted Funds

### POLICY

All reserves and restricted funds are required to be managed, tracked, monitored, and controlled.

Management should ensure that any specific reserve or fund requirements that have been approved by the Board of Directors are maintained and followed in accordance with the decision.

FNEI's Legal Counsel must be consulted when establishing a new reserve or restricted fund.

Each reserve / fund shall have a formal and documented purpose, optimal funding level and other details / conditions (i.e., eligible activities / costs that are served under the reserve / fund, etc.).

The Chief Financial Officer is responsible for the management and strategies of reserves and restricted funds.

Additional information on reserve funds can be found in the *Regulatory Handbook*, available under separate cover.

#### ***Operating Reserve***

The amount(s) set aside into an operating reserve shall be approved by the Board of Directors based on recommendations from the Executive Committee.

The maximum amount in the operating reserve shall be reviewed annually with the amount to be recommended by the Executive Committee and approved by the Board of Directors.

#### ***Insurance Reserve***

FNEI shall set aside an insurance reserve, as required by the Ontario Energy Board. Refer to [Section 1.10 Insurance](#) for additional information on FNEI's insurance reserve. FNEI shall ensure the reserve is appropriately funded at all times. Refer to [Section 6.2 Transfers](#) for additional information on transferring funds to ensure appropriate reserve levels.

### PROCEDURES

The Chief Financial Officer will submit details of a new fund / reserve to the Chief Executive Officer for review. Details of each reserve / fund can include, but is not limited to, its purpose, minimum and maximum funding levels, use of the funds, etc. Once reviewed, the Chief Executive Officer shall submit the details to the Executive Committee for review and approval. The Chief Executive Officer shall then submit the information to the Board for review and approval.

The Chief Financial Officer will develop and maintain a Reserve / Fund Continuity Spreadsheet to track all allocations and activities within each reserve / fund (including interest earned by the

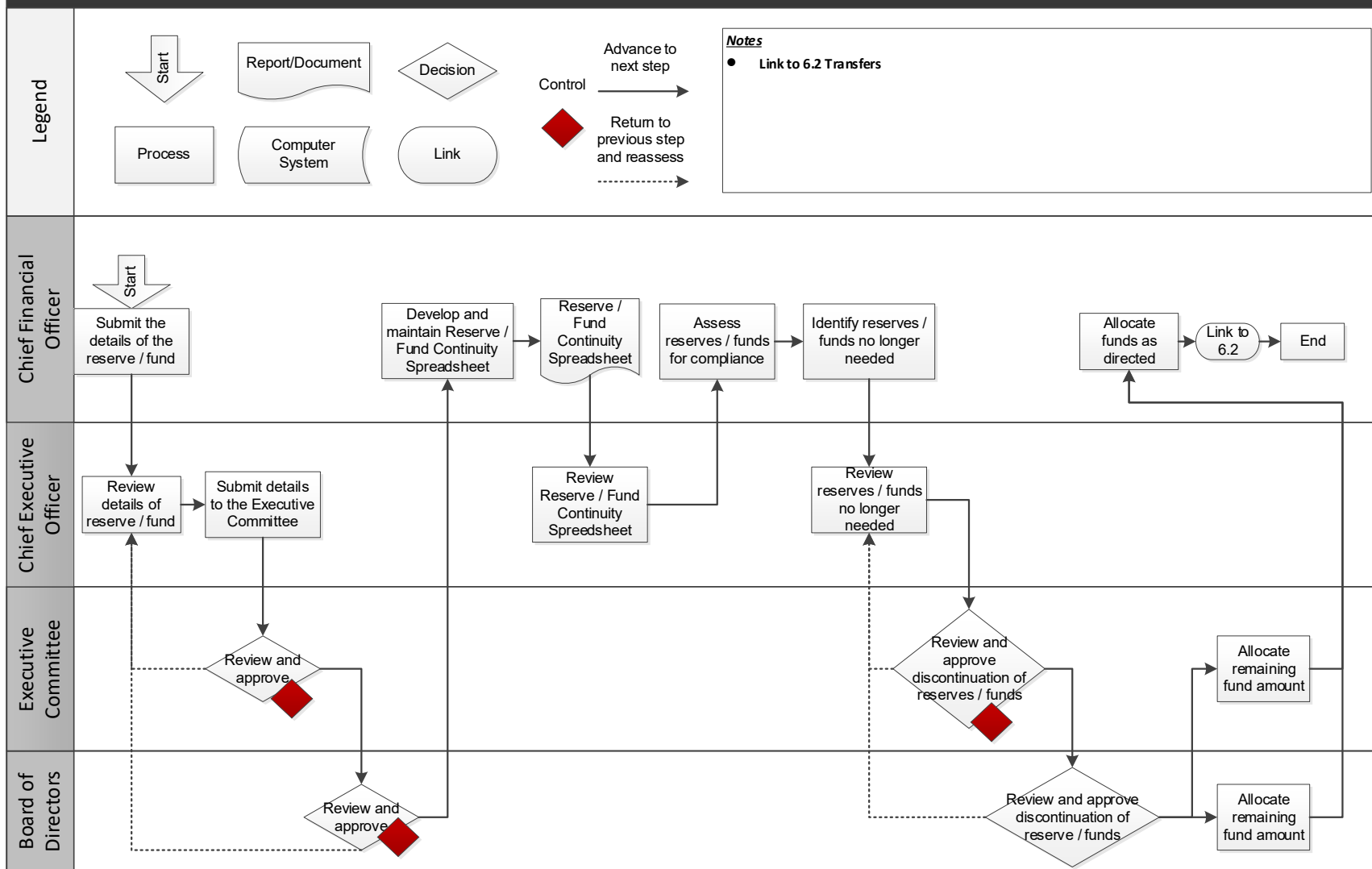
fund, capital gains/losses from fund investments, additions to and withdrawals from the fund, etc.). This detailed information is required for FNEI's annual financial statements and financial reporting. The Reserve / Fund Continuity Spreadsheet will be reviewed by the Chief Executive Officer.

On a periodic basis, (i.e., annually), the Chief Financial Officer will assess each of the reserves / funds to determine if the fund is in compliance with the specific requirements of the reserve / fund and whether the reserve / fund is still required / needed.

Any reserves / funds that are no longer needed should be brought to the Chief Executive Officer for review. The Executive Committee shall approve any discontinued reserves / funds before they are submitted to the Board for review and approval. Any remaining allocated funds are be transferred to FNEI's unrestricted fund balance or as directed by the Executive Committee and Board of Directors.

## PROCESS MAP

### Five Nations Energy Inc. – Reserves and Restricted Funds



## **6.4. Unrestricted Funds**

### **POLICY**

This section governs how to act on any unrestricted revenue generated by FNEI. The use of unrestricted funds will be at the discretion of Board of Directors and the Executive Committee.

Unrestricted revenue will be allocated as required to any area deemed by the Executive Committee and Board of Directors. This can include allocation to community support funds such as scholarships, donations, and amounts allocated for FNDI investments.

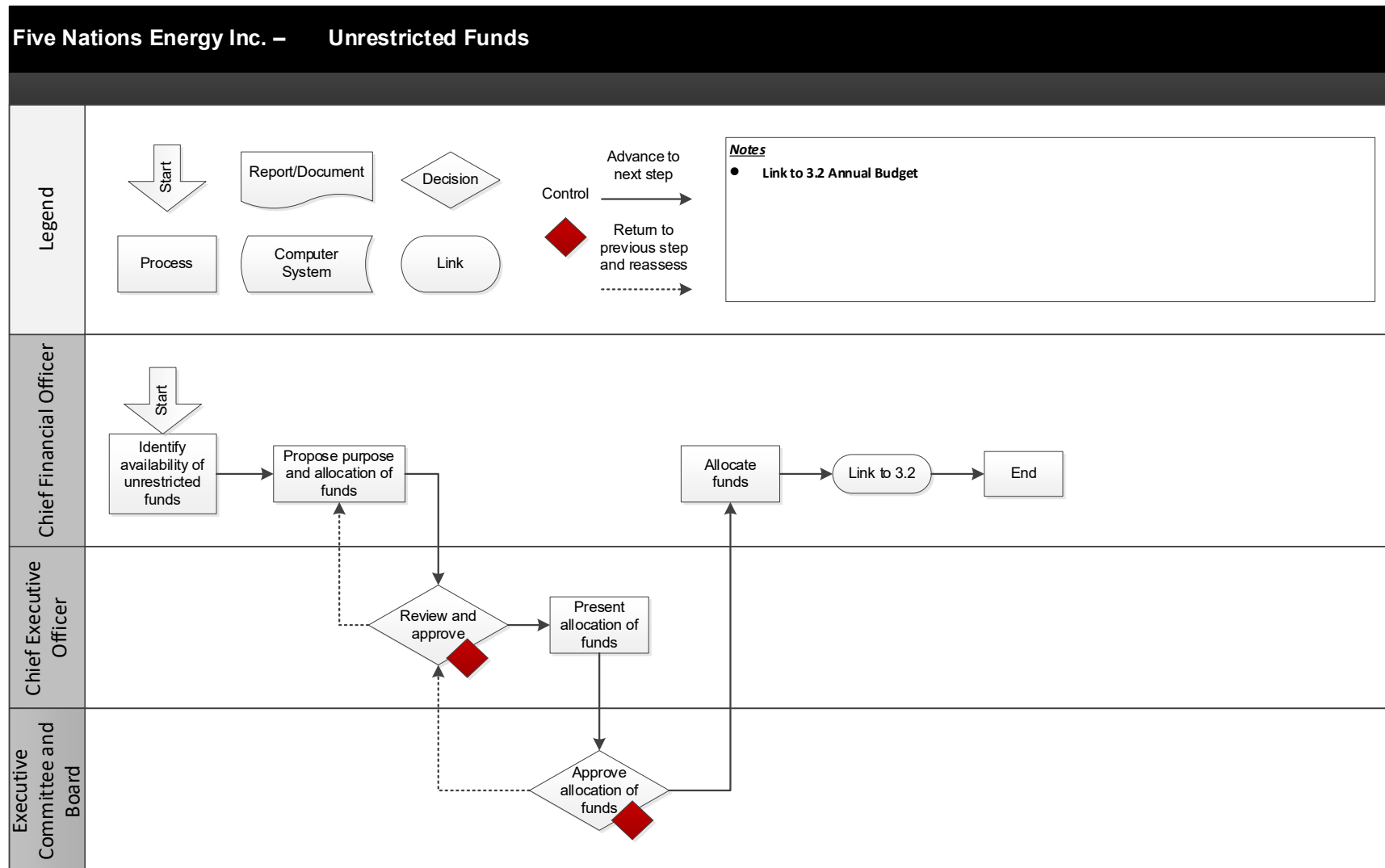
The Chief Financial Officer and Chief Executive Officer will propose a specific purpose for unrestricted revenue. The Chief Financial Officer and Chief Executive Officer will then communicate the request and proposed purpose to Executive Committee and Board of Directors for approval.

### **PROCEDURES**

The Chief Financial Officer will initiate the process by identifying unrestricted funds available. The Chief Financial Officer will propose a purpose and allocation of funds to the Chief Executive Officer. The proposed allocation will be presented to the Executive Committee and Board of Directors for approval.

Allocation of unrestricted funds shall be completed in tandem with the completion of the Annual Budgets. Refer to [Section 3.2 Annual Budgets](#).

## PROCESS MAP



## 6.5. Investments

### POLICY

FNEI's investments will be managed and administered in a manner to preserve capital and generate sufficient income and growth to meet FNEI's operational or strategic objectives. All investments require Board approval.

FNEI will prepare a framework for management of FNEI's investments to achieve short and long term operational and strategic objectives within an acceptable level of risk.

A separate policy for *FNDI Investments* is available under separate cover.

FNEI shall follow the requirements set out in the *Community Support Policy*, available under separate cover. The purpose of the *Community Support Policy* is to establish guidelines to govern the disbursement of FNEI's excess revenues to certain organizations and groups operating in, or for the benefit of, the communities of Attawapiskat, Fort Albany and Kashechewan communities. In connection with each FNEI annual budget, FNEI will determine and recommend the amount, if any, of FNEI's expected "*Community Support Funds*". Refer to [Section 3.2 Annual Budgets](#) for additional information.

The Executive Committee shall also recommend allocation of the Community Support Funds amount among the following three categories:

- **Discretionary Donations:** percentage of Community Support Funds to be disbursed to small-scale community-led projects, activities, and events on an ad hoc basis at the discretion of FNEI Management;
- **FNDI Disbursement:** percentage of Community Support Funds to be disbursed to Five Nations Developments Inc. (FNDI) for use in commercial opportunities that support the economic development of the Communities. Use of the FNDI Disbursement funds is at the sole discretion of FNDI; and
- **Social Program Donations:** percentage of Community Support Funds to be disbursed to deliberate and large-scale social programs that are servicing the Communities,

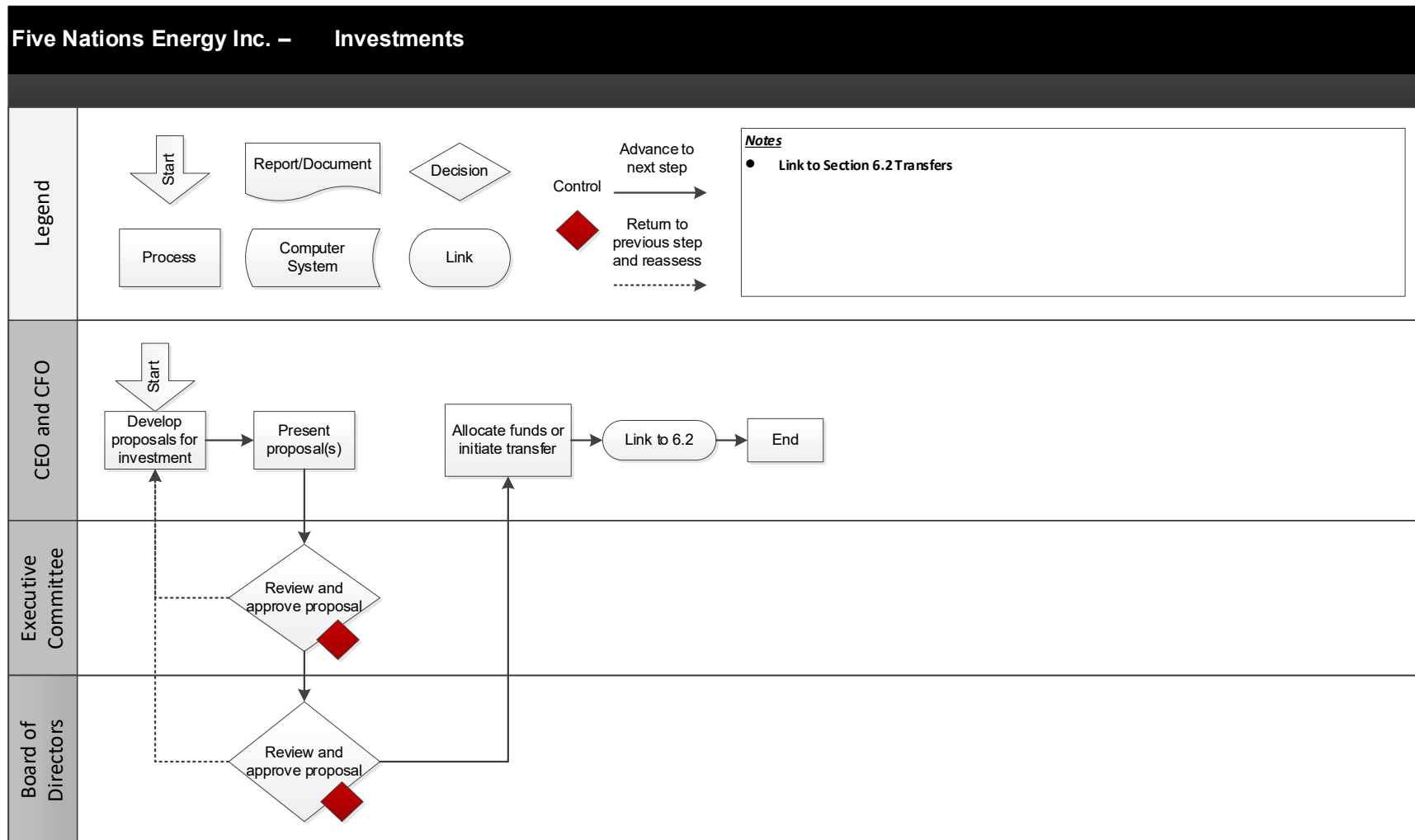
In determining the amount of Community Support Funds available for expenditure, FNEI will consider the need to maintain funds as a reserve amount, any recent unexpected expenses, and any other operational or capital needs of FNEI for which additional funds may be required. Refer to [Section 6.3 Reserves and Restricted Funds](#) for additional information.

## **PROCEDURES**

The Chief Executive Officer along with the Chief Financial Officer shall develop proposals for investments and present them to the Executive Committee for review. Once reviewed, the Board of Directors shall approve the investment and any transfer of funds (e.g., into the FNDI account). The Chief Financial Officer will action the investment through allocation of funds, or through transfer of funds into the designated investment account(s). Refer to [Section 6.2 Transfers](#).



## PROCESS MAP



## **6.6. Lending**

### **POLICY**

FNEI will not provide loans, salary advances, or guarantees to any person or organization.

## **7. Revenue, Receipts, Receivables**

### **7.1. Revenue**

#### **POLICY**

All revenue shall be monitored and recorded/accrued within the financial statements in accordance with funding agreements.

Once a revenue agreement is approved, signed by the Board of Directors and the revenue agency (e.g., the Independent Electricity System Operator (IESO)), the agreement will be managed by the Chief Financial Officer.

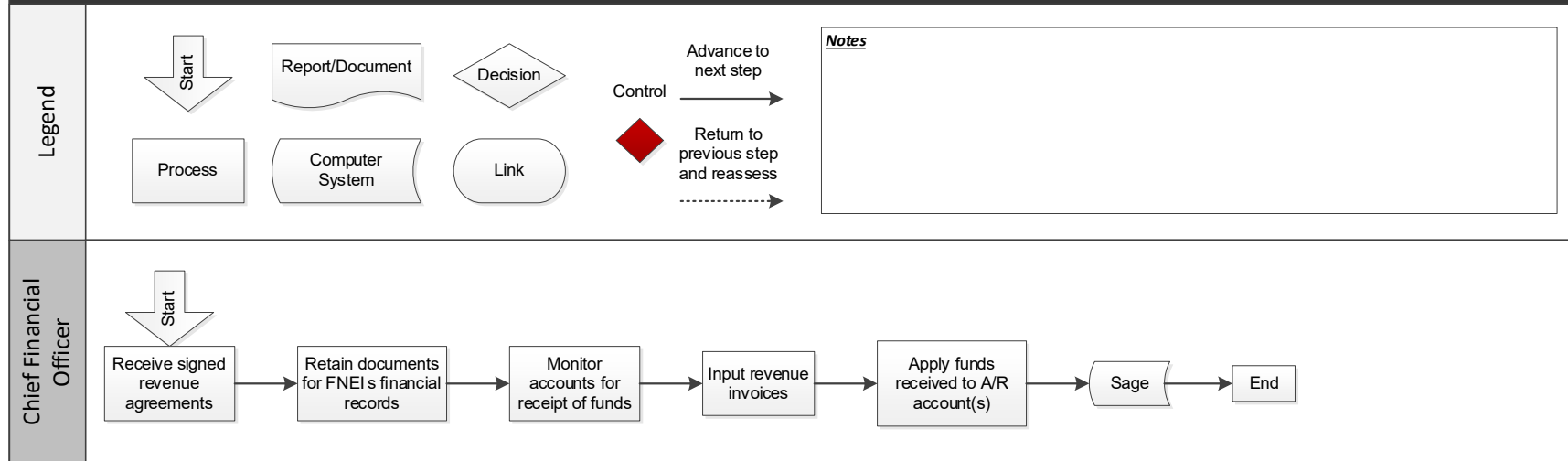
#### **PROCEDURES**

The Chief Financial Officer will receive all signed revenue agreements and retain the documents as part of FNEI's financial records. The Chief Financial Officer shall monitor the FNEI financial institution account for receipt of funds.

The Chief Financial Officer will input revenue invoices as required, once the revenue amounts are known. When funds are received, it will be applied to the corresponding Accounts Receivable (A/R) account in the financial system.

## PROCESS MAP

### Five Nations Energy Inc. – Revenue



## **7.2. Invoicing**

### **POLICY**

Customers shall be invoiced when a service / product is provided, or a fee is charged by FNEI.

FNEI's normal administration overhead charged is 15%. This rate may be reduced or waived upon the Executive Committee's recommendations to the Board of Directors.

Customers are responsible for paying the full amount specified on the invoice.

All invoices are due upon receipt.

Failure to receive an invoice does not release a customer from their responsibility to pay. FNEI's records of the date of mailing an invoice shall be conclusive evidence of the date of rendering. FNEI shall ensure that outstanding invoices are followed up on a timely basis to obtain collection.

FNEI reserves the right to send delinquent accounts to a collection agency for collection or to Small Claims Court.

### ***Local Distribution Corporations***

An invoice will be prepared on a quarterly or as required basis with backup supporting documentation. Administration overhead will not be charged to the Members of Five Nations Energy Inc.

### ***Other Customers***

An invoice will be prepared on a quarterly or as required basis with backup supporting documentation. Administration overhead will normally be charged; however, it may be waived at the discretion of the Executive Committee.

### **PROCEDURES**

The Chief Financial Officer is responsible for the creation of invoices in the financial system. Invoices shall be numbered sequentially, a process that is automated through use of the financial system.

### ***Collections***

The Chief Financial Officer will monitor and process the incoming payment. Refer to [Section 7.4 Collections by Cheque](#), and [Section 7.5 Collections by Electronic Funds Transfer](#). If payment is not received, the Chief Financial Officer will determine the best follow up action.

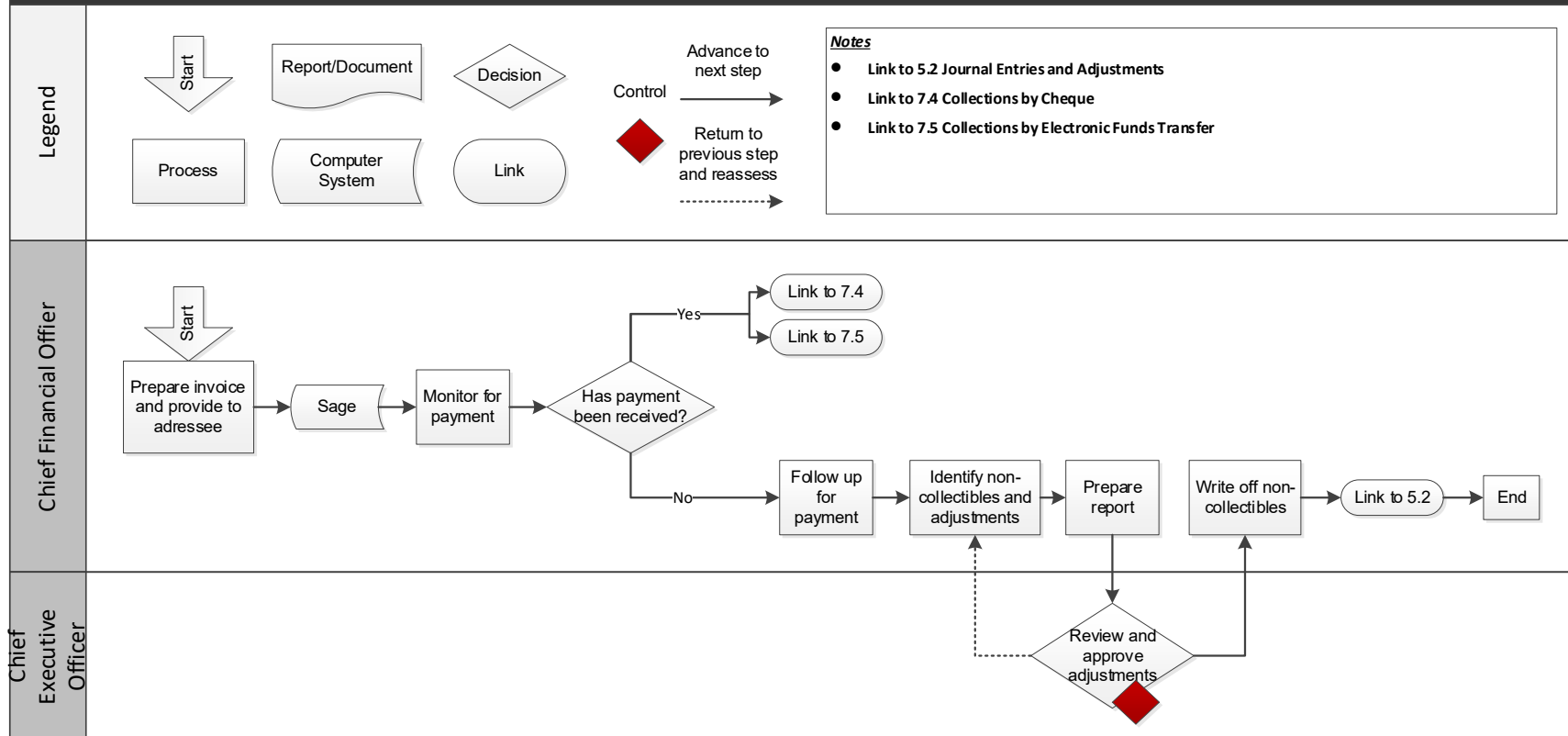
All reasonable steps should be taken to attempt to collect invoice balances.

On a monthly basis, the Chief Financial Officer will review the list of outstanding invoices. When it becomes evident that FNEI will be unable to collect the outstanding balance, a report should

be compiled by the Chief Financial Officer with the balance amounts, length of time since the invoice was issued, and the rationale to write off the invoice amounts. This report shall be provided to the Chief Executive Officer for review and approval before the amounts are written off. Refer to [\*Section 5.2 Journal Entries and Adjustments\*](#) to complete the adjustment.

## PROCESS MAP

### Five Nations Energy Inc. – Invoicing



## 7.3. Line of Credit and Loans

### POLICY

FNEI maintains lines of credit which may be used as needed in accordance with the established terms and conditions set by the bank.

The line of credit is intended to be available in the event of delays in the receipt of revenues for approved activities for which funds have been committed but not yet received.

The Chief Financial Officer shall identify the need to access the line of credit and notify the Chief Executive Officer who shall provide approval.

The Chief Executive Officer and/or Chief Financial Officer will identify the need to borrow funds by way of a loan, charge, or any other security interest. Funds can only be borrowed with a resolution of a quorum of the Board of Directors as per FNEI's *Bylaw #2*.

Refer to [Section 3.1 Five-Year Capital Plan](#), [Section 3.2 Annual Budgets](#), [Section 3.3. Cash Forecasting](#), and [Section 3.4 Budget Review / Monitoring / Variance Analysis](#).

### PROCEDURES

The Chief Executive officer shall identify the need to access the line of credit. The Chief Executive Officer shall review and approve the request to access the line of credit.

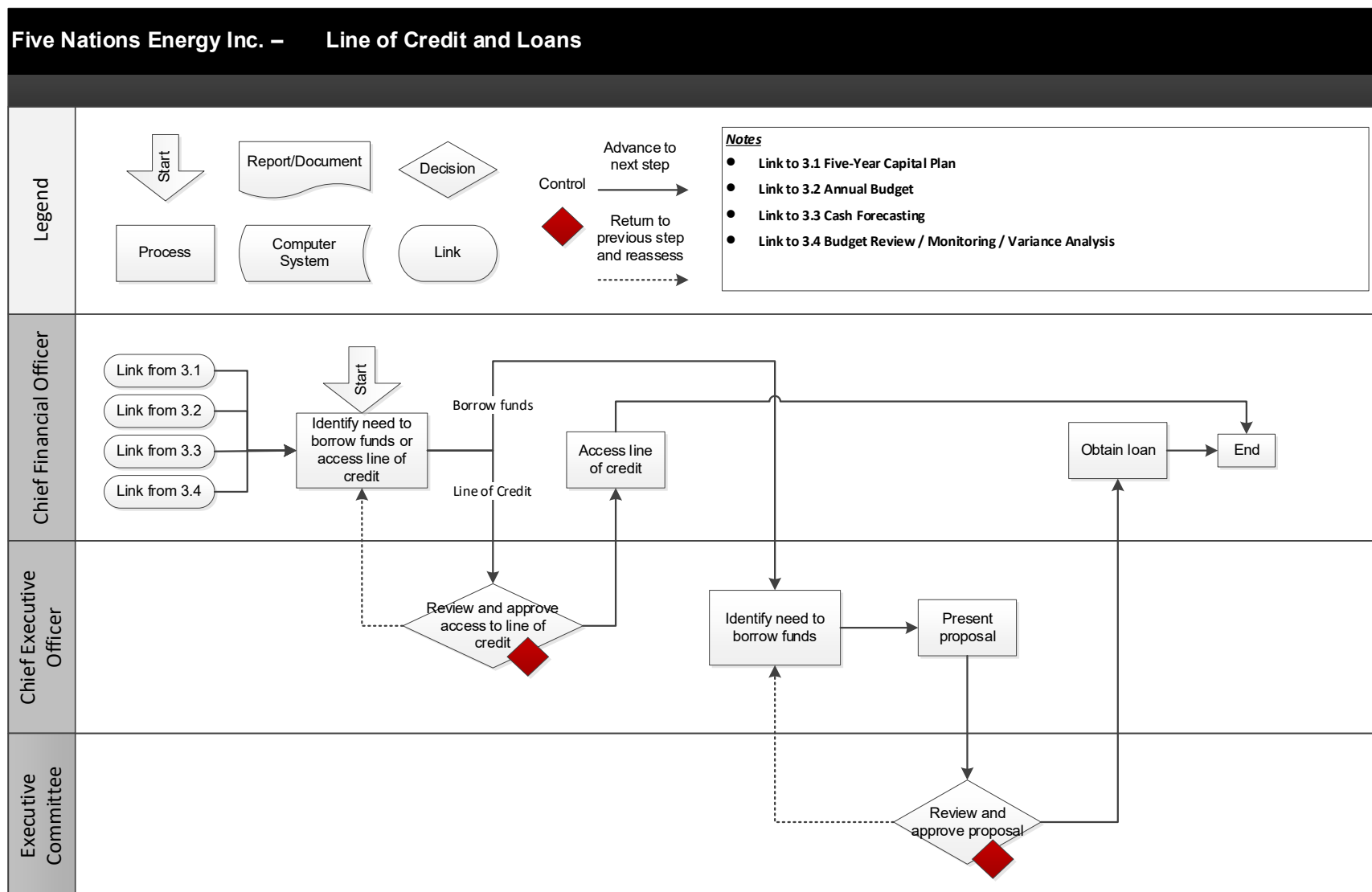
The Chief Executive Officer and/or Chief Financial Officer shall identify the need to borrow funds.

The need for a loan shall be identified through financial planning and analysis processes. Refer to [Section 3.1 Five-Year Capital Plan](#), [Section 3.2 Annual Budgets](#), [Section 3.3. Cash Forecasting](#), and [Section 3.4 Budget Review / Monitoring / Variance Analysis](#).

The Chief Executive Officer will obtain Board approval of the loan before it is obtained.



## PROCESS MAP



## **7.4. Collections by Cheque**

### **POLICY**

All incoming cheques received by mail are to be tracked by the Administrative Assistant.

Cheques will be deposited weekly or at another frequency as established by the Office Manager.

All forms of cash (currency, cheques, money orders, negotiable instruments, and charge card transactions) should be physically protected through the use of vaults, locked cash drawers, locked metal boxes, etc. This includes post-dated cheques that will be retained in the safe and will be deposited on the date indicated.

There must be a separation of duties between the person receiving cash and the person responsible for maintaining the accounting records.

Cash receipt activity should be reconciled weekly. The reconciliation should be reviewed by someone independent of the cash handling or recording functions.

The following responsibilities should be distributed among personnel so one person is not responsible for all aspects:

- Opening mail;
- Endorsing cheques;
- Preparing deposits;
- Reconciling to budget statements; and
- Entry of the deposits into the financial system.

It is the responsibility of the Chief Executive Officer to make whatever provisions are necessary to properly safeguard the cash receipts. Cash should not be retained in desk drawers or standard file cabinets since they are easily accessed with minimal forcing or readily available keys.

Money should be deposited promptly and intact to the bank. Cashing cheques from FNEI's deposits, borrowing cash for personal use, lapping receipts to cover shortages in cash receipts, withholding cheques for deposit in order to float cheques, commingling of personal and FNEI funds, and modification of cash records are all serious offenses and may result in immediate discharge from employment and/or prosecution.

### **PROCEDURES**

All incoming cheques received by mail are to be tracked by the Administrative Assistant. The cheques are stamped with the date of receipt and are entered into the Cheque Log Book. The Administrative Assistant shall scan the cheques and retain copies for financial records (i.e., a copy is attached to the invoice and filed).

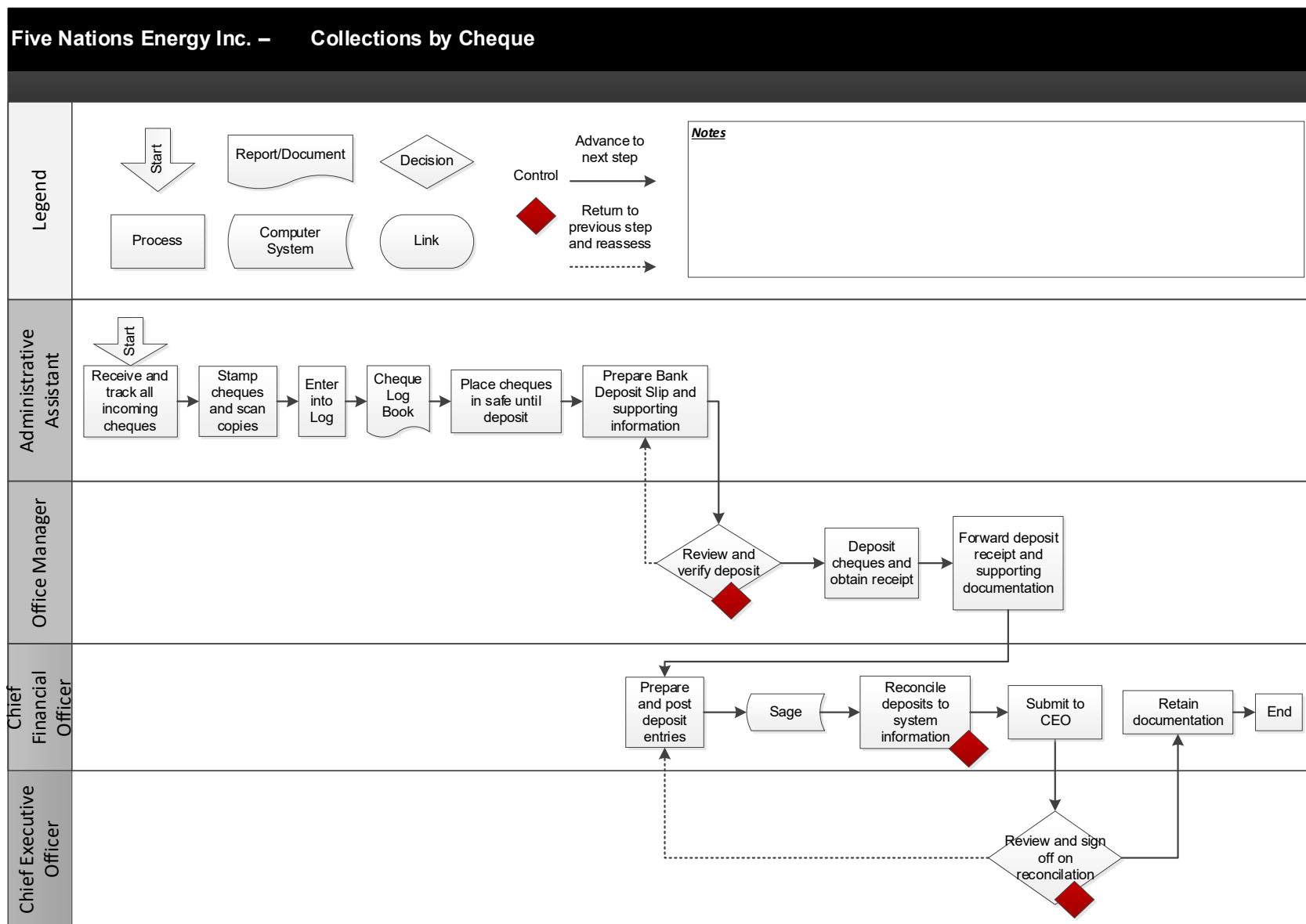
The original cheque shall be placed into the safe until deposit. The Administrative Assistant shall prepare the Bank Deposit Slip and provide it to the Office Manager, along with the cheques ready for deposit.

The Office Manager shall review and verify the cheques and the Bank Deposit Slip prior to completing deposit. The Office Manager shall deposit cheques on a weekly basis. Once deposited, the Office Manager shall obtain the deposit receipt. The Office Manager shall provide the deposit receipt, copy of the Bank Deposit Slip, and any other supporting documents to the Chief Financial Officer.

The Chief Financial Officer shall enter the deposits into the financial system and will retain documentation within financial records.

On a weekly basis, the Chief Financial Officer shall reconcile the depositing of cheques (using the deposit receipt) against the Bank Deposit Slip and supporting documentation. Once the reconciliation is complete, the Chief Financial Officer shall submit the reconciliation to the Chief Executive Officer for review and sign off.

## PROCESS MAP



## **7.5. Collections by Electronic Funds Transfer**

### **POLICY**

Incoming Electronic Funds Transfers ("EFT") will be accepted.

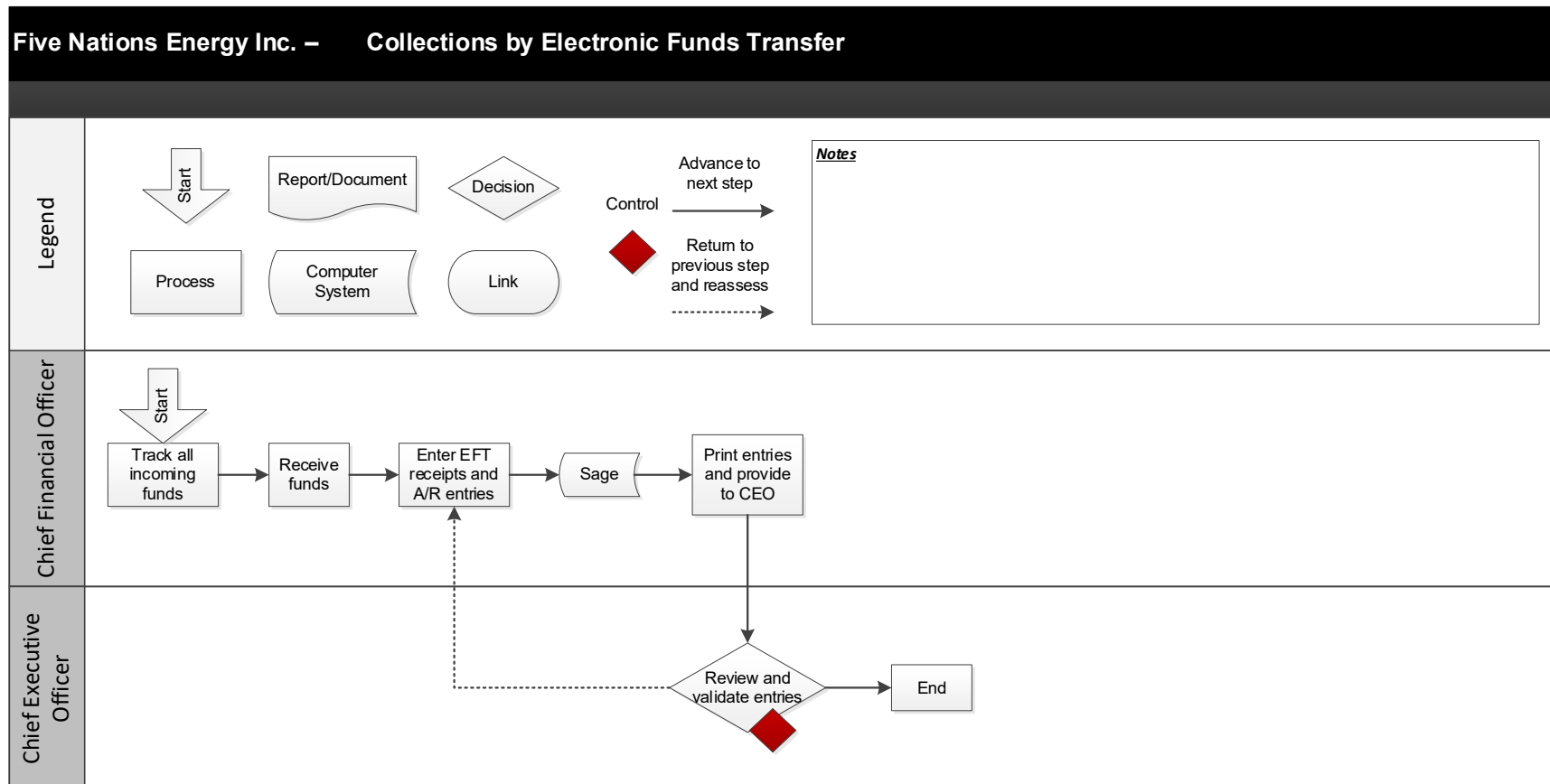
Access to FNEI's view EFTs within the banking services portal is restricted to the Chief Executive Officer, Chief Financial Officer, and Office Manager.

### **PROCEDURES**

The Chief Financial Officer will track all incoming funds from banking services.

Once the funds are received, the Chief Financial Officer will enter the EFT receipts and accounts receivable entries into the system. The entries will be printed and provided to the Chief Executive Officer for review and sign off.

## PROCESS MAP



## 8. Purchases, Payables, Disbursements

### 8.1. Purchase Orders

#### POLICY

Regular purchases for day-to-day operational supplies and services may require the use of a Purchase Order. Purchase Orders track the purchase of all goods, services and/or equipment. It is recommended that accounts be set up with regular suppliers.

Purchase Orders may be prepared provided that:

- The necessary funds are identified in the budget;
- The Purchase Orders are required by FNEI; and
- The Purchase Orders are made in accordance with established regulations and procedures of FNEI.

Purchase Order Forms shall be completed and signed before a Purchase Order is created. A Purchase Order Log will be maintained to account for each Purchase Order in numerical order.

Purchase Order Forms up to \$10,000 must be signed by any one of FNEI's authorized signing authorities. Purchase Order Forms over \$10,000 two signing authorities must sign the purchase order. It is understood that the CEO will be the primary signing authority for all purchase orders, however, this may be delegated as appropriate. Refer to [Appendix A: Delegation of Authority Table](#) and [Section 8.2 Procurement](#) for additional information.

The original copy of the Purchase Order is to be forwarded to the supplier, as needed, and one hard copy will be retained at the FNEI office for attachment to the invoice for the goods/services authorized by the purchase order.

At no time will a staff member make orders before Purchase Orders are approved.

Purchase Orders must be kept in safekeeping. Outstanding Purchase Orders will expire within six months of the date of issue if no goods and services have been provided.

All outstanding Purchase Orders will be reviewed at the FNEI's fiscal year-end. A report listing each outstanding Purchase Order detailing the amount of goods and/or services to be provided will be prepared for the Executive Committee for their review and information.

The Chief Financial Officer is to ensure that any purchases to be made are within the budget.

All accounts should be paid for on or before the due date, and any discount in payments should be taken advantage of.

All invoices are to be paid when supporting documentation is available, including a Purchase Order, and if applicable, a signed packing slip that the goods have been received.

Regularly recurring payments (e.g., mortgage payment, phone bills, hydro bills, equipment lease payments) do not require a Purchase Order but will be verified by the Office Manager and approved by the Chief Executive Officer, prior to being paid.

## **PROCEDURES**

Any purchases that require a Purchase Order shall be submitted to the Administrative Assistant. Requests shall be submitted in the form of a completed Purchase Order Form. The Purchase Order Form shall be completed and signed off by appropriate signing authority as identified in [\*Appendix A: Delegation of Authority Table\*](#).

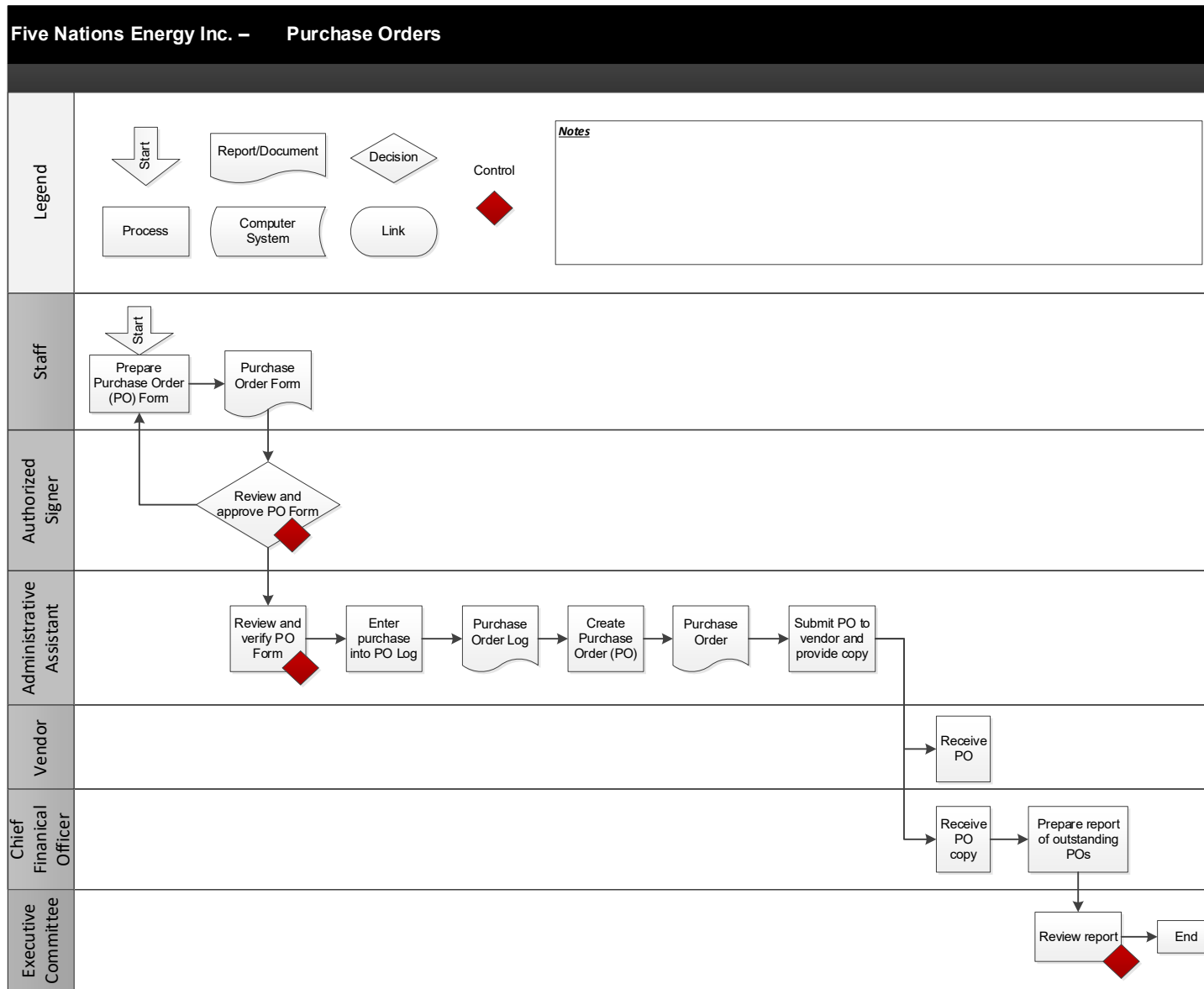
The Administrative Assistant will review the request for appropriate approvals. Once verified, the Administrative Assistant shall create a Purchase Order and record the creation in a Purchase Order Log. The Purchase Order Log will be maintained to account for each Purchase Order in numerical order.

The Administrative Assistant will submit the original Purchase Order to the supplier and will provide a copy to the Chief Financial Officer. The Chief Financial Officer shall review to ensure the purchases are aligned with FNEI's budget.

At the end of FNEI's fiscal year, the Chief Financial Officer shall prepare a report listing each outstanding Purchase Order detailing the amount of goods and/or services to be provided and will submit it to the Executive Committee for their review and information.



## PROCESS MAP



## 8.2. Procurement

### POLICY

The procurement of goods, services and assets will be conducted with sufficient due diligence to demonstrate transparency, fairness, quality, and value for money in meeting FNEI's requirements. When appropriate, FNEI will promote the use of local content in the procurement of goods and services.

As the annual capital budget is being determined, the Executive Committee will determine which projects will require a tender process. Refer to [Section 3.1 Five Year Capital Plan](#), [Section 3.2 Annual Budgets](#) for more information on capital budgeting.

Three Competitive quotes will be required for all purchases between \$10,000 and \$50,000 unless it can be clearly demonstrated that a competitive quote is not an option. For purchases of \$50,000 and upwards, tenders will be required using the Request for Proposal (RFP) process, Request for Tender (RFT), or a similar process, whichever is appropriate to the circumstances. The RFP or RFT process is referred to as the RFx process within this section.

#### ***Sole Source Contracting Principles***

If it can be demonstrated that a sole source contract would provide best value to FNEI, then a contract may be sole sourced.

#### ***Contracts***

Each contract entered into on behalf of FNEI must include terms and conditions including rates, insurance requirements, confidentiality provisions, and identification of potential liability, termination clauses, and the duties for which the contract is in effect. Refer to [Section 1.7 Contract Management](#) for additional information on contract management.

### PROCEDURES

#### ***Procurement of goods and services amounting up to \$10,000***

Goods and services under or up to \$10,000 can be procured by the individuals noted in the [Appendix A: Delegation of Authority Table](#) for each threshold of value.

The responsible employee noted in the [Appendix A: Delegation of Authority Table](#) will ensure that the goods or service selected is the best value for FNEI.

The responsible employee noted in the [Appendix A: Delegation of Authority Table](#) will sign the invoice indicating that the goods or services have been received under the terms in the agreement between FNEI and the vendor.

### ***Procurement of goods and services amounting greater than \$10,000 and up to \$50,000***

Where practical, quotes will be obtained through advertisements, direct solicitations to contractors/suppliers and other methods in an effort to compare prices and select the best option for FNEI. Competitive quotes are required, unless it can be demonstrated that a competitive quote is not an option.

The responsible employee noted in the [Appendix A: Delegation of Authority Table](#) will perform a documented analysis of the costs and benefits of at least three options to procure the good or service.

### ***Procurement of goods and services amounting greater than \$50,000***

Goods and services amounting greater than \$50,000 shall be approved according to [Appendix A: Delegation of Authority Table](#) and will be procured using a competitive tendering process.

A RFx process, or a similar process (whichever is appropriate to the circumstances) will be issued and will include the following components:

- Date by which proposals are due;
- Background to the requirement (e.g., context, challenges);
- Specific requirements of the proposal (e.g., course of construction insurance, performance guarantees and bonding);
- Qualifications of the ideal supplier (e.g., track record, experience, integrated services);
- At least three references from clients where the vendor or supplier has completed similar work;
- Criteria and weighting (if applicable) by which proposals will be assessed;
- Planned contract award date;
- Timelines for initiation and completion of work;
- Process for entertaining questions regarding the RFx and sharing responses with other potential suppliers;
- Caveat providing FNEI with the right to pick any proposal or none; and
- A checklist of other special terms and conditions (e.g., maximum price expected, delivery dates or constraints) that would be critical for an organization to build into their response to meet the needs of FNEI.

The Chief Executive Officer, Chief Financial Officer, the Operations Manager, and any required staff possessing relevant expertise will form a review panel and review the proposals received

against the pre-determined selection criteria for the RFx. Any procurements over \$100,000 will be presented to the Executive Committee for additional approval.

To maintain consistency in the procurement process, a standard methodology will be used to evaluate each contractor/supplier. The methodology will include, at a minimum, an evaluation of:

- o How the contractor/supplier meets the RFx requirements and specifications;
- o The contractor/supplier's qualifications;
- o The price quoted; and
- o Results and quality of all work the contractor/supplier has previously done for FNEI. Refer to [Section 1.8 Vendor Management](#).

Normally an RFx process as described above will be followed to procure goods and services. Exceptions to this process (i.e., granting a Sole Source contract, non-competitive contract award) will be rare and limited to the following situations:

- o If there were no bids received during the RFx process;
- o When the good or service is available only through a Sole Source; and
- o In an emergency situation where a delay in procuring the good or service would result in severe loss or damage to FNEI.

Any exceptions to the procurement process will be documented to demonstrate the rationale and submitted for approval to the persons authorized per [Appendix A: Delegation of Authority Table](#).

### ***Approval, initiation, and monitoring***

Approval of procurement decisions should be documented on the relevant purchasing document (i.e., purchase order, RFx, or contract, depending on the nature of the procurement activity).

Once approved, the Chief Financial Officer will ensure that an accounting system is in place for each procurement activity over \$10,000 and for each contracted procurement so that money is set aside and used specifically for those goods or services.

On a monthly basis, the Chief Financial Officer will review the status of procurement, noting and investigating any over budget commitments. Procurement activities over budget by \$20,000 will be reported to the Chief Executive Officer.

At each Executive Committee meeting the Chief Executive Officer will report on the status of a capital project including a comparison of expenditures to date with the project budget and a detailed description of any identified legal, financial, technical, scheduling, or other problems

and the manner in which it has been or will be addressed. Refer to [Section 3.5 Project Planning](#) for additional information on capital projects.

### ***Documentation requirements***

All procurement documents (including but not limited to purchase orders, invoices, RFx) will clearly indicate the details of the goods and services requested.

Approvals and budget appropriations and accounts from which certain goods or services may or must be purchased will be documented on relevant internal procurement documentation.

A file will be created for each RFx process that contains the results of each supplier evaluation.

### ***Monitoring of Contractors/Suppliers***

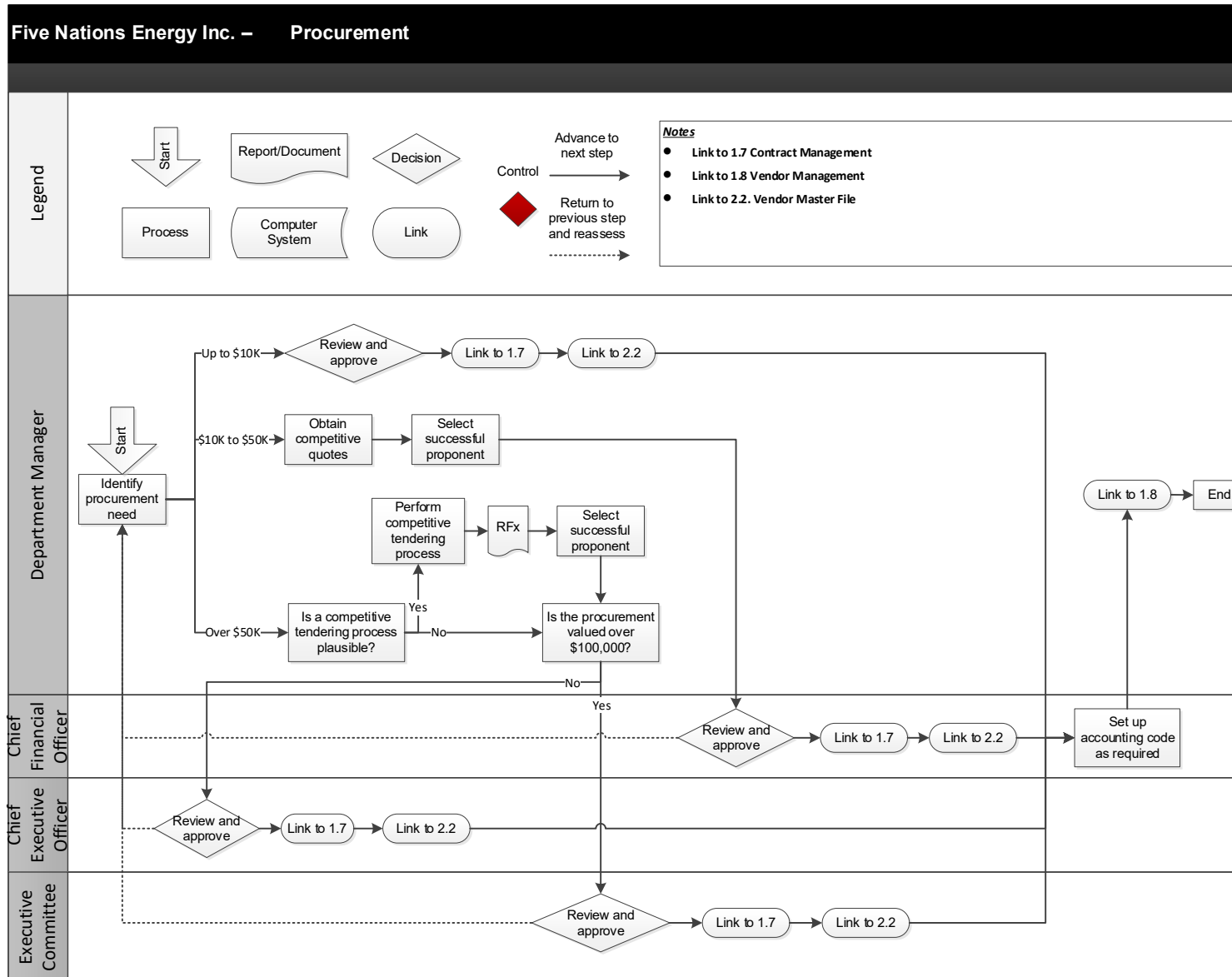
On an ongoing basis, Management will monitor the quality of the work and the working relationship with the contractor/supplier. Any issues noted will be documented in the contractor/supplier file and resolved by the Chief Executive Officer.

Performance evaluation should be tailored to job size and complexity. A review of both the project quality and the service quality should be conducted using a standard set of criteria and applying weight factors established at the time of award. Any adjustments to the criteria weighting should not be made without the contractor/supplier's concurrence. Refer to [Section 1.8 Vendor Management](#) for additional information.

### ***Encouraging new contractors/suppliers***

Contracts will be reviewed on an annual basis (or other timeframe as deemed appropriate by the Chief Financial Officer for the nature and complexity of the goods/services in question) and a request for other contractors/suppliers initiated.

## PROCESS MAP



## 8.3. Payments By Cheque

### POLICY

Payments by cheque will be completed on a periodic basis (i.e., weekly, or bi-weekly).

Disbursements or payments are to be made by a pre-numbered cheque on the basis of certified supporting documentation, such as the invoice, the packing slip, and the Purchase Order. All cheques are to be accounted for. Void cheques are to be retained for audit purposes.

The Board of Directors may authorize up to three (3) Officers or Directors to be named by resolution to sign cheques drawn on its' accounts. All cheques are to be signed by at least two of these authorized persons:

- President
- Vice President (Acting Chair)
- Chief Executive Officer
- Operations Manager, and
- Office Manager.

Other specific signing authorities for special accounts will be named by resolution.

The authorized signers are required to review payment supporting documents (e.g., purchase order, contract, invoices, etc.) before signing, and are to evidence their review and approval by initialling or signing the supporting documentation package. Refer to [Appendix A: Delegation of Authority Table](#) for additional information on authorized cheque signers.

Corporation cheques are not to be postdated and must not be signed blank.

Where a cheque is reported as lost, destroyed, stolen, or has been presented for payment longer than six months from the date of issue, it will be canceled, and a stop payment notice sent to the bank. A duplicate cheque may then be issued, but the payee must indemnify FNEI against further loss.

All blank cheque stock will be stored in a locked cabinet or safe with controlled or limited access.

### PROCEDURES

#### *Invoice Processing*

The Administrative Assistant shall receive receiving/packing slips and invoices for goods/services received and match them to Purchase Orders. Once verified, the supporting documents are provided to the Signing Authority to review and approve the invoice. Signing Authorities shall follow the appropriate approvals per [Appendix A: Delegation of Authority Table](#). The Signing Authority shall confirm the appropriate general ledger / account details. Once the invoice is

signed, the Administrative Assistant shall forward the signed invoice and supporting documentation to the Chief Financial Officer.

The Chief Financial Officer will review for appropriate approvals and will perform a match of supporting documentation. The Chief Financial Officer will follow-up for any clarifications and will investigate any discrepancies. Once reviewed, the Chief Financial Officer will enter the vendor invoice, along with scanning of digital copies of the supporting information into the financial system.

### ***Issuing Cheques***

Once the invoices are entered into the system, the Chief Financial Officer will prepare an Accounts Payable (A/P) Aging Report, indicating the payments to be made by cheque. This report will be provided to the Chief Executive Officer, along with the invoices and supporting documentation. The Chief Executive Officer will review and approve the information and notify the Chief Financial Officer which invoices have been approved for payment by cheque.

Upon receiving approval from Chief Executive Officer, the Chief Financial Officer will prepare cheques for signing. The Chief Financial Officer will print the cheque and submit the unsigned cheque, along with the invoice, and supporting documentation to the appropriate cheque signers for review and signature. Cheques are to be signed by two authorized signers per [Appendix A: Delegation of Authority Table](#).

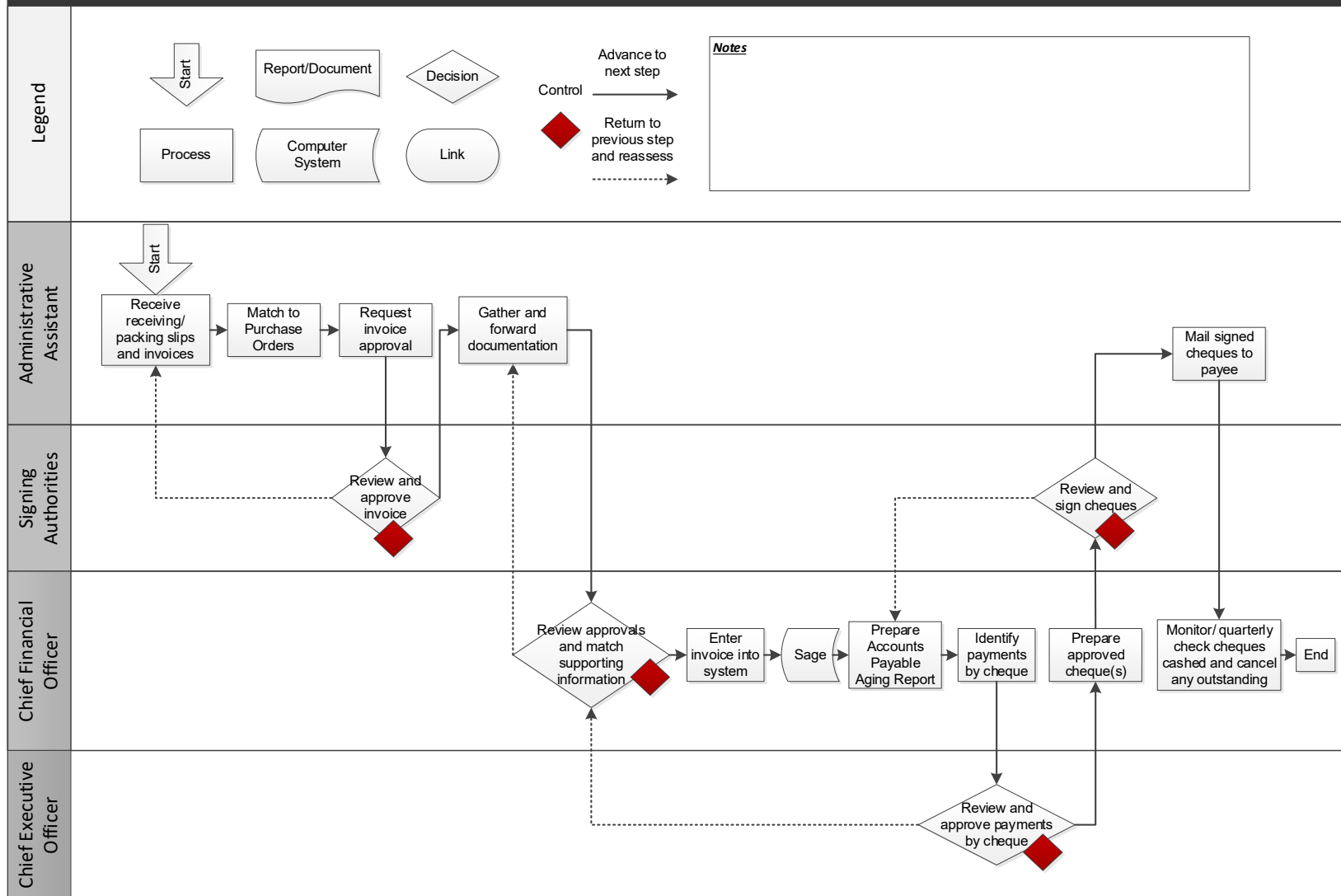
Once signed, the Chief Financial Officer will submit the cheques to the Administrative Assistant. The Administrative Assistant will mail cheques directly to the payee. The Chief Financial Officer will maintain records of the paid vendor invoice and all supporting documents (including cheque stubs).

On a quarterly basis, the Chief Financial Officer will monitor to ensure cheques have been cashed. If cheques are not cashed within six months, the Chief Financial Officer shall cancel the outstanding cheque.



## PROCESS MAP

### Five Nations Energy Inc. – 8.3.Payments by Cheque



## 8.4. Payments by Electronic Funds Transfer

### POLICY

Access to initiate payments in FNEI's banking services is restricted to the Chief Financial Officer. Access to release payment is restricted to the Chief Executive Officer and Office Manager. Access to release payment can be delegated per [Appendix A: Delegation of Authority Table](#).

The process for electronic funds transfer is as follows:

- a. FNEI may choose to enter into an agreement with a financial institution to process electronic funds transfer for the purpose of paying accounts payable, disbursements, or other payments that are normally paid by cheque.
- b. The system of internal controls currently in place and set out in this Financial Policies and Procedures Manual must not be subverted by the use of electronic payments. Specifically, the authorization of two signing authorities must be recognized before any payments or release of funds takes place.
- c. The Chief Financial Officer or another FNEI authorized person will have access to the financial institution's secure site to create a list of payments based on certified documentation normally used in the process of issuing paper cheques.
- d. the payee's banking information entered into the financial institution's system will be based on information received from the payee and will be verified prior to an initial payment issued electronically to the payee. Refer to [Section 2.2 Vendor Master File](#).
- e. Once the list of payments has been entered in the financial institution's system, two of the authorized bank signing authorities discussed in section will log on to the financial institution's secure system, using a device to verify their identity, to verify and approve the list of payments previously created. Refer to [Appendix A: Delegation of Authority Table](#) for additional information on EFT authorities.
- f. The act of logging on and approving the list of payments is, in effect, the signing of a paper cheque and contains with it the same function and responsibility as signing a paper cheque.
- g. The list of payments made and generated by the financial institution detailing the payee's and payment amounts will be filed with the supporting documentation and will serve as proof of purchase.

Regularly recurring payments (e.g., mortgage payments, phone bills, hydro bills, equipment lease payments) shall be verified by the Office Manager and approved by the Chief Executive Officer, prior to being paid.

## PROCEDURES

### ***Invoice Processing***

The Administrative Assistant shall receive receiving/packing slips and invoices for goods/services received and match them to Purchase Orders. Once verified, the supporting documents are provided to the signing authority to review and approve the invoice. Signing authorities shall follow the appropriate approvals per [Appendix A: Delegation of Authority Table](#). The signing authority shall confirm the appropriate general ledger / account details. Once the invoice is signed, the Administrative Assistant shall forward the signed invoice and supporting documentation to the Chief Financial Officer.

The Chief Financial Officer will review for appropriate approvals and will perform a match of supporting documentation. The Chief Financial Officer will follow-up for any clarifications and will investigate any discrepancies. Once reviewed, the Chief Financial Officer will enter the vendor invoice, along with scanning of digital copies of the supporting information into the financial system.

Once the invoices are entered into the system, the Chief Financial Officer will prepare an Accounts Payable Aging Report, indicating the payments to be made by EFT. This report shall identify all payables in the system, including payment of invoices, employee expenses, or travel advances. Refer to [Section 8.5 Travel and Travel Advances](#) and [Section 8.6 Employee Expenses](#). This report will be provided to the Chief Executive Officer, along with the invoices and supporting documentation. The Chief Executive Officer will review and approve the information and notify the Chief Financial Officer which invoices have been approved for payment by EFT.

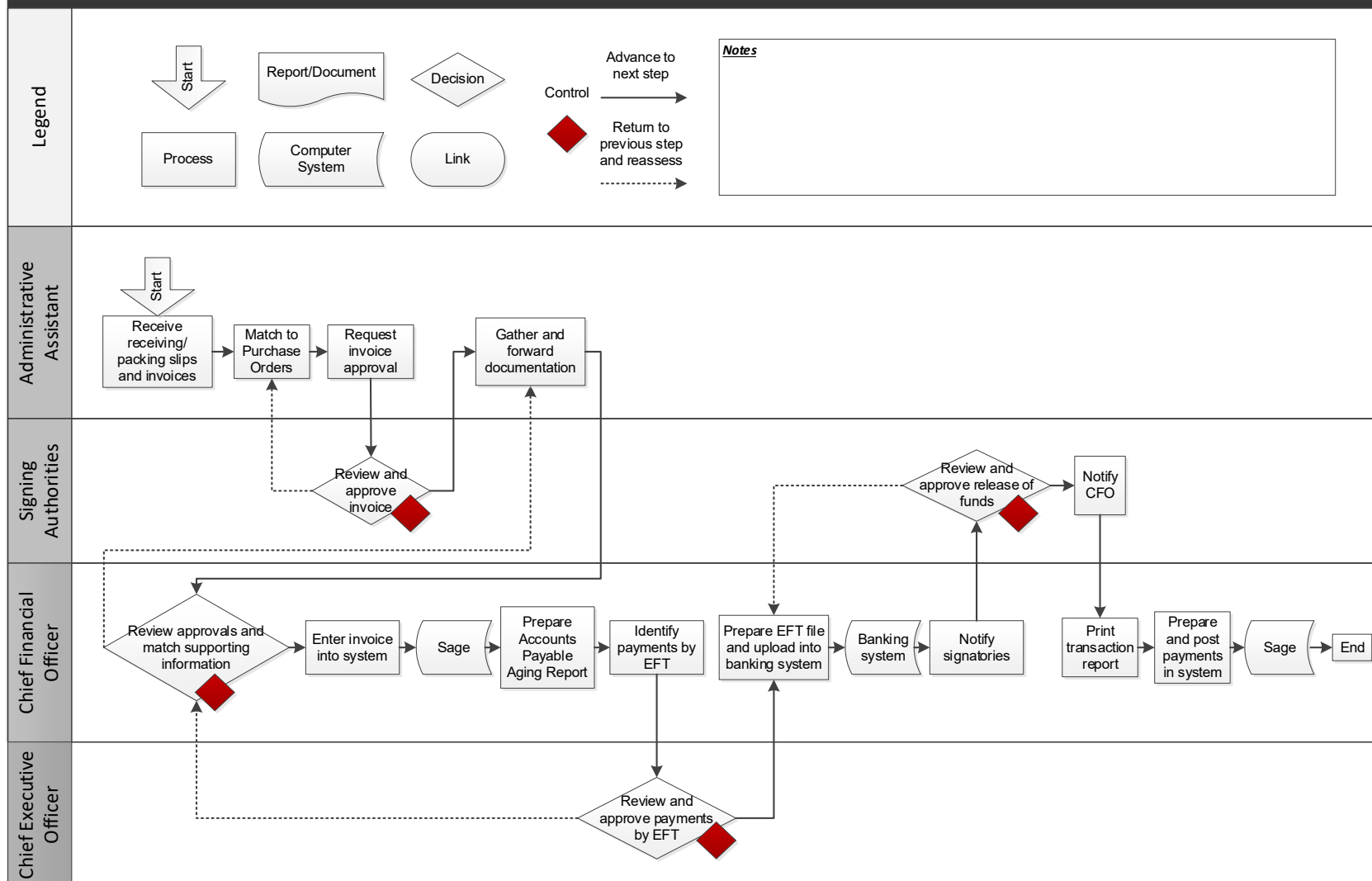
### ***Initiation of EFT payments and release***

Upon receiving the approval from the Chief Executive Officer, the Chief Financial Officer will prepare an EFT file and shall upload the file into the online banking service. Once uploaded, the Chief Financial Officer shall notify the Officer Manager and Chief Executive Officer who are the two authorized signatories. Between the Officer Manager and Chief Executive Officer, one shall review and approve and notify the other who will review, approve, and release the funds.

Once the EFT has been complete, the Officer Manager or Chief Executive Officer will notify the Chief Financial Officer of the transfer. The Chief Financial Officer shall print a report of the transactions and post the transactions within the financial system. The transaction report will be retained within the financial records.

## PROCESS MAP

### Five Nations Energy Inc. – Payments by Electronic Funds Transfer



## 8.5. Travel and Travel Advances

### POLICY

FNEI will reimburse Employees, Officers, Directors, and outside contractors, for reasonable out of pocket expenses.

Any monies owing to FNEI will be repaid in cash, or by a deduction from the Employee's next travel cheque, and by deduction from Officers and Directors future honoraria.

### ***Approved Travel Rates***

Corporate or government rates for accommodations (if available) should be requested.

The maximum allowed accommodation rate is \$250, unless there is no other accommodation available, and make reasonable effort to find accommodation not exceeding \$250.

When hotel reservations are canceled, it is the responsibility of each Employee or Director to advise the hotel prior to the deadline time in order that FNEI is not charged for unused rooms. If charges are processed and paid for by FNEI, this amount will be deducted from the next travel disbursement or honoraria entitlement.

The rate for private accommodation (without receipts) is \$50.00.

Daily meal allowances shall be those established from time to time by FNEI. The rates are as follows:

- Breakfast      \$20.00
- Lunch            \$20.00
- Supper           \$55.00
- \$95.00

*Note: Receipts are required for approved business meals that are above the maximum allowed.*

Incidental payments are allowed for every day that the Employee, Director, or Officer, travels away from home. The maximum payment for incidentals is \$17.50 per day.

The mileage rate paid by FNEI for travel in a private vehicle is \$0.65/km. The mileage rate paid should not exceed the cost of a more economical mode of transportation.

### ***Travel Expenses for FNEI staff and management***

All travel expenses for FNEI staff and management (including car and truck rentals) must be approved by the authorized approver as identified in [Appendix A: Delegation of Authority Table](#). The most economical car rental rate should be utilized, and full insurance must be taken. FNEI will not be responsible for any accidents, traffic violations, or parking tickets.

All travel claims must be approved by the individual authorizing the travel. The Chair shall approve the CEO's travel claim, the CEO will approve the travel claim for the staff member's travel that the CEO approved, the Operations Manager shall approve the travel claim for the travel that the Operations Manager approved.

When travel arrangements are changed or cancelled, it is the responsibility of each Employee to advise the designated travel agency that originally made the arrangements. All unused tickets must be returned.

### ***Travel Expenses for FNEI Board of Directors / Officers***

All travel arrangements for which reimbursement of expenses is to be made shall be approved in advance by the authorized approver as identified in [Appendix A: Delegation of Authority Table](#). Rates of travel reimbursements will follow corporate approved standard rates per the Approved Travel Rates section above.

When travel arrangements are changed, it is the responsibility of each Director to advise the designated travel agency that originally made the arrangements. All unused tickets must be returned.

Attendance at Board meetings will be verified. Any outstanding advances that have been paid for meetings that were not attended by the Director will be recovered from the travel disbursement or honoraria paid for the next Board of Directors meeting. Refer to [Section 9.2 Board and Officer Remuneration and Bonuses](#) for additional information.

### ***Travel Expenses for Consultants***

All travel arrangements for which reimbursement of expenses is to be made shall be approved in advance by the Chief Executive Officer or his/her designate.

Rates of travel reimbursements will follow corporate-approved standard travel rates, as per the Approved Travel Rates section above.

Flight passes purchased by FNEI or an FNEI Purchase Order to a designated travel agency should be utilized for Air Travel unless it can be shown that it was beneficial to FNEI to purchase a ticket by other means (a credit card, either FNEI's or the Consultant's).

Other costs that are invoiced shall be based on actual costs.

### ***All Other Expenditures***

For expenditures other than travel, pre-approval is necessary from the Chief Executive Officer before initiating the expenditure and submitting an advance or reimbursement claim. If the expense claim is for the Chief Executive Officer, the Board Chair must provide the pre-approval.

### ***Travel Authorization***

All travel arrangements for which reimbursement of expenses is to be made shall be approved in advance by the authorized approver as identified in [Appendix A: Delegation of Authority Table](#). Rates of travel reimbursements will follow corporate approved standard rates set per the Approved Travel Rates section above. No payment for travel will be issued prior to approval of the travel.

An employee is deemed to be on official “travel status” for an approved trip for the period when an employee departs their residence or office until he or she returns to their residence or office.

At the end of each trip, the Employee is required to complete a travel expense claim within a week of his or her return. Original receipts must be included for all expenses, including prepaid expenses. In lieu of missing receipts, a signed declaration must be included with travel claims.

The Chief Executive Officer will submit their expense claim to the Board Chair for pre-approval / reimbursement approval.

When travel arrangements are changed or cancelled, it is the responsibility of each Employee to advise the designated travel agency that originally made the arrangements. All unused tickets must be returned.

### ***Travel Advances***

FNEI will, on occasion, be required to provide payments in advance of receiving any invoices or receipts or against employee’s advance expense claims. Requests for payments in advance must be approved per [Appendix A: Delegation of Authority Table](#) prior to placing the request.

If it is necessary for the Chief Executive Officer or the Operations Manager to draw on a cash advance for travel, the maximum amount of all outstanding travel advances is to be \$1,000.00.

Once travel has been approved, a travel advance will be completed. All receipts for expenses where travel advances have been used shall be submitted to the Chief Financial Officer. A travel expense claim will not be required after the travel, unless the total expenses are in excess of the advance.

No further travel advances will be issued until previous travel advances are accounted for. The maximum travel claims outstanding are not to exceed two (2).

### **PROCEDURES**

When an employee incurs an approved expense, the employee is to prepare an expense report. Refer to [Section 8.6 Employee Expenses](#).

When an employee requires payment in advance of receiving goods or services (e.g., for travel expenses), the individual will prepare the appropriate documentation and provide the request

with appropriate documentation and approvals per [Appendix A: Delegation of Authority Table](#) to the Chief Financial Officer.

The Chief Financial Officer will review the request against the supporting documentation and approval. Once the review is complete, the Chief Financial Officer will enter the amounts into the system to complete payment. Advances are to be paid through EFT. Refer to [Section 8.4 Payments by Electronic Funds Transfer](#).

Once the individual has incurred the expense and completed the transaction, they shall provide the receipt/invoice to the Chief Financial Officer. The individual shall also provide any additional supporting documentation (e.g., boarding passes, bill of lading, etc.) to the Chief Financial Officer.

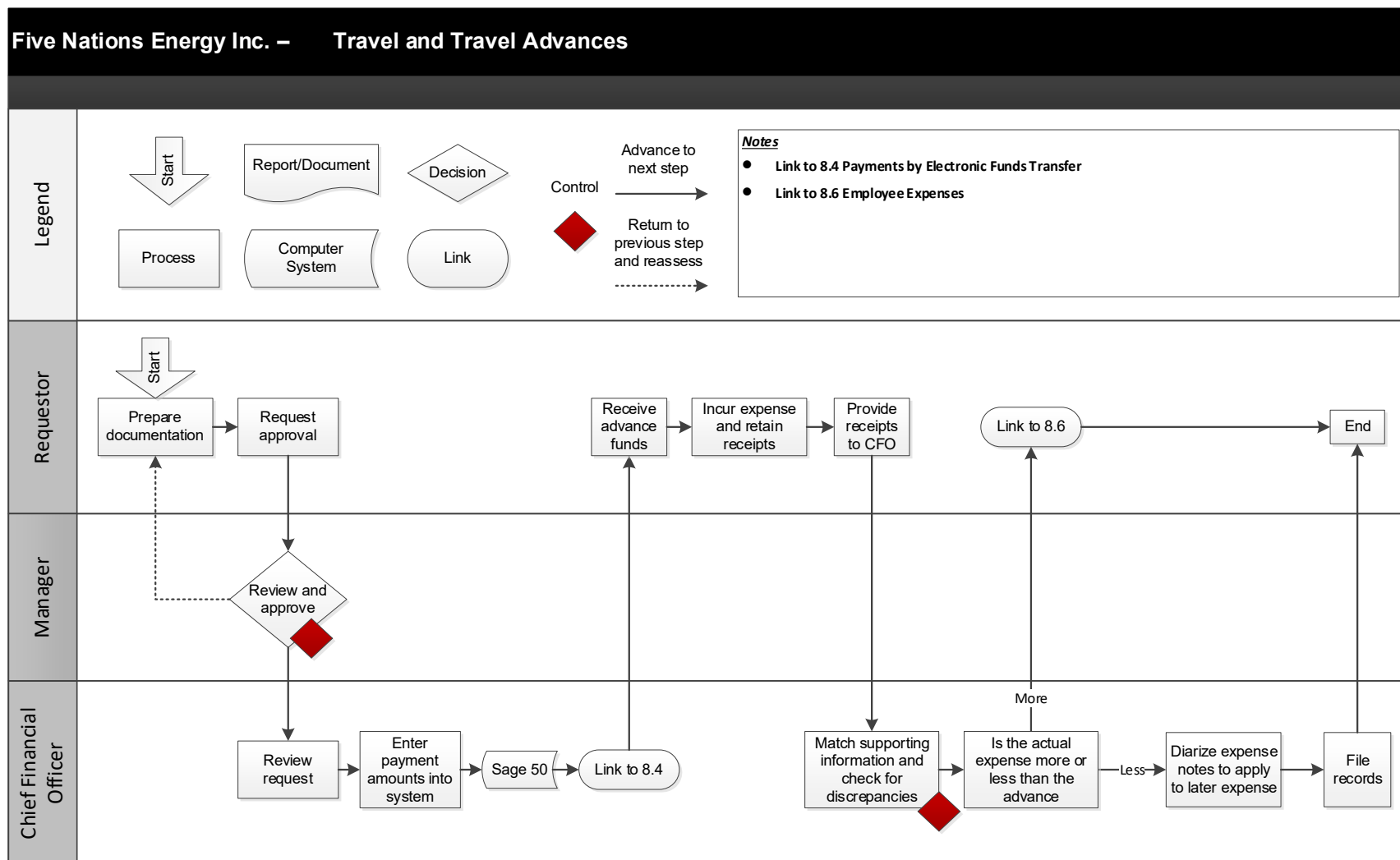
The Chief Financial Officer will perform a match of information with the supporting documentation. Any discrepancies will be investigated. If the money spent by the individual is less than the travel advance, the balance will be noted and applied to future travel advance or employee expense. If money spent is more than the travel advance, the employee will submit an expense report for the difference. Refer to [Section 8.6 Employee Expenses](#).

Once complete, the Chief Financial Officer will diarize any expense notes (e.g., balances) and file all records.



## PROCESS MAP

### Five Nations Energy Inc. – Travel and Travel Advances



## 8.6. Employee Expenses

### POLICY

Employees must submit expenses to the Chief Financial Officer in a timely manner. Employees must ensure all receipts are included with the report when it is submitted.

An employee may request an expense advance but requires approval which must be submitted as per [Section 8.5 Travel and Travel Advances](#). If an employee is granted an expense advance, receipts and other supporting documentation must be submitted to the Chief Financial Officer in a timely manner.

Employees will clearly demonstrate and document that all amounts they are claiming for reimbursement were directly related to authorized activities performed on behalf of FNEI. For travel expenditures, employees will ensure that they comply with the limits and expectation set in [Section 8.5 Travel and Travel Advances](#).

Expenses reimbursed by hosts or other third-parties arrangements must not be claimed. Declaration of such third-party reimbursements must be made in alignment with FNEI's *Conflict of Interest, Code of Conduct, and Ethics Policy*. Refer to [Section 1.4 Conflict of Interest](#) for additional information related to financial conflicts of interest.

Employees are to submit a signed and approved, completed expense report along with all receipts to the Chief Financial Officer. Approval of the Employee Expense Form shall be provided in accordance with [Appendix A: Delegation of Authority Table](#).

### PROCEDURES

Reimbursable expense claims must be complete, sufficiently supported, and recorded on the prescribed Employee Expense Report. Before submitting expenses for approval and payment, the employee will ensure that they have prepared a complete claim that includes:

- The employee's signature and date signed, acknowledging that all amounts claimed are accurate and in support of FNEI official business;
- Original receipts and any supporting documentation for all amounts claimed. Depending on the nature of the claim, these can include
  - o Invoices;
  - o Itineraries for air/train travel;
  - o Itemized restaurant bills (where per diems do not apply);
  - o Support for any exchange rates used in the expense claim. Sufficient support includes receipts from exchange bureaus for money exchanged or credit card bills showing the exchange rate received. When neither is available, the Bank of Canada official rate shall be used;

- o Signed authorization from the employee's manager (for the Chief Executive Officer a Board Member will approve, for Board Members the Chief Executive Officer will approve); and
- o Proof of payment for items claimed.

Credit card receipts alone are not sufficient - the original itemized receipt or invoice from the supplier must be included for every reimbursement or expense claim.

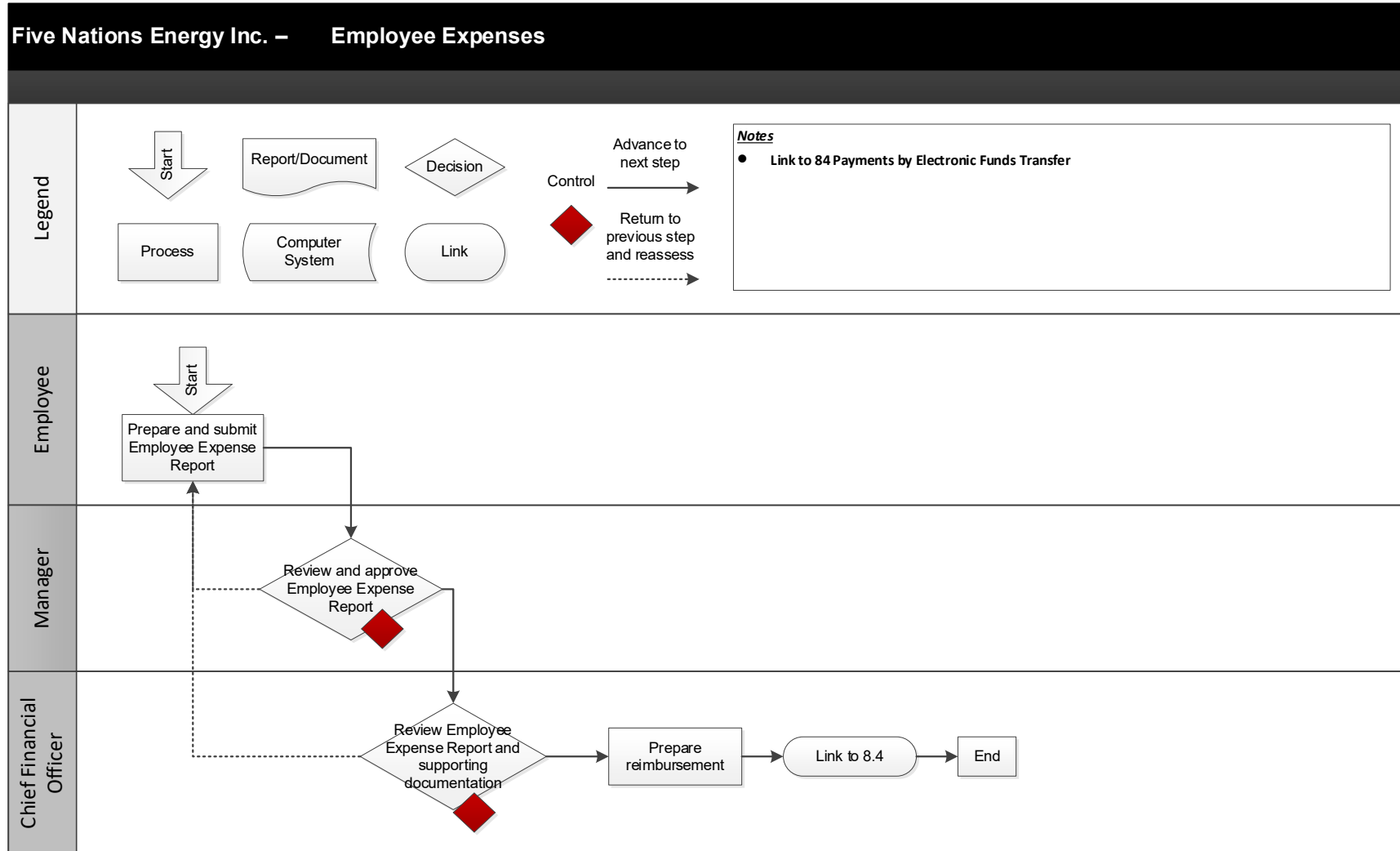
For all expenditures, claims with the appropriate support as described above must be submitted to the Chief Financial Officer within 30 days of the expense being incurred.

The Chief Financial Officer will review the Employee Expense Report and supporting documentation and follow-up on any discrepancies.

Once the amount is confirmed, the Chief Financial Officer will prepare for payments. Refer to [Section 8.4 Payments by Electronic Funds Transfer](#).

## PROCESS MAP

### Five Nations Energy Inc. – Employee Expenses



## 8.7. Credit Cards

### POLICY

Credit cards will be issued as recommended by the Chief Executive Officer and approved by the Board of Directors for the sole purpose to purchase goods and services for FNEI and the use of FNEI credit cards will be governed by the FNEI *Credit Card Policy and Procedures* credit card receipts for FNEI purchases must be submitted to the FNEI office within thirty (30) days of the purchases, or earlier, for the reconciliation of monthly credit card statements. Failure to do so will result in suspension of credit card privileges.

Misuse of the FNEI credit cards will result in immediate suspension of credit card privileges and includes any purchases made that are not for FNEI business. Every effort will be made to immediately recoup the funds. Refer to FNEI's *Credit Card Policy and Procedures*, available under separate cover.

Each staff person and council member receiving an FNEI credit card must read and sign-off on *Credit Card Policy and Procedures* prior to use.

The corporate credit card can be used for:

- Confirmation of hotel reservations;
- Travel for FNEI (including flights, taxis, hotel expenses);
- Program supplies;
- Gas for FNEI-owned vehicles;
- Registration for conference or training;
- Routine maintenance costs for FNEI-owned vehicles; and
- Low dollar value assets.

The corporate credit card cannot be used for:

- Purchases from companies who will invoice FNEI directly;
- Capital purchases;
- Personal use; and
- Cash advances.

Lost or stolen cards must be notified to Chief Financial Officer and are to be cancelled immediately. The Card is returned to the Chief Financial Officer immediately upon termination or resignation of employment.

The Chief Financial Officer may set-up automated payments for recurring payments to the Credit Card, however, any requests for automated payments must be pre-approved by the Chief Executive Officer. The Chief Executive Officer will review the list of automated payments charged to all the issued credit cards on a quarterly basis.

## **PROCEDURES**

### ***Using Credit Card to incur expenses***

Corporate Credit Cards are issued to designated Cardholders throughout FNEI. Cardholders require approval from the Chief Executive Officer to obtain a card. The Cardholder is responsible for the safekeeping and appropriate use of the card.

When the Cardholder incurs an expense on the credit card, a copy of receipt shall be retained. The Cardholder shall collect the receipts and identify the associated general ledger / accounts for each expense. The receipts and account details are to be provided to the Chief Financial Officer on a monthly basis.

### ***Credit card expense processing***

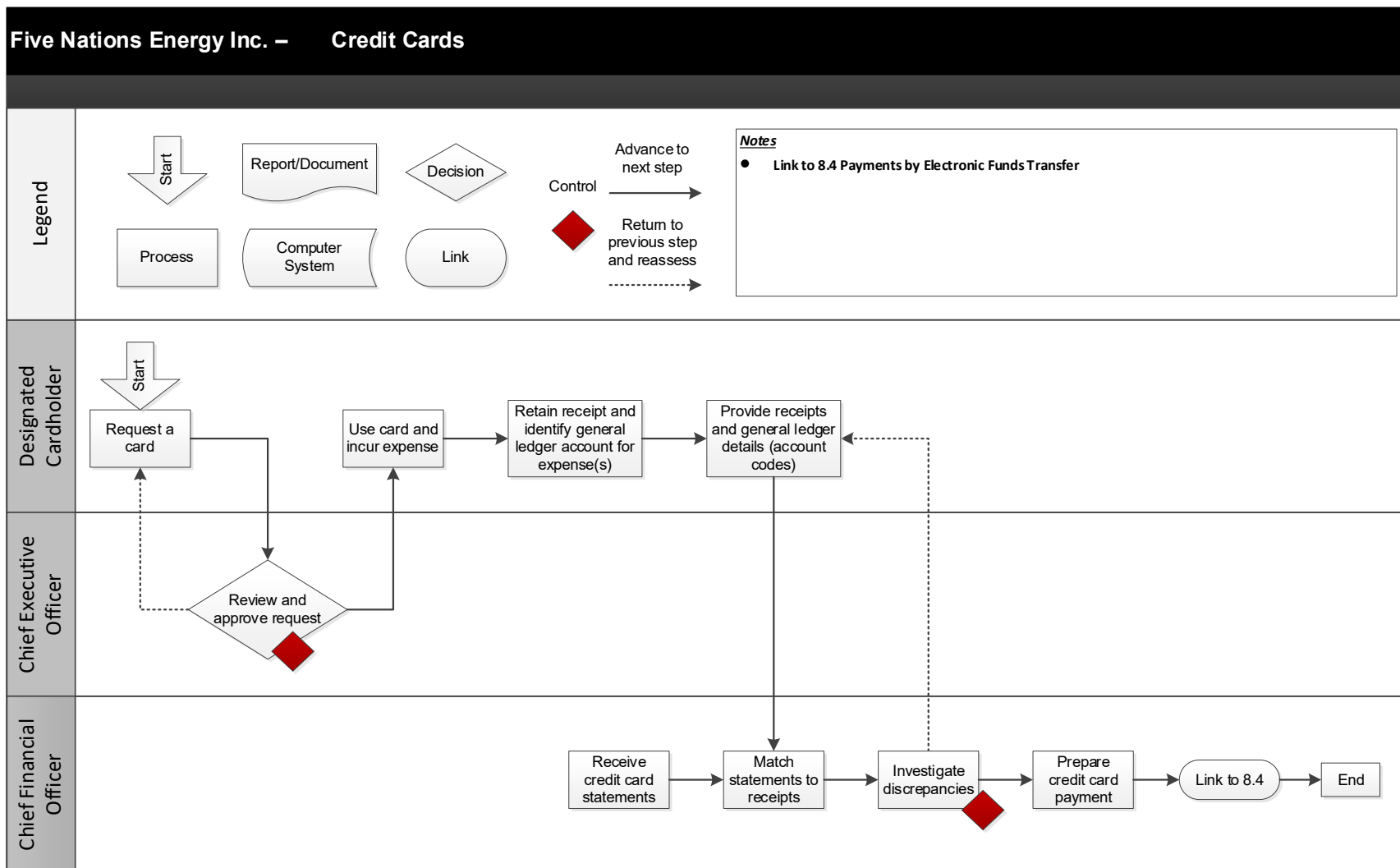
The Chief Financial Officer receives monthly credit card statements directly (either through the mail or through an online portal). The Chief Financial Officer will match the supporting information provided by the Cardholder with the statements. The Chief Financial Officer will investigate any discrepancies.

Once the statement and information have been verified, the Chief Financial Officer will prepare entries into the financial system for payment.

Payments will be made through electronic funds transfer. Refer to [Statement 8.4 Payments by Electronic Funds Transfer](#).

## PROCESS MAP

### Five Nations Energy Inc. – Credit Cards



## 8.8. Scholarship Fund

### POLICY

Scholarships are issued on an annual basis to eligible individuals. Funds for scholarships shall be set aside during the annual budgeting process. Refer to [Section 3.2 Annual Budgets](#).

Scholarships are to be issued in alignment with FNEI's *Scholarship Fund Guidelines*, available under separate cover.

### PROCEDURES

To initiate the process, the Office Manager shall reach out to education authorities to identify eligible candidates (per *Scholarship Fund Guidelines*). Education authorities will provide the names, transcripts, and details of an individual's eligibility to the Office Manager.

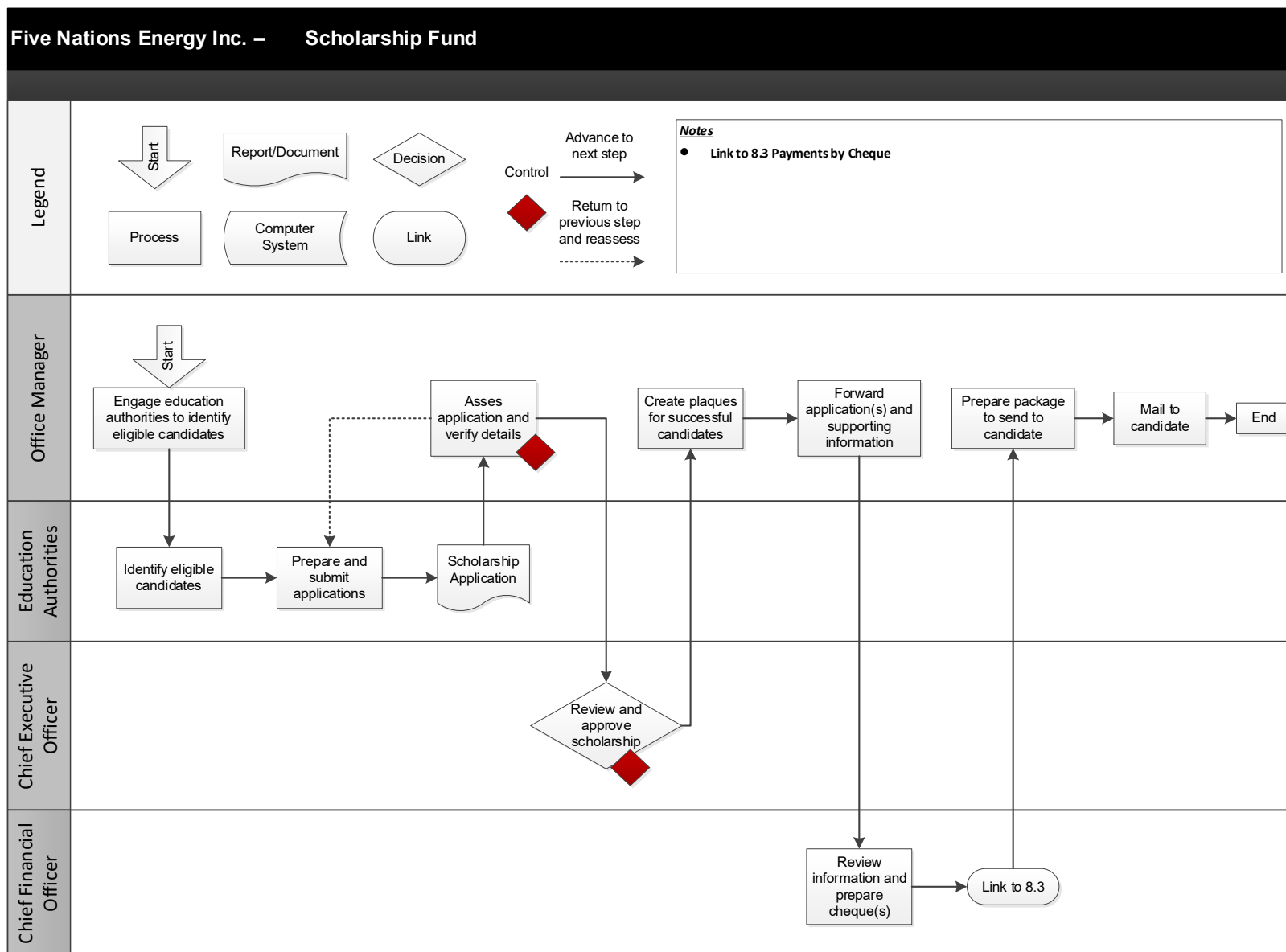
The Office Manager will assess the information and confirm the details, including the value of the scholarship. The details and information are then provided to the Chief Executive Officer for approval.

Once approved, the Office Manager will arrange to have plaques created for each successful candidate. The applications and supporting information are provided to the Chief Financial Officer. The Chief Financial Officer shall prepare and issue a cheque for the successful candidate. Refer to [Section 8.3 Payments by Cheque](#).

The Office Manager will package up the plaque, a letter and the cheque. This package is then mailed to the successful candidate.



## PROCESS MAP



## 8.9. Donations

### POLICY

The objects of FNEI are to promote the social, economic, and civic welfare and development of Attawapiskat, Fort Albany, and Kashechewan First Nations by:

- a. Promoting, acquiring, developing, and establishing works and facilities of any manner or nature for the provision acquisition, transmission, distribution of electricity and other utilities to the communities of Attawapiskat, Fort Albany, and Kashechewan, First Nations and elsewhere;
- b. Constructing, operating, maintaining, and managing such works and facilities for the general benefit and for the purpose of providing electrical power and other utilities to the communities of Attawapiskat, Fort Albany, and Kashechewan, First Nations and elsewhere; and
- c. Through the accomplishment of the objects described in paragraphs 1 and 2, encouraging and promoting self-sufficiency, skills training, employment and economic development opportunities, community cooperation, measures to improve the protection of the natural environment and such other measures to that are socially beneficial for the community as may accrue from FNEI's objects and undertakings, in the communities of the Attawapiskat, Fort Albany, and Kashechewan, First Nations and elsewhere

The FNEI annual budgeted expenditures for donations shall be approved by motion of the Board of Directors. Refer to [Section 3.2 Annual Budgets](#).

In order to adhere to the objects of FNEI, the Board of Directors will review the goals and objectives of this section on an annual basis and set guidelines for the following year's discretionary support. The Board of Directors will also review their long-term commitments annually and reaffirm their support for them.

The Chief Executive Officer of FNEI will administer this section as per guidelines set by the FNEI Board of Directors.

FNEI will contribute up to a maximum of \$1,500.00 per instance for projects that meet the guidelines provided there are funds remaining within the approved budget. A request over and above \$1,500 will be granted on a one-time basis only, and only if the request meets the Community objectives, and that there are sufficient funds remaining the approved budget.

The request for funding must reflect the direction as set by the Board of Directors of FNEI for discretionary support and will identify monies available for donation and will also identify what funds are remaining in the communication budget.

Any organization that receives sponsorship must be willing to sign a contract that stipulates that FNEI is indemnified against any proceedings that may happen against FNEI.

Organizations must publicly acknowledge that they have received support from FNEI.

Organizations must prepare and submit a report to FNEI on the event or activity that was sponsored.

Apart from the annual FNEI Scholarship, FNEI will not provide donations to individuals, only groups or organizations. FNEI will attempt to support both male and female activities and events equally.

Applications for funding must originate and be of benefit to organizations and/or groups in or from the following communities:

- Attawapiskat;
- Kashechewan;
- Fort Albany;
- Moose Cree; and
- Taykwa Tagamou Nation.

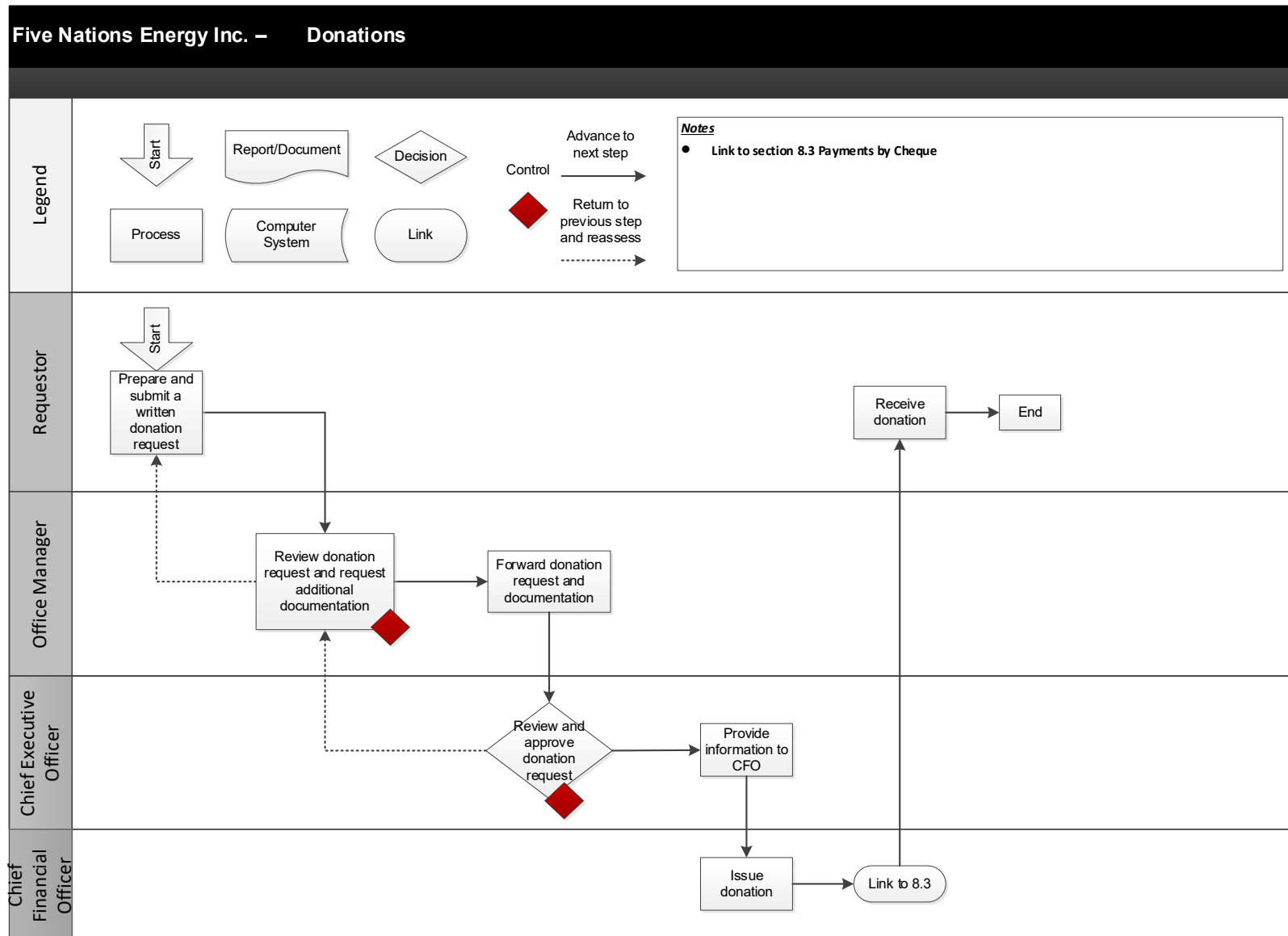
Any other provision at the relevant time that FNEI thinks should be included that would protect FNEI's interests, recognize FNEI's contribution, and/or otherwise ensure the furtherance of FNEI's objectives.

Additional guidelines on donations can be found in the *Community Support Policy*, available under separate cover.

## **PROCEDURES**

Organizations are to submit a written donation request to FNEI's Office Manager. The Office Manager shall review and assess the written donation request. Once the information in the written donation request is verified by the Office Manager, the written donation request and any supporting information is provided to the Chief Executive Officer for approval. The Chief Executive Officer shall review the written donation request and will approve a donation amount based on budget available. Once verified by the Chief Executive Officer, the information will be provided to the Chief Financial Officer to issue payment by cheque. Refer to [Section 8.3 Payments by Cheque](#).

## PROCESS MAP



## 9. Payroll

### 9.1. Employee Payroll

#### **POLICY**

Employee payroll is completed on a bi-weekly basis.

Payments will be made by direct deposit into the employee's bank account.

All changes to salaries must be approved by the Chief Executive Officer.

When employees are promoted or reclassified, retroactive adjustments may be appropriate. Retroactive pay must be approved by the Chief Executive Officer and the Executive Committee.

FNEI has an arrangement with Mushkegowuk Council to process payroll on behalf of FNEI. All changes to payroll are to be promptly communicated to Mushkegowuk Council.

Year end adjustments for unused sick leave and unused vacation shall be made with the appropriate approvals from the Chief Executive Officer or the Board Chair and shall align with the requirements set out in FNEI's *Human Resources Policy*.

#### **PROCEDURES**

The Office Manager is responsible for the coordination of payroll at FNEI, while Mushkegowuk Council is responsible for issuance of payroll payments.

Employees are required to submit weekly timesheets (digital or hard copy) to their respective Managers for review, recording hours worked and time taken off. Once the weekly timesheets are reviewed and approved, the Managers will submit the weekly timesheets including regular hours worked, overtime details and other adjustments to the Office Manager. With this information, the Office Manager will generate the bi-weekly payroll. The Office Manager will identify any payroll adjustments for employees as needed. All of the information is prepared into a Payroll File.

The Office Manager will print the Payroll File and review for accuracy and completeness. Any errors shall be corrected. When complete, the Office Manager will sign-off on the Payroll File and will submit to the Chief Executive Officer for final review. Once approved by the Chief Executive Officer, the Office Manager shall forward the Payroll File to Mushkegowuk Council.

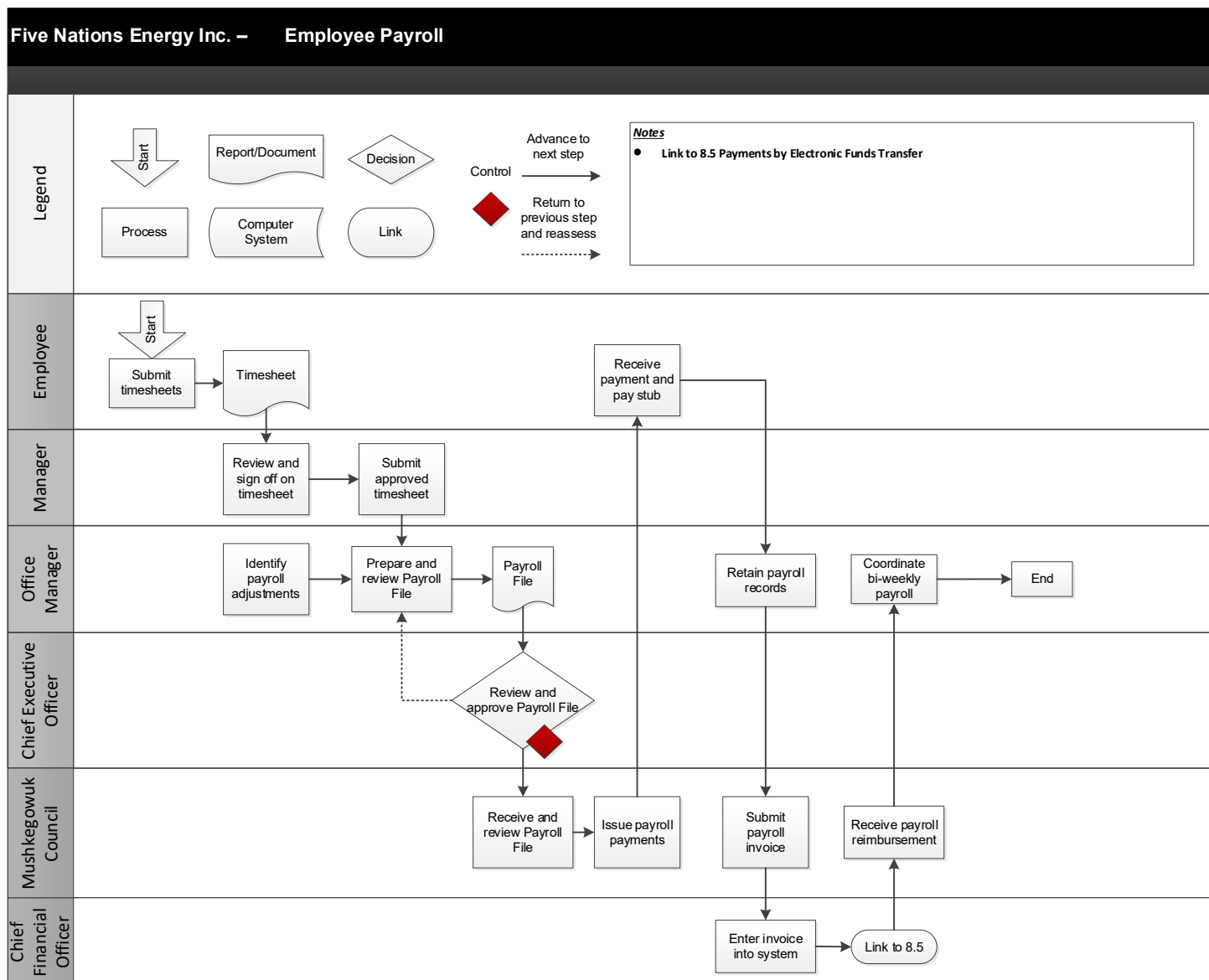
Payroll Clerks at Mushkegowuk Council will review the Payroll File, completing spot checks of calculations, review of adjustments and overtime as per timesheets, analysis of variances from past pay runs, and accuracy of payroll journal entries. Once reviewed, Mushkegowuk Council will process and issue payroll payments. Once processed, Mushkegowuk Council will provide pay stubs to FNEI employees. On a monthly basis Mushkegowuk Council will submit an invoice to

FNEI for payroll amounts, including details of general ledger accounts for payroll, pension, benefits, etc.

The Chief Financial Officer will record the invoice within the financial system and prepare payment to Mushkegowuk Council via Electronic Funds Transfer. Refer to [8.5 Payments by Electronic Funds Transfer](#).

The Office Manager will maintain records of the approved Payroll File.

## PROCESS MAP



## 9.2. Board and Officer Remuneration and Bonuses

### POLICY

#### ***Board and Officer Remuneration***

The Board of Directors of FNEI shall be entitled to such remuneration for their services as may be determined from time to time by the Board of Directors. Currently, this has been determined to be \$3000 per year. The Board of Directors will also receive \$500 per meeting day plus reasonable expenses. In addition, the Board of Directors shall be entitled to a flat rate of \$250 per travel day to attend FNEI Board meetings; or other meetings/conferences where the Director has been requested to attend on behalf of FNEI; and pre-approved by the Chief Executive Officer.

The Officers of FNEI shall be entitled to such remuneration for their services as may be determined from time to time by the Board of Directors as follows:

- This has been determined to be \$4000 per year for the Secretary/Treasurer, and Vice Chair, plus reasonable expenses, and \$5000 per year for the Chair, plus reasonable expenses; and such remuneration will cover the following activities: duties such as signing of cheques, documents, simple phone calls, e-mails, and routine correspondence, for FNEI;
- For attendance at Board of Directors meetings, and Executive Committee meetings, and other meetings, (other than designated project meetings) or Conferences/activities, pre-approved, the rate of remuneration for the Chair will be \$750 per meeting day plus reasonable expenses; and \$600 per meeting day for the Secretary/Treasurer and Vice Chair plus reasonable expenses; Conference attendance should not exceed two per year; and
- In addition, the Officers shall be entitled to a flat rate of \$250 per travel day to attend FNEI Board/Finance meetings, conferences, or other meetings (other than designated project), where the Officers have been requested to attend on behalf of FNEI; and pre-approved by the Chief Executive Officer.

As per honorarium rates approved by the Board of Directors, remuneration will be paid to FNEI's Directors at \$500/day for the following:

- Meetings of the Board of Directors;
- Executive Committee Meetings;
- Meetings where the presence of the Directors are required;
- Conferences or meetings that are relevant to the business of FNEI that have been pre-approved by the Chief Executive Officer. Conference attendance should not exceed two per year;
- Additional work required by FNEI, pre-approved by the Chief Executive Officer; and



- Any disputes on the above will be brought forth to the Board of Directors.

As authorized by the Chief Executive Officer or Operations Manager, Directors/Officers attending teleconference calls, will be compensated a minimum payment of \$200 (Two Hundred Dollars) for the first two (2) hours or part thereof.

No payment will be made to the Directors and Officers of FNEI in lieu of lost wages.

Any reimbursement for travel or other expenses that are covered and paid by another organization shall be made payable to FNEI, and not to the Board member or Officer personally.

No payments will be made to the Directors and Officers of FNEI in excess of the regular honoraria as set out in this Section.

### ***Designated Projects Compensation***

Compensation for a Project Member (e.g., FNEI Directors/Officers) will be \$125/hour.

Actual travel time and actual hours of meeting time is compensation at this rate up to a maximum of a normal day which is eight (8) hours per day, unless business is longer, then all hours of work will be paid. Timesheets shall be completed and submitted to the Chief Executive Officer on a periodic basis for approval and payment. Any disagreements to this clause will be brought to the Chief Executive Officer and the Executive Committee.

### ***Bonuses***

All staff shall receive an annual holiday bonus during the December holiday season. Currently, this amount is set at \$1,000 per employee.

## **PROCEDURES**

Remuneration is provided to Directors and Officers on a quarterly basis. Bonuses are provided to all staff on an annual basis.

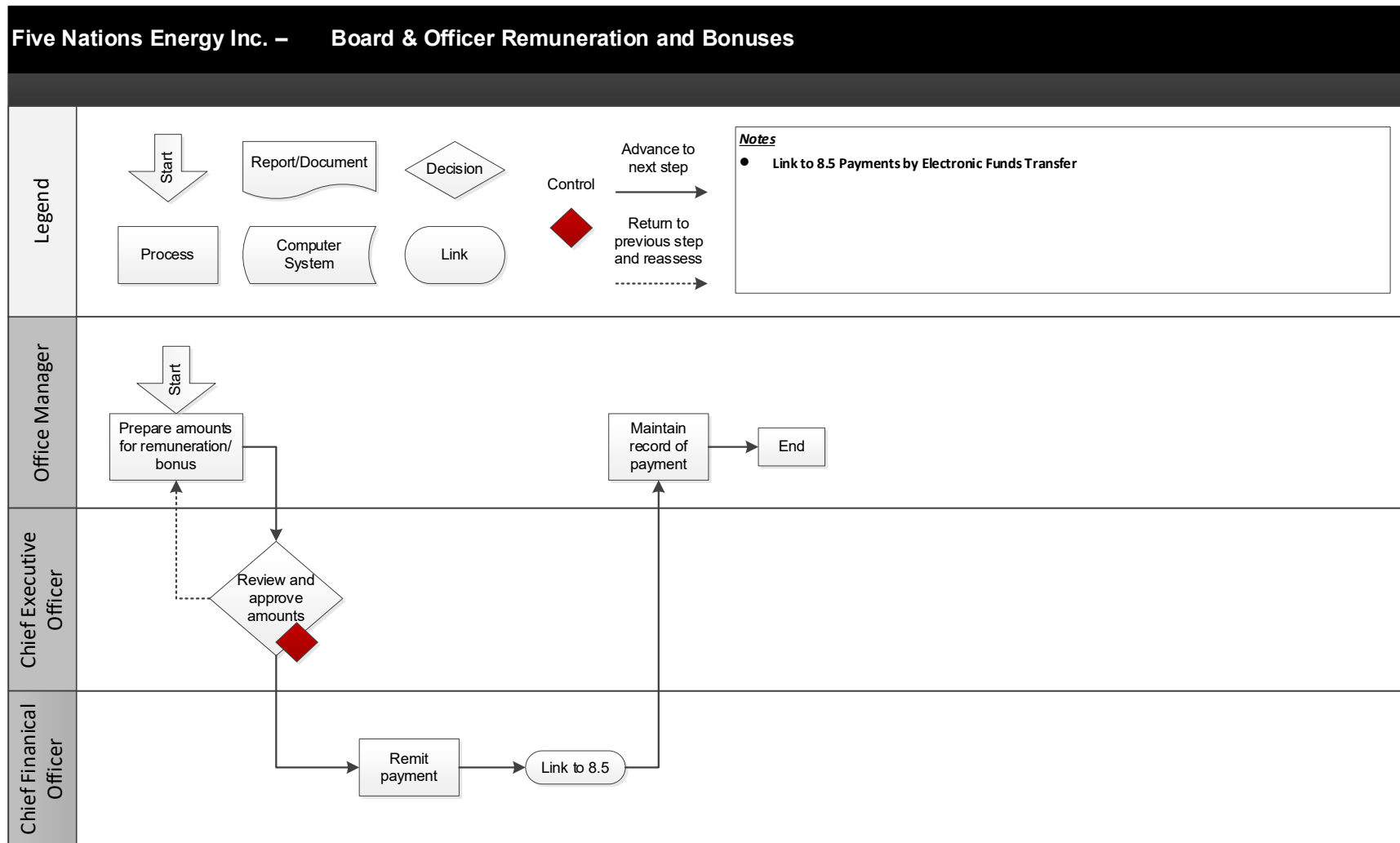
After each quarter end, the Office Manager will prepare the amount for remuneration to be paid. The Office Manager will review the meeting minutes and supporting documents to verify the amounts and provide to the Chief Executive Officer for review and approval.

Annually, the Office Manager will prepare bonus amounts for all employees. These amounts are submitted to the Chief Executive Officer for approval.

Once the quarterly and annual amounts are approved by the Chief Executive Officer, the Office Manager shall forward the remuneration and bonus amounts to the Chief Financial Officer to remit payment. Payments are made through Electronic Funds Transfer. Refer to [8.5 Payments by Electronic Funds Transfer](#).

The Office Manager will maintain records of the approved remuneration and bonuses paid.

## PROCESS MAP



# 10. Asset Management

## 10.1. Security

### **POLICY**

The loss of any piece of equipment or misappropriation of assets with an original purchase price of \$5000 or more and a life expectancy of more than one year, which is not consumed in the normal course of business, must be reported immediately to the Police, and the Chief Executive Officer, for insurance claim purposes.

Damage or destruction of property should be reported promptly to the Chief Executive Officer.

Damage or destruction of property by a criminal act should be reported promptly to the local police.

Any equipment purchased by FNEI for use by the Board of Directors must be returned to FNEI when a Board of Director resigns from the FNEI Board of Directors.

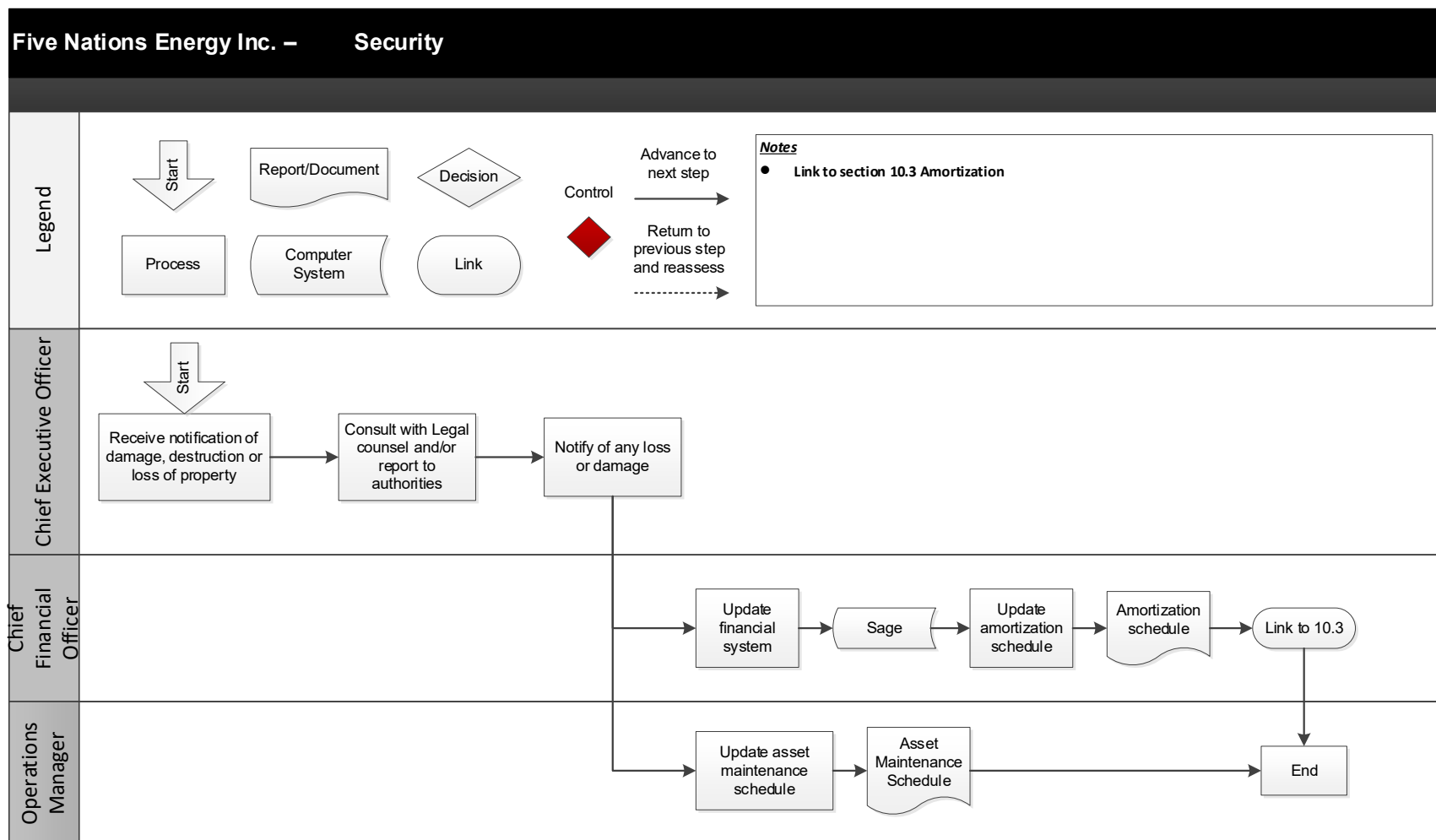
Additional information on asset management can be found in the *Regulatory Handbook*, available under separate cover.

### **PROCEDURES**

Any FNEI staff member can identify damage, destruction, or loss of FNEI property. Any property damage, destruction, or loss is to be promptly reported to the Chief Executive Officer. The Chief Executive Officer shall determine whether local police or other authorities must be contacted or consulted. The Chief Executive Officer shall consult with FNEI's Legal Counsel as required.

The Chief Executive Officer shall notify the Chief Financial Officer of any damage, destruction, or loss that requires an update FNEI's financial information (e.g., updates to the Tangible Capital Asset Register or Amortization Schedule). The Operations Manager will also be notified in order to update the Asset Maintenance Schedule.

## PROCESS MAP



## 10.2. Additions

### POLICY

The acquisitions of Property, Plant or Equipment are referred to as “Tangible Capital Assets” within this Finance Policy and Procedure Manual shall be acquired in accordance with [Section 8.2 Procurement](#) and the purchasing authorities in [Appendix A: Delegation of Authority Table](#).

All purchases or leases of Tangible Capital Assets are to be made in accordance with the Capital Budget and Operational Budget, the Five-Year Capital Plan, and Board approval. Refer to [Section 3.1 Five-Year Capital Plan](#) and [Section 3.2 Annual Budgets](#) for additional information.

Management will identify to the Chief Executive Officer the asset to be acquired as part of the Capital Budget and Operational Budget and or Five-Year Capital Plan. It is recognized however that unforeseen asset acquisitions will occasionally be necessary.

Any significant variance between budgeted and actual cost of the Tangible Capital Asset is to be reported to the Chief Executive Officer and the Executive Committee.

Following acquisition and delivery of a Tangible Capital Asset, the Chief Financial Officer will ensure the asset is reflected in the accounting records, the financial statements and in the Tangible Capital Asset register.

Assets entered into the financial system shall match the requirements set out in the Ontario Energy Board's *Accounting Procedures Handbook*.

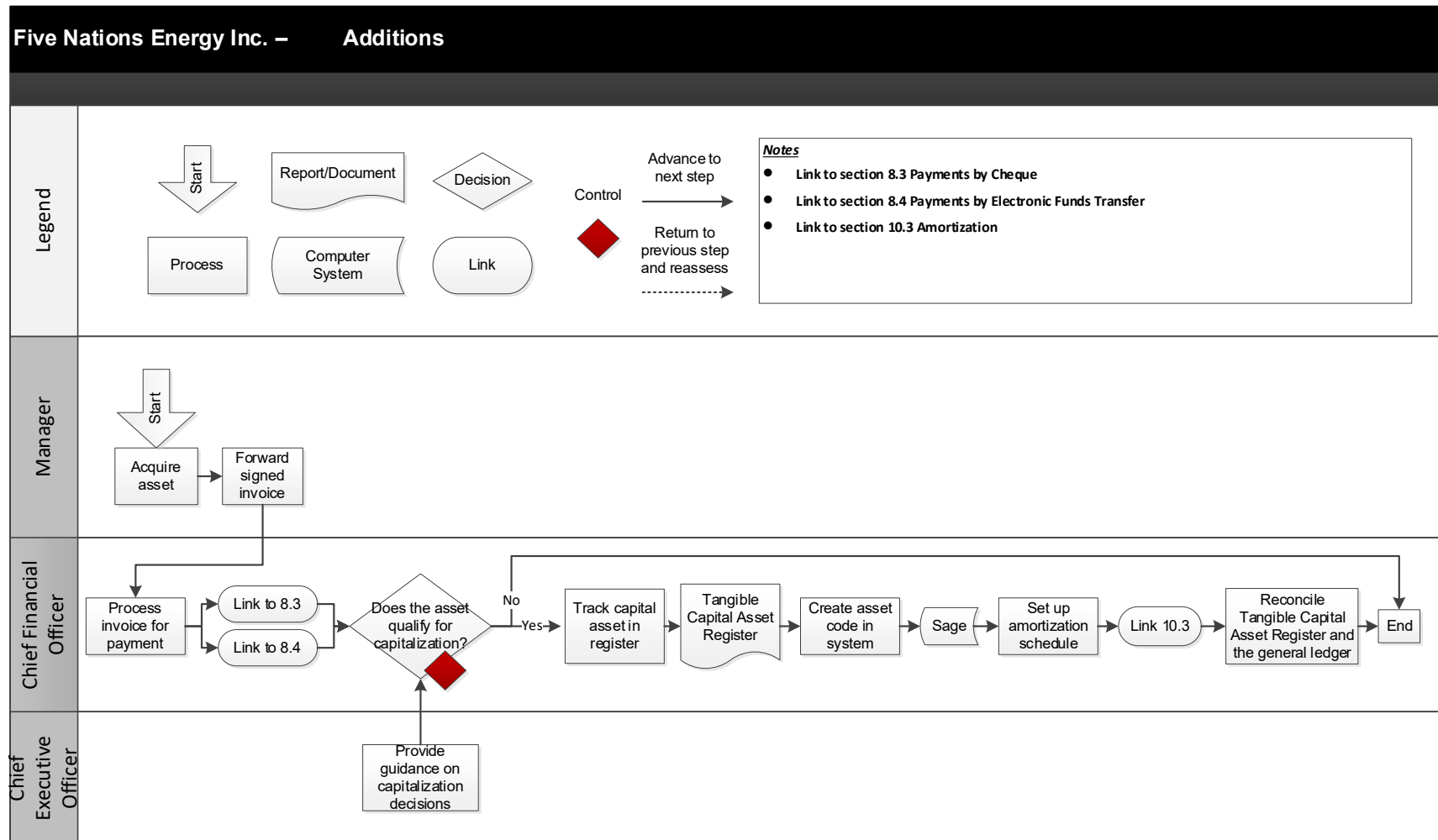
Additional information on asset management can be found in the *Regulatory Handbook*, available under separate cover.

### PROCEDURES

Management will acquire an asset and notify the Chief Financial Officer, and Chief Executive Officer by forwarding the signed invoice. The Chief Financial Officer shall process the payment for the invoice following [Section 8.3 Payments by Cheque](#) or [Section 8.4 Payments by Electronic Funds Transfer](#).

The Chief Executive Officer and Chief Financial Officer shall determine together whether the asset qualifies for capitalization. All Tangible Capital Assets shall be tracked within the Tangible Capital Asset Register. An asset shall be created within the financial system by allocating a fixed asset general ledger code. The Chief Financial Officer shall review the asset record in the system and shall put the asset into service and input any additional information. Payable invoices shall be allocated to the appropriate general ledger code within the register. The Chief Financial Officer will also set up the Tangible Capital Assets on the Amortization Continuity Schedule, based on straight-line depreciation, through the financial system per [Section 10.3 Amortization](#). The Chief Financial Officer will reconcile the Tangible Capital Asset Register and the general ledger within the financial system.

## PROCESS MAP



### **10.3. Amortization**

#### **POLICY**

Amortization rates are based on expected useful lives of asset groups and shall be based on straight-line depreciation.

The amortization of the costs of Tangible Capital Assets should be accounted for as expenses in the statement of operations.

Land normally has an unlimited life and is not be amortized.

The amortization method and estimate of the useful life of the remaining unamortized portion of a Tangible Capital Asset should be reviewed on a regular basis and revised when the appropriateness of a change can be clearly demonstrated.

An Amortization Continuity Schedule will be maintained and updated on a regular basis (i.e., at least annually). The Tangible Capital Asset register should also be reviewed on a regular basis to ensure the amortization continuity schedule agrees with the Tangible Capital Asset register. Tangible Capital Assets will be amortized using straight-line depreciation.

The Chief Financial Officer will approve the amortization continuity schedule and any required adjustments.

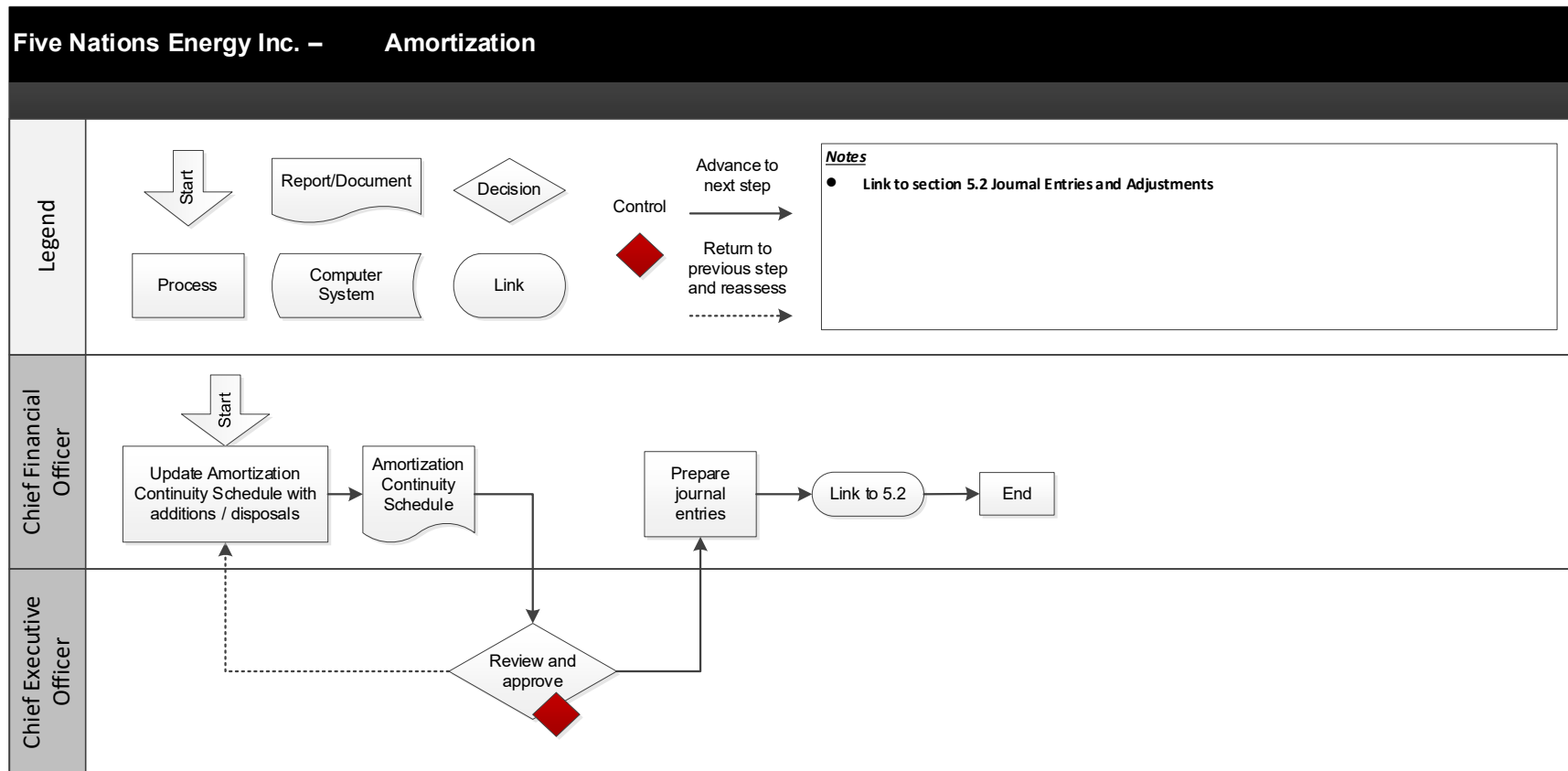
Additional information on asset management can be found in the *Regulatory Handbook*, available under separate cover.

#### **PROCEDURES**

At least annually, and prior to Year-End Close, the Chief Financial Officer will update the Amortization Continuity Schedule with any capital asset additions or disposals over the past year/period, as per the Tangible Capital Asset Register.

The Chief Financial Officer will also generate the amortization calculations, applying the applicable amortization rates, for all assets and will prepare the journal entries required to record the amortization within the financial system. The Amortization Continuity Schedule and will be provided to the Chief Executive Officer for review and approval. Journal entries will be completed following [\*Section 5.2 Journal Entries and Adjustments\*](#).

## PROCESS MAP





## 10.4. Disposals

### POLICY

All property, equipment, and supplies, acquired by FNEI remain the responsibility of FNEI until disposed of in an authorized manner.

Management of FNEI may dispose of FNEI property (equipment and supplies) as follows:

- Trade the item in on new acquisitions through purchasing with prior Board of Directors approval;
- Sell the item with prior Board of Directors approval;
- Salvage the item for parts, only after the Board of Directors has approved disposal in this manner; or
- Return the item to the owner if loaned or leased to FNEI.

All disposals of assets whose acquisition cost exceeded \$5,000 will require Board of Directors approval. Such actions will be recorded in the minutes.

The difference between the net proceeds on disposal of a Tangible Capital Asset and the Net Book Value of the asset should be accounted for as a revenue or expense in the statement of operations.

Additional information on asset management can be found in the *Regulatory Handbook*, available under separate cover.

### PROCEDURES

Management will notify the Chief Executive Officer and Chief Financial Officer of any disposal needs. The Chief Executive Officer will request approval from the Board to complete the disposal in the method identified (e.g., trade, sale, salvage, or return).

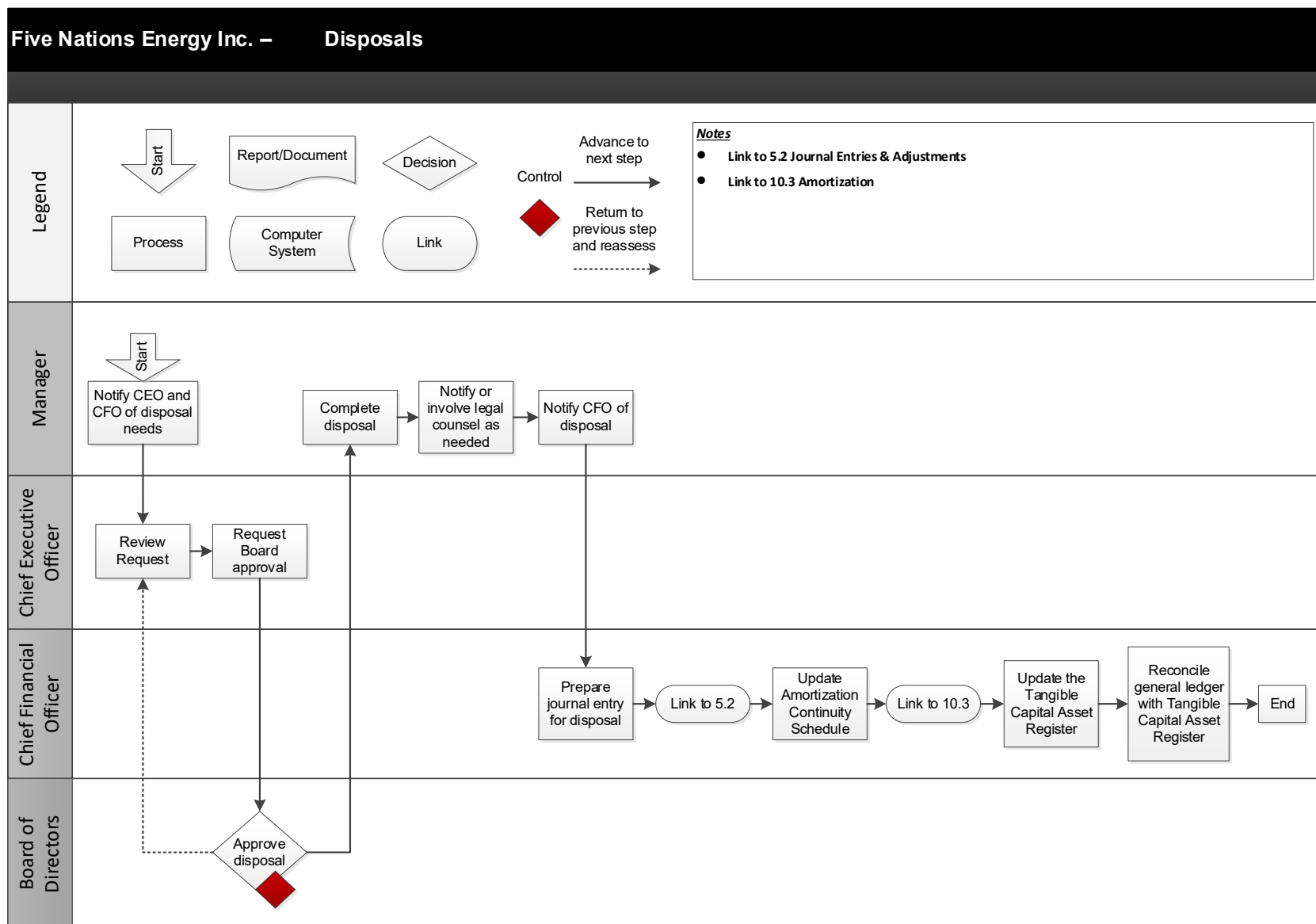
Once approved by the Board, Management will complete the trade / sale / salvage / return of the asset in a timely manner. FNEI's Legal Counsel may be also notified or involved, if applicable.

Once the disposal is complete, Management will notify the Chief Financial Officer. The Chief Financial Officer will review the disposal transaction and prepare and post the journal entry required to remove the asset from the general ledger and to record any gain or loss from the disposal.

The Chief Financial Officer will also update the Amortization Continuity Schedule for the disposal. Once complete the Chief Executive Officer will review the adjustment as per [Policy 5.3 Journal Entries and Adjustments](#).

The Chief Financial Officer will track all disposals in the Tangible Capital Asset Register. The Chief Financial Officer will reconcile the general ledger to the Tangible Capital Asset Register on a regular basis to ensure all capital assets are accurately recorded.

## PROCESS MAP



## 11. Appendices

### Appendix A: Delegation of Authority Table

| Financial Administration Activity / Function                                  | Authorized Position(s)       | Description of Authorization                                                                               | Delegation to Others?                            |
|-------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Annual Budgets</b>                                                         | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |
| <b>Audited Financial Statements</b>                                           | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |
| <b>Policies and Procedures</b>                                                | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |
| <b>Line of Credit / Loans</b>                                                 | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |
| <b>Appropriation of Restricted Funds or Withdrawal of Funds from Reserves</b> | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |
| <b>Financial Institution Accounts – Opening / Closing</b>                     | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |
| <b>Appointment of External Auditors</b>                                       | Quorum of Board of Directors | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval | No - Mandatory Board of Directors responsibility |

| <b>Financial Administration Activity / Function</b>               | <b>Authorized Position(s)</b>                                                                                                                                                                                                                                                                              | <b>Description of Authorization</b>                                                                                                                                         | <b>Delegation to Others?</b>                                                |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Investments</b>                                                | Quorum of Board of Directors                                                                                                                                                                                                                                                                               | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval                                                                  | No                                                                          |
| <b>Annual Budgets (including Capital and Operational Budgets)</b> | Quorum of Board of Directors                                                                                                                                                                                                                                                                               | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval. Operations Manager to support recommendation for Capital Budget | No                                                                          |
| <b>Delegation of Authority Table</b>                              | Quorum of Board of Directors                                                                                                                                                                                                                                                                               | Chief Executive Officer and Chief Financial Officer make recommendation to Board of Directors for approval.                                                                 | No                                                                          |
| <b>Insurance</b>                                                  | Quorum of Board of Directors                                                                                                                                                                                                                                                                               | Chief Executive Officer will make recommendation to Board of Directors for approval                                                                                         | Executive Committee                                                         |
| <b>Regulatory Reports to Ontario Energy Board</b>                 | Chief Executive Officer                                                                                                                                                                                                                                                                                    | Must approve all reporting submitted to the Ontario Energy Board                                                                                                            | Executive Committee                                                         |
| <b>Purchase Order Forms</b>                                       | At least two signers: <ul style="list-style-type: none"> <li>One signature from the list below: <ul style="list-style-type: none"> <li>o Chief Financial Officer</li> <li>o Operations Manager</li> <li>o Office Manager</li> </ul> </li> <li>Second signature from the Chief Executive Officer</li> </ul> | Purchase Order Forms are generally signed by the owner of the relationship with the vendor/supplier and the Chief Executive Officer.                                        | The Secretary / Treasurer may sign on behalf of the Chief Executive Officer |

| Financial Administration Activity / Function        | Authorized Position(s)                                                                                                                                                                                                                 | Description of Authorization                                                                                                                                                                                                                                               | Delegation to Others?   |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Purchases and Invoice Approvals</b>              | Chief Executive Officer, the Operations Manager, Secretary/Treasurer, and the Chair, in consensus                                                                                                                                      | Can authorize any purchase in emergency situations                                                                                                                                                                                                                         | No                      |
|                                                     | Executive Committee                                                                                                                                                                                                                    | Authorize purchases greater than \$100,000 and any commitment of funds exceeding budgeted amounts                                                                                                                                                                          | Board of Directors      |
|                                                     | Chief Executive Officer                                                                                                                                                                                                                | Authorize purchases up to \$100,000 and any commitment of funds exceeding budgeted amounts up to \$100,000                                                                                                                                                                 | Executive Committee     |
|                                                     | Chief Financial Officer                                                                                                                                                                                                                | Authorize purchases up to \$50,000                                                                                                                                                                                                                                         | Chief Executive Officer |
|                                                     | Managers                                                                                                                                                                                                                               | Authorize purchases up to \$10,000                                                                                                                                                                                                                                         | Chief Financial Officer |
| <b>Vendor Selection for Competitive Procurement</b> | Executive Committee                                                                                                                                                                                                                    | Executive Committee to provide additional approval selection of vendors for procurements valued over \$100,000                                                                                                                                                             | Board of Directors      |
|                                                     | Review Panel made up of: <ul style="list-style-type: none"> <li>• Chief Executive Officer</li> <li>• Chief Financial Officer</li> <li>• Operations Manager, and</li> <li>• Any required staff possessing relevant expertise</li> </ul> | Review Panel to approve selection of vendors for procurements over \$50,000.<br><br>Additional approval by the Executive Committee is required for procurements valued over \$100,000<br><br>Competitive procurements are not required for purchased valued under \$50,000 | No                      |

| <b>Financial Administration Activity / Function</b>                      | <b>Authorized Position(s)</b> | <b>Description of Authorization</b>                                                                                                                                                                                                                  | <b>Delegation to Others?</b>                                                                                                                                                                                           |
|--------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Signing of Contracts or Agreements</b>                                | Chief Executive Officer       | Chief Executive Officer will sign all agreements and contracts and capital leases.<br>Chief Executive Officer will review all agreements, contracts and capital leases and discuss with the Executive Committee and Board of Directors as necessary. | Any member of the Executive Committee may sign contracts in the absence of the Chief Executive Officer                                                                                                                 |
|                                                                          | Chief Financial Officer       | Chief Financial Officer will review all agreements, contracts, and capital leases (with focus on financial implications) and discuss with the Chief Executive Officer as necessary                                                                   | No                                                                                                                                                                                                                     |
| <b>Travel Advances</b>                                                   | Secretary / Treasurer         | Approve travel advances for the Chief Executive Officer                                                                                                                                                                                              | Any other member of the Executive Committee                                                                                                                                                                            |
|                                                                          | Chief Executive Officer       | Approve travel advances for: <ul style="list-style-type: none"> <li>• Executive Committee</li> <li>• Chief Financial Officer</li> <li>• Operations Manager</li> <li>• Office Manager</li> </ul>                                                      | Executive Committee may approve for: <ul style="list-style-type: none"> <li>• Chief Financial Officer</li> <li>• Operations Manager</li> <li>• Office Manager</li> </ul> Board may approve for the Executive Committee |
|                                                                          | Managers                      | Approve their respective staff travel advances                                                                                                                                                                                                       | Chief Executive Officer                                                                                                                                                                                                |
| <b>Travel Authorization / Travel Expenses / Employee Expense Reports</b> | Board of Directors            | Monitor the Chief Executive Officer's and Executive Committee expense claims through Board of Directors reporting.                                                                                                                                   | No                                                                                                                                                                                                                     |

| <b>Financial Administration Activity / Function</b>                            | <b>Authorized Position(s)</b>                                                                                                                                                                                 | <b>Description of Authorization</b>                                                                                                                                                                                            | <b>Delegation to Others?</b>                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                | Chief Executive Officer                                                                                                                                                                                       | Approve expense claims for: <ul style="list-style-type: none"> <li>• Executive Committee</li> <li>• Chief Financial Officer</li> <li>• Operations Manager</li> <li>• Office Manager</li> <li>• External Consultants</li> </ul> | Executive Committee may approve for: <ul style="list-style-type: none"> <li>• Chief Financial Officer</li> <li>• Operations Manager</li> <li>• Office Manager.</li> </ul> Board of Directors may approve for the Executive Committee. |
|                                                                                | Managers                                                                                                                                                                                                      | Approve their respective staff expense claims                                                                                                                                                                                  | Chief Executive Officer                                                                                                                                                                                                               |
| <b>Journal Entries and Adjustments</b>                                         | Chief Financial Officer                                                                                                                                                                                       | Must complete all journal entries and adjustments                                                                                                                                                                              | No                                                                                                                                                                                                                                    |
|                                                                                | Chief Executive Officer                                                                                                                                                                                       | Chief Executive Officer to approve all journal entries and adjustments                                                                                                                                                         | Secretary / Treasurer                                                                                                                                                                                                                 |
| <b>Cheques</b>                                                                 | Any two of: <ul style="list-style-type: none"> <li>• President</li> <li>• Vice President (Acting Chair)</li> <li>• Chief Executive Officer</li> <li>• Office Manager</li> <li>• Operations Manager</li> </ul> | All cheques (of any value) require two signatures for authorization.                                                                                                                                                           | N/A                                                                                                                                                                                                                                   |
| <b>Financial Institution Accounts - Account Establishment / Closing Letter</b> | Chief Executive Officer and one of the following: <ul style="list-style-type: none"> <li>• Chair</li> <li>• Secretary / Treasurer</li> </ul>                                                                  | Two signatures shall be included on Account Establishment / Closing Letters.                                                                                                                                                   | In the absence of the Chief Executive Officer, the Chair and Secretary / Treasurer shall both sign                                                                                                                                    |



| <b>Financial Administration Activity / Function</b>                                     | <b>Authorized Position(s)</b>                                                                                                                   | <b>Description of Authorization</b>                                                                                                                                                                             | <b>Delegation to Others?</b>                                                                                            |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Financial Institution Accounts - Bank Signing Authorities for EFTs and Transfers</b> | Any two of: <ul style="list-style-type: none"> <li>• Chief Executive Officer</li> <li>• Office Manager</li> <li>• Operations Manager</li> </ul> | All EFT requires two signatories for authorization. Between the Officer Manager and Chief Executive Officer, one shall review and approve and notify the other who will review, approve, and release the funds. | Secretary / Treasurer may fill in for the absence of either the Office Manager or Chief Executive Officer, but not both |
| <b>Employee Payroll</b>                                                                 | Chief Executive Officer                                                                                                                         | Must authorize any payroll payments to employees through review and sign off of the Payroll File                                                                                                                | The Secretary / Treasurer may sign on behalf of the Chief Executive Officer                                             |

**Appendix B: Annual Declaration Template**

By signing below, I confirm that I have read, understood, and will adhere to the FNEI Finance Policy and Procedure Manual.

|                   |                          |
|-------------------|--------------------------|
| <b>Date:</b>      | <b>Date:</b>             |
| <b>Name:</b>      | <b>Witness name:</b>     |
| <b>Signature:</b> | <b>Witness Signature</b> |

1      **Appendix 3– FNEI Financial Statements**

**Five Nations Energy Inc.**  
**Financial Statements**  
*December 31, 2022*

# Five Nations Energy Inc.

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For the year ended December 31, 2022

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To the Board of Directors and Members of Five Nations Energy Inc.:

### Opinion

We have audited the financial statements of Five Nations Energy Inc. (the "Company"), which comprise the statement of financial position as at December 31, 2022, and the statements of income and other comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2022, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

### Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Timmins, Ontario  
April 27, 2023

*MNP LLP*

Chartered Professional Accountants  
Licensed Public Accountants

# Five Nations Energy Inc.

## Statement of Financial Position

As at December 31, 2022

|                                                         | 2022              | 2021              |
|---------------------------------------------------------|-------------------|-------------------|
| <b>Assets</b>                                           |                   |                   |
| <b>Current</b>                                          |                   |                   |
| Cash                                                    | 4,330,221         | 3,392,146         |
| Accounts receivable (Note 6), (Note 15)                 | 1,161,691         | 947,145           |
| Prepaid expenses                                        | 68,132            | 76,000            |
|                                                         | <b>5,560,044</b>  | <b>4,415,291</b>  |
| <b>Non-current</b>                                      |                   |                   |
| Property, plant and equipment (Note 5)                  | 35,001,467        | 44,669,453        |
| Investments (Note 7)                                    | 500,000           | 500,000           |
| Restricted deposits (Note 10)                           | 4,000,000         | 4,000,000         |
| Right of use assets (Note 11)                           | 2,912,578         | 2,989,491         |
|                                                         | <b>42,414,045</b> | <b>52,158,944</b> |
|                                                         | <b>47,974,089</b> | <b>56,574,235</b> |
| <b>Liabilities</b>                                      |                   |                   |
| <b>Current</b>                                          |                   |                   |
| Accounts payable and accrued liabilities (Note 6)       | 643,600           | 442,338           |
| Current portion of long-term debt (Note 9)              | 1,037,081         | 985,994           |
| Current portion of lease obligation (Note 11)           | 35,134            | 33,534            |
|                                                         | <b>1,715,815</b>  | <b>1,461,866</b>  |
| <b>Non-current</b>                                      |                   |                   |
| Long-term debt (Note 9)                                 | 8,294,028         | 9,327,076         |
| Long-term lease obligation (Note 11)                    | 3,075,397         | 3,106,384         |
| Deferred contributions in aid of construction (Note 17) | -                 | 8,462,583         |
|                                                         | <b>13,085,240</b> | <b>22,357,909</b> |
| <b>Commitments and contingencies (Note 13)</b>          |                   |                   |
| <b>Utility Equity</b>                                   |                   |                   |
| <b>Equity in capital fund</b>                           | <b>25,670,355</b> | <b>25,893,799</b> |
| <b>Equity in insurance reserve fund (Note 10)</b>       | <b>4,000,000</b>  | <b>4,000,000</b>  |
| <b>Equity in general fund</b>                           | <b>5,218,494</b>  | <b>4,322,527</b>  |
|                                                         | <b>34,888,849</b> | <b>34,216,326</b> |
|                                                         | <b>47,974,089</b> | <b>56,574,235</b> |

Approved on behalf of the Board

e-Signed by Janie Wesley  
2023-04-27 15:40:02:02 EDT

Director

e-Signed by Jessie Kooses  
2023-04-27 15:54:48:48 EDT

Director



**Five Nations Energy Inc.**  
**Statement of Income and Other Comprehensive Income**  
*For the year ended December 31, 2022*

|                                                  | <b>2022</b>       | <b>2021</b> |
|--------------------------------------------------|-------------------|-------------|
| <b>Revenue (Note 16)</b>                         |                   |             |
| Transmission services                            | <b>8,420,990</b>  | 8,175,466   |
| Contributions in aid of construction (Note 17)   | <b>8,462,583</b>  | 2,161,542   |
| Miscellaneous services                           | <b>168,032</b>    | 127,740     |
| Interest income                                  | <b>218,248</b>    | 39,639      |
|                                                  | <b>17,269,853</b> | 10,504,387  |
| <b>Administrative and general (Schedule 1)</b>   | <b>2,680,169</b>  | 1,913,575   |
| <b>Depreciation (Schedule 2)</b>                 | <b>10,480,563</b> | 3,985,502   |
| <b>Interest (Schedule 3)</b>                     | <b>643,220</b>    | 681,351     |
| <b>Transmission maintenance (Schedule 4)</b>     | <b>819,846</b>    | 623,563     |
| <b>Transmission operations (Schedule 5)</b>      | <b>915,916</b>    | 957,102     |
| <b>Total expenses</b>                            | <b>15,539,714</b> | 8,161,093   |
| <b>Income from regulated operations</b>          | <b>1,730,139</b>  | 2,343,294   |
| <b>Non-regulated expenses (Schedule 6)</b>       | <b>1,057,616</b>  | 572,827     |
| <b>Net income and other comprehensive income</b> | <b>672,523</b>    | 1,770,467   |

The accompanying notes are an integral part of these financial statements

**Five Nations Energy Inc.**  
**Statement of Changes in Equity**  
*For the year ended December 31, 2022*

|                                               | <i>General<br/>Fund</i> | <i>Capital<br/>Fund</i> | <i>Insurance<br/>Reserve<br/>Fund<br/>(Note 10)</i> | <i>Total equity</i> |
|-----------------------------------------------|-------------------------|-------------------------|-----------------------------------------------------|---------------------|
| <b>Balance January 1, 2021</b>                | <b>2,719,871</b>        | <b>25,725,988</b>       | <b>4,000,000</b>                                    | <b>32,445,859</b>   |
| Net income for the year                       | 1,770,467               | -                       | -                                                   | 1,770,467           |
| Property, plant and equipment additions - net | (1,008,733)             | 1,008,733               | -                                                   | -                   |
| Depreciation (Note 5)                         | 3,935,898               | (3,935,898)             | -                                                   | -                   |
| Repayment of long-term debt                   | (933,434)               | 933,434                 | -                                                   | -                   |
| Contributions in aid of construction          | (2,161,542)             | 2,161,542               | -                                                   | -                   |
| <b>Balance January 1, 2022</b>                | <b>4,322,527</b>        | <b>25,893,799</b>       | <b>4,000,000</b>                                    | <b>34,216,326</b>   |
| Net income for the year                       | 672,523                 | -                       | -                                                   | 672,523             |
| Property, plant and equipment additions - net | (753,631)               | 753,631                 | -                                                   | -                   |
| Depreciation (Note 5)                         | 10,421,618              | 10,421,618)             | -                                                   | -                   |
| Repayment of long-term debt                   | (981,960)               | 981,960                 | -                                                   | -                   |
| Contributions in aid of construction          | (8,462,583)             | 8,462,583               | -                                                   | -                   |
| <b>Balance December 31, 2022</b>              | <b>5,218,494</b>        | <b>25,670,355</b>       | <b>4,000,000</b>                                    | <b>34,888,849</b>   |

*The accompanying notes are an integral part of these financial statements*

**Five Nations Energy Inc.**  
**Statement of Cash Flows**  
*For the year ended December 31, 2022*

|                                                             | 2022               | 2021               |
|-------------------------------------------------------------|--------------------|--------------------|
| <b>Cash provided by (used for) the following activities</b> |                    |                    |
| <b>Operating activities</b>                                 |                    |                    |
| Cash received from customers                                | 8,293,571          | 8,494,447          |
| Cash paid to suppliers and employees                        | (5,020,844)        | (3,851,156)        |
| Interest paid                                               | (643,220)          | (677,346)          |
| Interest receipts                                           | 218,248            | 39,639             |
|                                                             | <b>2,847,755</b>   | <b>4,005,584</b>   |
| <b>Financing activities</b>                                 |                    |                    |
| Repayments of long-term debt                                | (981,960)          | (933,434)          |
| Repayments of finance leases                                | (174,089)          | (166,357)          |
|                                                             | <b>(1,156,049)</b> | <b>(1,099,791)</b> |
| <b>Investing activities</b>                                 |                    |                    |
| Purchases and construction of property, plant and equipment | (753,631)          | (1,127,736)        |
| Proceeds from disposal of property, plant and equipment     | -                  | 119,001            |
|                                                             | <b>(753,631)</b>   | <b>(1,008,735)</b> |
| <b>Increase in cash resources</b>                           | <b>938,075</b>     | <b>1,897,058</b>   |
| <b>Cash resources, beginning of year</b>                    | <b>3,392,146</b>   | <b>1,495,088</b>   |
| <b>Cash resources, end of year</b>                          | <b>4,330,221</b>   | <b>3,392,146</b>   |

**1. Reporting entity**

Five Nations Energy Inc. (the "Company") is a not-for-profit Corporation incorporated in Canada without share capital on September 30, 1997. The Company is domiciled in Canada. The Company owns and operates electricity transmission lines along the western James Bay coast to the three First Nation communities of Attawapiskat, Kashechewan and Fort Albany, Ontario.

The address of the Company's registered office is located in Moose Factory, Ontario. Its administration and operations office is located at 725 Highway 655, Timmins, Ontario. The Board of Directors is controlled by representatives of the participating First Nation communities.

The members are Attawapiskat Power Corporation, Fort Albany Power Corporation, Kashechewan Power Corporation with the ultimate parents being the respective First Nations of the Power Corporations. Additional members are Moose Cree First Nation and Taykwa Tagamou Nation.

The Company is not subject to income tax.

**2. Statement of compliance**

The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") and interpretations adopted by the International Accounting Standards Board ("IASB").

**3. Basis of preparation**

***Basis of measurement***

The financial statements have been prepared in the historical basis except for the revaluation of certain non-current assets and financial instruments. The principal accounting policies are set out in Note 4.

These financial statements were authorized for issuance by the Board of Directors on April 27, 2023.

***Functional and presentation currency***

These financial statements are presented in Canadian dollars, which is the Company's functional currency. All financial information presented in Canadian dollars has been rounded to the nearest dollar.

***Significant accounting judgments, estimates and assumptions***

The preparation of the Company's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the reporting date. These estimates and assumptions have been made using careful judgment; however, uncertainties could result in outcomes that would require a material adjustment to the carrying amount of the asset or liability affected in the future.

The estimates and underlying assumptions are prepared based on management's best knowledge of current events and actions that the Company may undertake in the future. These estimates and underlying assumptions are reviewed on an ongoing basis and revisions to accounting estimates are recognized prospectively in comprehensive income in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date are discussed below.

**3. Basis of preparation** *(Continued from previous page)*

***Impairment of non-financial assets***

The Company assesses non-financial assets for impairment at the end of each reporting period. If impairment indicators exist, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

The recoverable amount is the higher of fair value less costs to sell and value in use. Value in use is the present value of estimated future cash flows discounted using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units. Otherwise corporate assets are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss unless the relevant asset is carried at a revalued amount in which case the impairment loss is treated as a revaluation decrease.

The carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss unless that asset is carried at a revalued amount in which case an impairment reversal is treated as a revaluation increase.

***Useful life of property, plant and equipment***

Management is required to use judgment when determining the useful life and the residual value of the items included in property, plant and equipment. Differences in the estimated lives and residual values from those determined by management could result in material differences in the carrying amount of the assets and the depreciation recorded as an expense.

***Allowance for expected credit losses***

It is management's opinion that accounts receivable are fully collectable and as such, no allowance for expected credit losses is required.

***Leases***

At inception of a contract, the Company assesses whether a contract is, or contains, a lease, depending on if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company recognizes a right-of-use asset, initially measured at cost and subsequently depreciated using the straight-line method over the shorter of the asset's useful life (determined on the same basis as capital assets) or the end of the lease term. A corresponding lease liability is recognized, initially measured at the present value of the future lease payments (which include payments under extension options that the Company is reasonably certain to exercise), discounted using the interest rate implicit in the lease or, if not readily determinable, the Company's incremental borrowing rate. Generally, the Company uses its incremental borrowing rate as the discount rate. The lease liability is subsequently measured at amortized cost using the effective interest method.

The lease liability is remeasured when there is a change in future lease payments resulting from a change in index or rate or if the Company changes its assessment of whether it will exercise an option to extend, purchase or terminate. Should the corresponding right-of-use asset have been reduced to zero when the lease liability is remeasured, the adjustment would be recorded through profit or loss. The Company has exercised judgment to determine both the applicable discount rate as well as the lease term for lease contracts that contain renewal options.

**4. Summary of significant accounting policies**

The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied to all the years presented, unless otherwise stated.

**4. Summary of significant accounting policies** *(Continued from previous page)*

***Cash resources***

Cash resources comprise a short-term GIC and balances with banks. Cash subject to restrictions that prevent its use for current purposes is included in restricted cash.

***Employee benefits***

The Company's post employment benefit programs consist of a defined contribution plan.

Contributions to defined contribution plans are recognized as an expense when employees have rendered service to the Company during the year, entitling them to the contributions.

***Harmonized sales tax***

Revenue, expenses and assets are recognized net of the amount of harmonized sales tax (HST). The net amount of HST payable to the taxation authority is included as part of accounts payable. Cash flows are included in the cash flow statement on a net basis. The HST component of cash flows arising from investing and financing activities which is recoverable from, or payable to, the taxation authority is classified as operating cash flows.

***Property, plant and equipment***

All property, plant and equipment is stated at cost less accumulated depreciation and impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, and the cost of dismantling and removing the items and restoring the site on which they are located.

The cost of major inspections, overhauls and replacement parts of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The cost of day-to-day maintenance of property, plant and equipment is recognized immediately in profit or loss as incurred.

All assets having limited useful lives are depreciated using the straight-line method over their estimated useful lives. Land has an unlimited useful life and is therefore not depreciated. Assets are depreciated from the date of acquisition. Internally constructed assets are depreciated from the time an asset is available for use.

The useful life applicable for each class of asset during the current and comparative period are as follows:

|                                      |                |
|--------------------------------------|----------------|
| Station equipment                    | 10 to 50 years |
| Poles and fixtures                   | 15 to 40 years |
| Overhead conductors and devices      | 15 to 60 years |
| Buildings                            | 15 to 40 years |
| Automotive and other equipment       | 2 to 10 years  |
| Contributions in aid of construction | 10 to 60 years |
| Non-regulated building and equipment | 5 to 40 years  |
| Right of use assets                  | 40 years       |

The residual value, useful life and depreciation method applied to each class of assets are reassessed at each reporting date.

**4. Summary of significant accounting policies** *(Continued from previous page)*

***Fund accounting***

The Company uses fund accounting procedures resulting in a self-balancing set of accounts for each fund established by legal, contractual or voluntary actions. Funds are maintained as follows:

General Fund - reports on the general transmission activities of the Company.

Capital Fund - reports on the property, plant and equipment of the Company, together with related financing.

Insurance Reserve Fund - reports on the cash funded appropriated retained earnings set aside for damages to poles, fixtures, overhead conductors and devices.

***Revenue recognition***

The following describes the Company's principal activities from which it generates revenue.

**Transmission Revenue**

Transmission revenues consist of transmission tariffs, which are collected through OEB-approved Uniform Transmission Rates (UTR) and the monthly peak demand for electricity across FNEI's high-voltage network as a percentage of total demand across all networks in Ontario. OEB-approved UTR is based on an approved revenue requirement that includes a rate of return. The transmission tariffs are designed to recover revenues necessary to support the Company's transmission system with sufficient capacity to accommodate the maximum expected demand which is influenced by weather and economic conditions. Transmission revenues are recognized over time as electricity is transmitted and delivered to customers. Revenue is recognized using an output method at the amount of consideration to which the Company has a right to invoice, as the amount invoiced corresponds directly with the value to the customer for each incremental unit of electricity transferred to the customer. Amounts are invoiced to the IESO on a monthly basis, with payment terms due on receipt.

**Miscellaneous Revenue**

The Company generates revenue from administrative fees which are incurred as part of the Connection and Cost Recovery Agreement with De Beers Canada (DBC). Performance obligations are satisfied as long as the Company is in compliance with its obligations as a transmitter under the OEB administered Transmission System Code as well as provides operation and maintenance services to the twinned transmission line from Moosonee to Kashechewan and the modification to the substation in Kashechewan and Attawapiskat.

Revenue is recognized when an invoice for all expenditures incurred for the aforementioned services is prepared. Consideration is typically due from the receipt of the invoice. The transaction price is predetermined as a set rate under the CCRA which intends to cover internal administrative costs incurred for the performance of allowable services.

**Interest Revenue**

The Company generates revenue from interest earned under a banking agreement with Bank of Montreal. Under the agreement, the bank is obligated to pay the Company interest on their bank balance and outstanding guaranteed investment certificates (GICs).

Revenue is recognized over the term of the GIC as interest is earned. Consideration is typically due at the end of the month. The transaction price is the determined based on the ending bank balance and the Bank of Canada prime rate.

The Company expects interest revenues from BMO to be recoverable as BMO is a well established bank and the probability of BMO becoming insolvent and not being able to meet its interest payment obligations is remote.

**Contributions in Aid of Construction Revenue**

As a condition of connecting the Victor Mine to the transmission grid, De Beers Canada was required to construct and transfer to the Company a second transmission line between Moosonee and Kashechewan. The cost of constructing the second line was recorded as deferred revenue with revenue being recognized on a straight-line basis over the 15 year term of the contract. Deferred revenue was fully recognized as revenue during the year as a result of the Victor mine being disconnected from the system by DBC.

**4. Summary of significant accounting policies** *(Continued from previous page)*

***Financial instruments***

***Financial assets***

**Recognition and initial measurement**

The Company recognizes financial assets when it becomes party to the contractual provisions of the instrument. Financial assets are measured initially at their fair value plus, in the case of financial assets not subsequently measured at fair value through profit or loss, transaction costs that are directly attributable to their acquisition. Transaction costs attributable to the acquisition of financial assets subsequently measured at fair value through profit or loss are expensed in profit or loss when incurred.

**Classification and subsequent measurement**

Subsequent to initial recognition, all financial assets are classified and subsequently measured at amortized cost. Interest revenue is calculated using the effective interest method and gains or losses arising from impairment, foreign exchange and derecognition are recognized in profit or loss. Financial assets measured at amortized cost are comprised of accounts receivable and investments.

**Reclassifications**

The Company reclassifies debt instruments only when its business model for managing those financial assets has changed. Reclassifications are applied prospectively from the reclassification date and any previously recognized gains, losses or interest are not restated.

**Impairment**

The Company recognizes a loss allowance for the expected credit losses associated with its financial assets. Expected credit losses are measured to reflect a probability-weighted amount, the time value of money, and reasonable and supportable information regarding past events, current conditions and forecasts of future economic conditions.

The Company applies the simplified approach for trade receivables. Using the simplified approach, the Company records a loss allowance equal to the expected credit losses resulting from all possible default events over the assets' contractual lifetime.

The Company assesses whether a financial asset is credit-impaired at the reporting date. For financial assets assessed as credit-impaired at the reporting date, the Company continues to recognize a loss allowance equal to lifetime expected credit losses.

Loss allowances for expected credit losses are presented in the statement of financial position as follows:

- For financial assets measured at amortized cost, as a deduction from the gross carrying amount of the financial asset

Financial assets are written off when the Company has no reasonable expectations of recovering all or any portion thereof.

**Derecognition of financial assets**

The Company derecognizes a financial asset when its contractual rights to the cash flows from the financial asset expire.

***Financial liabilities***

**Recognition and initial measurement**

The Company recognizes a financial liability when it becomes party to the contractual provisions of the instrument. At initial recognition, the Company measures financial liabilities at their fair value plus transaction costs that are directly attributable to their issuance, with the exception of financial liabilities subsequently measured at fair value through profit or loss for which transaction costs are immediately recorded in profit or loss.

Where an instrument contains both a liability and equity component, these components are recognized separately based on the substance of the instrument, with the liability component measured initially at fair value and the equity component assigned the residual amount.



**4. Summary of significant accounting policies** *(Continued from previous page)*

**Classification and subsequent measurement**

Subsequent to initial recognition, all financial liabilities are measured at amortized cost using the effective interest rate method. Interest, gains and losses relating to a financial liability are recognized in profit or loss.

**Derecognition of financial liabilities**

The Company derecognizes a financial liability only when its contractual obligations are discharged, cancelled or expire.

**Community support**

The Company accrues non-regulated community support expenditures only once all criteria have been met by the recipient.

**Leases**

At the lease commencement date, the Company recognizes a right-of-use asset and a lease liability. The right-of-use asset is initially measured at cost. The cost of the right-of-use asset is comprised of the initial amount of the lease liability, any lease payments made at or before the commencement date less any lease incentives received, initial direct costs incurred by the Company, and an estimate of the costs to be incurred by the Company in dismantling and removing the underlying asset and restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

After the commencement date, the Company measures right-of-use assets related to MNR and Albany 67 Land use by applying the cost model, whereby the right-of-use asset is measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liability. The right-of-use asset is depreciated using the straight-line method from the commencement date to the end of the lease term or the end of the useful life of the right-of-use asset. The estimated useful life of the right-of-use assets are determined on the same basis as those of property, plant and equipment. The determination of the depreciation period is dependent on whether the Company expects that the ownership of the underlying asset will transfer to the Company by the end of the lease term or if the cost of the right-of-use asset reflects that the Company will exercise a purchase option.

The lease liability is initially measured at the present value of the lease payments not paid at the lease commencement date, discounted using the interest rate implicit in the lease or the Company's incremental borrowing rate, if the interest rate implicit in the lease cannot be readily determined. The lease payments included in the measurement of the lease liability comprise of fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or rate, amounts expected to be payable by the Company under a residual value guarantee, the exercise price of a purchase option that the Company is reasonably certain to exercise, and payment of penalties for terminating the lease if the lease term reflects the Company exercising an option to terminate the lease. After the commencement date, the Company measures the lease liability at amortized cost using the effective interest method.

The Company remeasures the lease liability when there is a change in the lease term, a change in the Company's assessment of an option to purchase the underlying asset, a change in the Company's estimate of amounts expected to be payable under a residual value guarantee, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments. On remeasurement of the lease liability, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2022

**5. Property, Plant and Equipment**

|                                               | Station<br>Equipment | Poles and<br>fixtures | Overhead<br>conductors<br>and devices | Land and<br>buildings | Automotive<br>and other<br>equipment | Non-regulated<br>building and<br>equipment | Less:<br>Contributions<br>in aid of<br>construction | Total      |
|-----------------------------------------------|----------------------|-----------------------|---------------------------------------|-----------------------|--------------------------------------|--------------------------------------------|-----------------------------------------------------|------------|
|                                               |                      |                       |                                       |                       |                                      |                                            |                                                     |            |
| Cost                                          |                      |                       |                                       |                       |                                      |                                            |                                                     |            |
| Balance at January 1, 2021                    | 41,189,701           | 52,527,609            | 20,441,101                            | 5,076,145             | 3,076,191                            | 496,957                                    | (34,405,460)                                        | 88,402,244 |
| Additions                                     | 670,865              | 4,975                 | 10,457                                | 227,129               | 210,220                              | 4,088                                      | -                                                   | 1,127,734  |
| Disposals                                     | -                    | -                     | -                                     | -                     | (263,072)                            | (48,453)                                   | -                                                   | (311,525)  |
| Balance at December 31, 2021                  | 41,860,566           | 52,532,584            | 20,451,558                            | 5,303,274             | 3,023,339                            | 452,592                                    | (34,405,460)                                        | 89,218,453 |
| Additions                                     | 623,425              | -                     | -                                     | 18,584                | 109,491                              | 2,131                                      | -                                                   | 753,631    |
| Balance at December 31, 2021                  | 42,483,991           | 52,532,584            | 20,451,558                            | 5,321,858             | 3,132,830                            | 454,723                                    | (34,405,460)                                        | 89,972,084 |
| Depreciation                                  |                      |                       |                                       |                       |                                      |                                            |                                                     |            |
| Balance at January 1, 2021                    | 17,576,227           | 29,188,478            | 9,953,091                             | 1,372,641             | 1,764,387                            | 133,640                                    | (19,182,837)                                        | 40,805,627 |
| Depreciation charge for the year              | 1,689,958            | 2,029,460             | 641,977                               | 180,982               | 183,614                              | 31,194                                     | (821,287)                                           | 3,935,898  |
| Disposals                                     | -                    | -                     | -                                     | -                     | (160,071)                            | (32,453)                                   | -                                                   | (192,524)  |
| Balance at December 31, 2021                  | 19,266,185           | 31,217,938            | 10,595,068                            | 1,553,623             | 1,787,930                            | 132,381                                    | (20,004,124)                                        | 44,549,001 |
| Depreciation charge for the year<br>(Note 17) | 3,643,222            | 5,320,629             | 1,739,204                             | 185,328               | 332,564                              | 21,959                                     | (821,288)                                           | 10,421,618 |
| Balance at December 31, 2022                  | 22,909,407           | 36,538,567            | 12,334,272                            | 1,738,951             | 2,120,494                            | 154,340                                    | (20,825,412)                                        | 54,970,619 |
| Net book value                                |                      |                       |                                       |                       |                                      |                                            |                                                     |            |
| At December 31, 2021                          | 22,594,381           | 21,314,646            | 9,856,490                             | 3,749,651             | 1,235,409                            | 320,211                                    | (14,401,336)                                        | 44,669,453 |
| At December 31, 2022                          | 19,574,584           | 15,994,017            | 8,117,286                             | 3,582,907             | 1,012,336                            | 300,383                                    | (13,580,048)                                        | 35,001,467 |

Contributions in aid of construction consist of Indigenous Services Canada (ISC) funding received for the acquisition and construction of station equipment, poles and fixtures and overhead conductors and devices. Refer to Note 1.1 for information pertaining to the Company's lease arrangements in which it is a lessee.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2022

**6. Related party transactions**

***Key management compensation of the Company***

Key management personnel remuneration includes the following expenses:

|                   | 2022           | 2021           |
|-------------------|----------------|----------------|
| Salaries          | 795,838        | 539,952        |
| Employee benefits | 105,614        | 77,686         |
|                   | <b>901,452</b> | <b>617,638</b> |

***Transactions with entities with significant influence over the company***

The Company is related to the individual First Nations and their respective power corporations by virtue of significant influence. Accounts receivable includes the following amounts due for services in the regular course of business:

|                                | 2022          | 2021          |
|--------------------------------|---------------|---------------|
| Attawapiskat Power Corporation | 16,617        | 67,479        |
| Fort Albany Power Corporation  | 8,205         | 8,583         |
| Kashechewan Power Corporation  | 19,478        | 11,716        |
| Kashechewan First Nation       | 10,228        | 10,228        |
|                                | <b>54,528</b> | <b>98,006</b> |

Accounts payable and accrued liabilities include the following amounts due for services in the regular course of business:

|                                | 2022           | 2021          |
|--------------------------------|----------------|---------------|
| Attawapiskat Power Corporation | 15,595         | 15,954        |
| Fort Albany First Nation       | 2,065          | 1,565         |
| Fort Albany Power Corporation  | 72,944         | 16,762        |
| Kashechewan First Nation       | 13,158         | 12,658        |
| Kashechewan Power Corporation  | -              | 17,985        |
|                                | <b>103,762</b> | <b>64,924</b> |

***The Company purchases goods and services from the member power corporations in the normal course of operations including the following:***

|                                                    | 2022           | 2021           |
|----------------------------------------------------|----------------|----------------|
| Electricity at Ontario Energy Board approved rates | 44,171         | 43,339         |
| Station checks at exchange amount                  | 39,000         | 39,000         |
| Construction and maintenance at exchange amount    | 148,733        | 224,123        |
|                                                    | <b>231,904</b> | <b>306,462</b> |

**7. Investments**

|                                                                                      | 2022    | 2021    |
|--------------------------------------------------------------------------------------|---------|---------|
| Bank of Montreal GIC, bearing interest at 2.7% (2021 - 2.4%), matures December 2023. | 500,000 | 500,000 |

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2022*

**8. Bank indebtedness**

The Company has an authorized operating facility of \$500,000 with the Bank of Montreal bearing interest at bank prime. The facility was has not been utilized as at December 31, 2022 or December 31, 2021.

**9. Long-term debt**

|                                                                                                                                                                                                                                                          | <b>2022</b>      | <b>2021</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|
| The Manufacturers Life Insurance Company loan payable bearing interest at 5.5%, secured by a general security agreement, repayable in blended monthly payments of \$75,246, maturing February 2028.                                                      | <b>4,002,979</b> | 4,668,736   |
| The Manufacturers Life Insurance Company loan payable bearing interest at 4.71% secured by a general security agreement, repayable in blended monthly payments of \$37,365, maturing October 2035.                                                       | <b>4,312,961</b> | 4,551,955   |
| Bank of Montreal loan payable, secured by land and office building with a net book value of \$3,089,400 and a general security agreement, bearing interest at 3.03% per annum, repayable in blended monthly payments of \$9,576, maturing November 2027. | <b>1,066,940</b> | 1,148,184   |
| Less: Finance acquisition costs related to The Manufacturers Life Insurance Company loan maturing October 2035.                                                                                                                                          | <b>(51,771)</b>  | (55,805)    |
|                                                                                                                                                                                                                                                          | <b>9,331,109</b> | 10,313,070  |
| Less: current portion                                                                                                                                                                                                                                    | <b>1,037,081</b> | 985,994     |
|                                                                                                                                                                                                                                                          | <b>8,294,028</b> | 9,327,076   |

Principal repayments on long-term debt in each of the next five years and thereafter, assuming long-term debt subject to refinancing is renewed, are estimated as follows:

|            |                  |
|------------|------------------|
| 2023       | 1,037,081        |
| 2024       | 1,086,286        |
| 2025       | 1,143,424        |
| 2026       | 1,203,039        |
| 2027       | 1,265,803        |
| Thereafter | 3,595,476        |
|            | <b>9,331,109</b> |

**10. Insurance Reserve Fund**

Under the terms of The Manufacturers Life Insurance Company loans payable, the Company must maintain an insurance reserve fund of \$4,000,000. Cash set aside for the insurance reserve is reported as restricted deposits.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2022*

**11. Leases**

***Right-of-use assets***

The following table illustrates the right-of-use asset balances during the period:

|                                     | <b><i>Albany 67</i></b> | <b><i>MNR Land Use</i></b> | <b><i>Total</i></b> |
|-------------------------------------|-------------------------|----------------------------|---------------------|
| <b>Cost</b>                         |                         |                            |                     |
| Balance at January 1, 2022          | 2,252,561               | 736,930                    | 2,989,491           |
| Depreciation                        | (60,880)                | (20,025)                   | (80,905)            |
| Consumer price index adjustment     | -                       | 3,992                      | 3,992               |
| <b>Balance at December 31, 2022</b> | <b>2,191,681</b>        | <b>720,897</b>             | <b>2,912,578</b>    |

***Lease liabilities***

The following table sets out a maturity analysis of lease liabilities:

|                                                                                               | <b><i>2022</i></b> | <b><i>2021</i></b> |
|-----------------------------------------------------------------------------------------------|--------------------|--------------------|
| <b>Maturity analysis – contractual undiscounted cash flows</b>                                |                    |                    |
| Less than one year                                                                            | <b>174,089</b>     | 173,857            |
| One to five years                                                                             | <b>696,356</b>     | 695,428            |
| More than five years                                                                          | <b>5,396,763</b>   | 5,563,421          |
| <b>Total undiscounted lease liabilities at December 31, 2022</b>                              | <b>6,267,208</b>   | 6,432,706          |
| <b>Lease liabilities included in the statement of financial position at December 31, 2022</b> |                    |                    |
| Current                                                                                       | <b>35,134</b>      | 33,534             |
| Non-current                                                                                   | <b>3,075,397</b>   | 3,106,384          |

***Amounts recognized in profit or loss***

The Company has recognized the following amounts in the statement of profit or loss:

|                                       | <b><i>2022</i></b> | <b><i>2021</i></b> |
|---------------------------------------|--------------------|--------------------|
| Interest expense on lease liabilities | <b>140,462</b>     | 137,737            |

***Amounts recognized in the statement of cash flows***

The Company has recognized the following amounts in the statement of cash flows.

|                                               | <b><i>2022</i></b> | <b><i>2021</i></b> |
|-----------------------------------------------|--------------------|--------------------|
| Cash outflow for MNR land use lease           | <b>43,089</b>      | 42,857             |
| Cash outflow for Albany 67 land use lease     | <b>131,000</b>     | 123,500            |
| <b>Total cash outflow for land use leases</b> | <b>174,089</b>     | 166,357            |

**12. Capital management**

The Company's objective when managing capital is to continue as a going concern to protect its ability to meet its on-going liabilities and to minimize expenditures over the long term. Protecting the ability to pay current and future liabilities includes maintaining capital above minimum debt covenant levels and internally determined capital guidelines based on risk management policies.

The Company sets the amount of capital in proportion to risk and manages the capital structure and makes adjustments to it in light of changes to economic conditions and the risk characteristics of the underlying assets, as well as with consideration of externally imposed capital requirements. Capital is comprised of the company's utility equity and debt. As at December 31, 2022, the company's utility equity was \$34,888,849 (2021 - \$34,216,326), and its total outstanding debt and lease obligations were \$12,441,640 (2021 - \$13,452,988).

The Manufacturers Life Insurance Company debt is subject to loan covenants which require the company to maintain a minimum debt service ratio of 1.20:1 and a debt to equity ratio of 1.50:1. For the purposes of the debt to equity ratio, equity is calculated as utility equity plus 30% of contributions in aid as disclosed in Note 5.

The Company was in compliance with these covenants at December 31, 2022 and 2021.

**13. Commitments and contingencies**

The Company has an Operating Services Agreement with Hydro One Networks Inc. which renews annually on December 31 and may be terminated either by mutual agreement or by either party providing one years written notice. Under the agreement, the Company is obligated to make minimum annual payments of \$325,211.

The Company is involved in claims and litigation arising in the normal course of business. Any settlements or awards will be reflected in the period in which they become determinable. It is managements opinion that no amounts will be payable by the Company as a result of these claims and litigation.

The Company agreed to pay \$130,000 per year (\$54,340 to Fort Albany First Nation and \$75,660 to Kashechewan First Nation) in respect to the transmission line's right of way across the Albany 67 reserve lands near the communities of Kashechewan and Fort Albany, Ontario. This commitment has been classified as a lease pursuant to IFRS 16.

The Company has a long term Land Use Permit with the Province of Ontario expiring December 31, 2025. Under the agreement, the Company must pay \$43,089 per year for the transmission line's right of way across Public Lands. The agreement renews for five year periods. This commitment has been classified as a lease pursuant to IFRS 16.

**14. Employee benefits**

***Defined contribution plan***

The Company has a defined contribution plan under which both the Company and employees make contributions. The Company's maximum contribution is between 5% and 9% of earnings, based on different criteria. The stipulations of this plan are that the employee must work a minimum of 20 hours a week. Company contributions and corresponding expense totaled \$229,262 in 2022 (2021 – \$226,236).

**15. Financial instruments**

The Company as part of its operations carries a number of financial instruments. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from these financial instruments except as otherwise disclosed.

**Credit Risk**

Credit risk is the risk of financial loss to the Company because a counter party to a financial instrument fails to discharge its contractual obligations. Credit risk primarily arises from trade receivables.

**Risk management process**

The Company manages its credit risk by performing regular credit assessments of its customers and considering the credit ratings of counterparties.

Credit-impaired financial assets are identified through regular reviews of past due balances and credit assessments of its customers. The Company considers past due information of its balances and information about the customer available through regular commercial dealings.

**Measurement of expected credit losses**

The Company measures expected credit losses for trade receivables on an individual customer basis.

When measuring lifetime expected credit losses, the Company considers its past credit experience and estimates the timing, probability and magnitude of any cash shortfalls to determine the present value of expected credit losses at the reporting date. Forward-looking information is incorporated into the determination of expected credit loss by collecting information available from regular commercial dealings with its customers and other publicly available information and considering the effect such information could have on any assumptions or inputs used in the measurement of expected credit losses.

**Write-offs**

Financial assets are written off when the customer has filed for bankruptcy and the trustee has indicated that no additional funds will be paid. Where an asset has been written off but is still subject to enforcement activity, the asset remains on a list of delinquent accounts. Where information becomes available indicating the Company will receive funds such amounts are recognized at their fair value.

**Exposure to credit risk**

The following table sets out information about the credit quality of financial instruments assessed for impairment under IFRS 9 *Financial instruments*. All classes of financial instruments shown are assessed for impairment using the simplified approach as permitted in IFRS 9, whereby the loss allowance is always measured at an amount equal to lifetime expected credit losses. The gross carrying amount represents the maximum exposure to credit risk for that class of financial asset.

|                                    | 2022             | 2021    |
|------------------------------------|------------------|---------|
| <b>Accounts receivable</b>         |                  |         |
| 1-30 days aged                     | 1,084,885        | 867,791 |
| > 90 days aged                     | 76,806           | 79,354  |
| <b>Total gross carrying amount</b> | <b>1,161,691</b> | 947,145 |
| Less: Loss allowance               | -                | -       |
| <b>Total carrying amount</b>       | <b>1,161,691</b> | 947,145 |

**Concentrations of credit risk**

A credit concentration exists relating to trade receivables. As at December 31, 2022, two customers accounted for 91% (2021 – 1 customer accounted for 84%) of trade receivables.

**15. Financial instruments** (Continued from previous page)

**Amounts arising from expected credit losses**

There were no significant changes in the gross carrying amount of financial instruments during the year that contributed to changes in the loss allowance.

**Interest rate risk**

Interest rate risk is the risk that the value of a financial instrument might be adversely affected by a change in the interest rates. Changes in market interest rates may have an effect on the cash flows associated with some financial assets and liabilities, known as cash flow risk, and on the fair value of other financial assets or liabilities, known as price risk. In seeking to minimize the risks from interest rate fluctuations, the Company manages exposure through the acquisition of financial instruments with fixed, long-term rates, which modify the maturity characteristics of financial assets and liabilities. The Company is exposed to interest rate risk primarily relating to the following financial assets and liabilities. The table summarizes the carrying amounts of financial instruments exposed to interest rate risk by the earlier of the contractual maturity dates.

**Financial instruments exposed to interest rate risk:**

|                                                                             | <b>2022</b>      | <b>2021</b>  |
|-----------------------------------------------------------------------------|------------------|--------------|
|                                                                             | <b>Total</b>     | <b>Total</b> |
| <b>Financial assets</b>                                                     |                  |              |
| BMO GIC, 2.7% (2021 - 2.4%)                                                 | <b>500,000</b>   | 500,000      |
| BMO Insurance Reserve, 2.1% (2021 - 2.1%)                                   | <b>4,000,000</b> | 4,000,000    |
| Cash Treasury Account, 2.1% (2021 - 2.1%)                                   | <b>250,000</b>   | 250,000      |
|                                                                             | <b>4,750,000</b> | 4,750,000    |
| <b>Financial liabilities</b>                                                |                  |              |
| Bank of Montreal loan payable, 3.03% (2021 - 3.03%)                         | <b>1,066,940</b> | 1,148,184    |
| The Manufacturers Life Insurance Company loan payable, 5.5% (2021 - 5.5%)   | <b>4,002,979</b> | 4,668,736    |
| The Manufacturers Life Insurance Company loan payable, 4.71% (2021 - 4.71%) | <b>4,312,961</b> | 4,551,955    |
|                                                                             | <b>9,382,880</b> | 10,368,875   |

**Liquidity risk**

Liquidity risk is the risk that the Company is unable to generate or obtain sufficient cash or its equivalents in a cost-effective manner to fund its obligations as they come due. The following table summarizes the maturity profile of the Company's financial liabilities as at December 31, 2022 and 2021.

Due in less than a year.

|                                     | <b>2022</b>      | <b>2021</b>      |
|-------------------------------------|------------------|------------------|
| Accounts payable                    | <b>643,600</b>   | <b>442,338</b>   |
| Current portion of long-term debt   | <b>1,466,247</b> | <b>1,466,247</b> |
| Current portion of lease obligation | <b>174,089</b>   | <b>173,857</b>   |
| <b>Total</b>                        | <b>2,283,936</b> | <b>2,082,442</b> |



**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2022*

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**16. Revenue from contracts with customers**

The Company has recognized the following revenue amounts in the statement of income and other comprehensive income.

|                                                     | <b>2022</b>       | <b>2021</b> |
|-----------------------------------------------------|-------------------|-------------|
| <b><i>Revenue from contracts with customers</i></b> |                   |             |
| Transmission services                               | <b>8,420,990</b>  | 8,175,466   |
| Contributions in aid of construction                | <b>8,462,583</b>  | 2,161,542   |
| <b><i>Revenue from other sources</i></b>            |                   |             |
| Miscellaneous services                              | <b>168,032</b>    | 127,740     |
| Interest income                                     | <b>218,248</b>    | 39,639      |
| <b>Total revenue</b>                                | <b>17,269,853</b> | 10,504,387  |

The Company has included all consideration from contracts with customers in the amounts presented above.

**17. Deferred revenue**

On January 23, 2023, the transmission line from Attawapiskat to the Victor mine was disconnected from the system by DBC. As a result, the deferred revenue on contributions in aid of construction relating to the line was recognized in revenue with the underlying assets being fully amortized in 2022.

Five Nations Energy Inc.  
**Schedule 1 - Schedule of Expenses - Administrative and general**  
*For the year ended December 31, 2022*

|                                      | 2022             | 2021             |
|--------------------------------------|------------------|------------------|
| <b>Administrative and general</b>    |                  |                  |
| Administrative salaries and expenses | 1,227,058        | 864,332          |
| Community relations                  | 133,740          | -                |
| Insurance                            | 561,677          | 537,746          |
| Maintenance of general plant         | 125,393          | 95,430           |
| Office and other                     | 107,454          | 93,528           |
| Outside services                     | 222,109          | 143,278          |
| Regulatory expenses                  | 124,573          | 139,175          |
| Travel                               | 178,165          | 40,086           |
|                                      | <b>2,680,169</b> | <b>1,913,575</b> |

**Schedule 2 - Schedule of Expenses - Depreciation**  
*For the year ended December 31, 2022*

|                                        | 2022              | 2021             |
|----------------------------------------|-------------------|------------------|
| <b>Depreciation</b>                    |                   |                  |
| Property, plant and equipment (Note 5) | 10,399,658        | 3,904,705        |
| Right-of-use assets (Note 11)          | 80,905            | 80,797           |
|                                        | <b>10,480,563</b> | <b>3,985,502</b> |

**Schedule 3 - Schedule of Expenses - Interest**  
*For the year ended December 31, 2022*

|                           | 2022           | 2021           |
|---------------------------|----------------|----------------|
| <b>Interest</b>           |                |                |
| Long-term debt            | 480,253        | 524,017        |
| Lease Liability (Note 11) | 140,462        | 137,737        |
| Other                     | 22,505         | 19,597         |
|                           | <b>643,220</b> | <b>681,351</b> |

**Schedule 4 - Schedule of Expenses - Transmission maintenance**  
*For the year ended December 31, 2022*

|                                   | 2022           | 2021           |
|-----------------------------------|----------------|----------------|
| <b>Transmission - maintenance</b> |                |                |
| Towers, poles and structures      | 442,872        | 129,803        |
| Transformer station equipment     | 376,974        | 493,760        |
|                                   | <b>819,846</b> | <b>623,563</b> |

**Five Nations Energy Inc.**  
**Schedule 5 - Schedule of Expenses - Transmission operations**  
*For the year ended December 31, 2022*

|                                  | <i>2022</i>    | <i>2021</i> |
|----------------------------------|----------------|-------------|
| <b>Transmission - operations</b> |                |             |
| Load dispatching                 | <b>259,391</b> | 289,671     |
| Station buildings and fixtures   | <b>63,583</b>  | 50,087      |
| Station operations wages         | <b>592,942</b> | 617,344     |
|                                  | <b>915,916</b> | 957,102     |

**Schedule 6 - Schedule of Expenses - Non-regulated**  
*For the year ended December 31, 2022*

|                       | <i>2022</i>      | <i>2021</i> |
|-----------------------|------------------|-------------|
| <b>Non-regulated</b>  |                  |             |
| Community support     | <b>569,525</b>   | 254,240     |
| Professional fees     | <b>464,050</b>   | 153,272     |
| Depreciation (Note 5) | <b>21,959</b>    | 31,194      |
| Other                 | <b>2,082</b>     | 134,121     |
|                       | <b>1,057,616</b> | 572,827     |

**Five Nations Energy Inc.**  
**Financial Statements**  
*December 31, 2023*

# Five Nations Energy Inc.

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For the year ended December 31, 2023

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To the Board of Directors and Members of Five Nations Energy Inc.:

### Opinion

We have audited the financial statements of Five Nations Energy Inc. (the "Company"), which comprise the statement of financial position as at December 31, 2023, and the statements of income and other comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2023, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

### Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Timmins, Ontario  
April 26, 2024

*MNP LLP*

Chartered Professional Accountants  
Licensed Public Accountants

# Five Nations Energy Inc.

## Statement of Financial Position

As at December 31, 2023

|                                                              | 2023              | 2022              |
|--------------------------------------------------------------|-------------------|-------------------|
| <b>Assets</b>                                                |                   |                   |
| <b>Current</b>                                               |                   |                   |
| Cash                                                         | 6,005,443         | 4,330,221         |
| Accounts receivable (Note 6), (Note 14)                      | 916,583           | 1,161,691         |
| Prepaid expenses                                             | 503,138           | 68,132            |
|                                                              | <b>7,425,164</b>  | <b>5,560,044</b>  |
| <b>Non-current</b>                                           |                   |                   |
| Property, plant and equipment (Note 5)                       | 33,927,102        | 35,001,467        |
| Investments (Note 14)                                        | -                 | 500,000           |
| Restricted deposits (Note 9)                                 | 4,000,000         | 4,000,000         |
| Right-of-use assets (Note 10)                                | 2,850,695         | 2,912,578         |
|                                                              | <b>40,777,797</b> | <b>42,414,045</b> |
|                                                              | <b>48,202,961</b> | <b>47,974,089</b> |
| <b>Liabilities</b>                                           |                   |                   |
| <b>Current</b>                                               |                   |                   |
| Accounts payable and accrued liabilities (Note 6), (Note 14) | 1,901,489         | 643,600           |
| Current portion of long-term debt (Note 8)                   | 1,090,320         | 1,037,081         |
| Current portion of lease obligation (Note 10)                | 37,014            | 35,134            |
|                                                              | <b>3,028,823</b>  | <b>1,715,815</b>  |
| <b>Non-current</b>                                           |                   |                   |
| Long-term debt (Note 8)                                      | 7,207,743         | 8,294,028         |
| Long-term lease obligation (Note 10)                         | 3,059,041         | 3,075,397         |
|                                                              | <b>13,295,607</b> | <b>13,085,240</b> |
| <b>Commitments and contingencies</b> (Note 12)               |                   |                   |
| <b>Events after the reporting period</b> (Note 16)           |                   |                   |
| <b>Utility Equity</b>                                        |                   |                   |
| Equity in capital fund                                       | 25,629,036        | 25,670,355        |
| Equity in insurance reserve fund (Note 9)                    | 4,000,000         | 4,000,000         |
| Equity in general fund                                       | 5,278,318         | 5,218,494         |
|                                                              | <b>34,907,354</b> | <b>34,888,849</b> |
|                                                              | <b>48,202,961</b> | <b>47,974,089</b> |

### Approved on behalf of the Board

e-Signed by Derek Archibald  
2024-04-26 11:20:23:23 EDT

Director

e-Signed by Janie Wesley  
2024-04-26 11:41:05:05 EDT

Director

The accompanying notes are an integral part of these financial statements



**Five Nations Energy Inc.**  
**Statement of Income and Other Comprehensive Income**  
*For the year ended December 31, 2023*

|                                                  | <b>2023</b>      | <b>2022</b> |
|--------------------------------------------------|------------------|-------------|
| <b>Revenue (Note 15)</b>                         |                  |             |
| Transmission services                            | <b>8,590,109</b> | 8,420,990   |
| Contributions in aid of construction             | -                | 8,462,583   |
| Miscellaneous services                           | <b>21,004</b>    | 168,032     |
| Interest income                                  | <b>464,462</b>   | 218,248     |
|                                                  | <b>9,075,575</b> | 17,269,853  |
| <b>Administrative and general (Schedule 1)</b>   | <b>2,543,095</b> | 2,680,169   |
| <b>Depreciation (Schedule 2)</b>                 | <b>1,992,464</b> | 10,480,563  |
| <b>Interest (Schedule 3)</b>                     | <b>584,413</b>   | 643,220     |
| <b>Transmission maintenance (Schedule 4)</b>     | <b>740,735</b>   | 819,846     |
| <b>Transmission operations (Schedule 5)</b>      | <b>2,275,477</b> | 915,916     |
| <b>Total expenses</b>                            | <b>8,136,184</b> | 15,539,714  |
| <b>Income from regulated operations</b>          | <b>939,391</b>   | 1,730,139   |
| <b>Non-regulated expenses (Schedule 6)</b>       | <b>920,886</b>   | 1,057,616   |
| <b>Net income and other comprehensive income</b> | <b>18,505</b>    | 672,523     |

*The accompanying notes are an integral part of these financial statements*

**Five Nations Energy Inc.**  
**Statement of Changes in Equity**  
*For the year ended December 31, 2023*

|                                               | <i>General<br/>Fund</i> | <i>Capital<br/>Fund</i> | <i>Insurance<br/>Reserve<br/>Fund<br/>(Note 9)</i> | <i>Total equity</i> |
|-----------------------------------------------|-------------------------|-------------------------|----------------------------------------------------|---------------------|
| <b>Balance January 1, 2022</b>                | <b>4,322,527</b>        | <b>25,893,799</b>       | <b>4,000,000</b>                                   | <b>34,216,326</b>   |
| Net income for the year                       | 672,523                 | -                       | -                                                  | 672,523             |
| Property, plant and equipment additions - net | (753,631)               | 753,631                 | -                                                  | -                   |
| Depreciation (Note 5)                         | 10,421,618              | (10,421,618)            | -                                                  | -                   |
| Repayment of long-term debt                   | (981,960)               | 981,960                 | -                                                  | -                   |
| Contributions in aid of construction          | (8,462,583)             | 8,462,583               | -                                                  | -                   |
| <b>Balance January 1, 2023</b>                | <b>5,218,494</b>        | <b>25,670,355</b>       | <b>4,000,000</b>                                   | <b>34,888,849</b>   |
| Net income for the year                       | 18,505                  | -                       | -                                                  | 18,505              |
| Property, plant and equipment additions - net | (855,239)               | 855,239                 | -                                                  | -                   |
| Depreciation (Note 5)                         | 1,929,604               | (1,929,604)             | -                                                  | -                   |
| Repayment of long-term debt                   | (1,033,046)             | 1,033,046               | -                                                  | -                   |
| <b>Balance December 31, 2023</b>              | <b>5,278,318</b>        | <b>25,629,036</b>       | <b>4,000,000</b>                                   | <b>34,907,354</b>   |

*The accompanying notes are an integral part of these financial statements*

**Five Nations Energy Inc.**  
**Statement of Cash Flows**  
*For the year ended December 31, 2023*

|                                                             | 2023               | 2022               |
|-------------------------------------------------------------|--------------------|--------------------|
| <b>Cash provided by (used for) the following activities</b> |                    |                    |
| <b>Operating activities</b>                                 |                    |                    |
| Cash received from customers                                | 8,793,358          | 8,293,571          |
| Cash paid to suppliers and employees                        | (5,434,641)        | (5,020,844)        |
| Interest paid                                               | (584,413)          | (643,220)          |
| Interest receipts                                           | 464,462            | 218,248            |
|                                                             | <b>3,238,766</b>   | <b>2,847,755</b>   |
| <b>Financing activities</b>                                 |                    |                    |
| Repayments of long-term debt                                | (1,033,046)        | (981,960)          |
| Repayments of finance leases                                | (175,259)          | (174,089)          |
|                                                             | <b>(1,208,305)</b> | <b>(1,156,049)</b> |
| <b>Investing activities</b>                                 |                    |                    |
| Proceeds on disposal of long-term investment                | 500,000            | -                  |
| Purchases and construction of property, plant and equipment | (855,239)          | (753,631)          |
|                                                             | <b>(355,239)</b>   | <b>(753,631)</b>   |
| <b>Increase in cash resources</b>                           | <b>1,675,222</b>   | <b>938,075</b>     |
| <b>Cash resources, beginning of year</b>                    | <b>4,330,221</b>   | <b>3,392,146</b>   |
| <b>Cash resources, end of year</b>                          | <b>6,005,443</b>   | <b>4,330,221</b>   |

*The accompanying notes are an integral part of these financial statements*

**1. Reporting entity**

Five Nations Energy Inc. (the "Company") is a not-for-profit corporation incorporated in Canada without share capital on September 30, 1997. The Company is domiciled in Canada. The Company owns and operates electricity transmission lines along the western James Bay coast to the three First Nation communities of Attawapiskat, Kashechewan and Fort Albany, Ontario.

The address of the Company's registered office is located in Moose Factory, Ontario. Its administration and operations office is located at 725 Highway 655, Timmins, Ontario. The Board of Directors is controlled by representatives of the participating First Nation communities.

The members are Attawapiskat Power Corporation, Fort Albany Power Corporation, Kashechewan Power Corporation with the ultimate parents being the respective First Nations of the Power Corporations. Additional members are Moose Cree First Nation and Taykwa Tagamou Nation.

The Company is exempt from tax pursuant to section 149 of the Income Tax Act.

**2. Statement of compliance**

The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") and interpretations adopted by the International Accounting Standards Board ("IASB").

**3. Basis of preparation**

***Basis of measurement***

The financial statements have been prepared on the historical basis except for the revaluation of certain non-current assets and financial instruments. The principal accounting policies are set out in Note 4.

These financial statements were authorized for issuance by the Board of Directors on April 26, 2024.

***Functional and presentation currency***

These financial statements are presented in Canadian dollars, which is the Company's functional currency. All financial information presented in Canadian dollars has been rounded to the nearest dollar.

***Significant accounting judgments, estimates and assumptions***

The preparation of the Company's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the reporting date. These estimates and assumptions have been made using careful judgment; however, uncertainties could result in outcomes that would require a material adjustment to the carrying amount of the asset or liability affected in the future.

The estimates and underlying assumptions are prepared based on management's best knowledge of current events and actions that the Company may undertake in the future. These estimates and underlying assumptions are reviewed on an ongoing basis and revisions to accounting estimates are recognized prospectively in comprehensive income in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date are discussed below.

**3. Basis of preparation** *(Continued from previous page)*

***Impairment of non-financial assets***

The Company assesses non-financial assets for impairment at the end of each reporting period. If impairment indicators exist, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

The recoverable amount is the higher of fair value less costs to sell and value in use. Value in use is the present value of estimated future cash flows discounted using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units. Otherwise corporate assets are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss unless the relevant asset is carried at a revalued amount in which case the impairment loss is treated as a revaluation decrease.

The carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss unless that asset is carried at a revalued amount in which case an impairment reversal is treated as a revaluation increase.

***Useful life of property, plant and equipment***

Management is required to use judgment when determining the useful life and the residual value of the items included in property, plant and equipment. Differences in the estimated lives and residual values from those determined by management could result in material differences in the carrying amount of the assets and the depreciation recorded as an expense.

***Allowance for expected credit losses***

It is management's opinion that accounts receivable are fully collectable and as such, no allowance for expected credit losses is required.

***Leases***

At inception of a contract, the Company assesses whether a contract is, or contains, a lease, depending on if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company recognizes a right-of-use asset, initially measured at cost and subsequently depreciated using the straight-line method over the shorter of the asset's useful life (determined on the same basis as capital assets) or the end of the lease term. A corresponding lease liability is recognized, initially measured at the present value of the future lease payments (which include payments under extension options that the Company is reasonably certain to exercise), discounted using the interest rate implicit in the lease or, if not readily determinable, the Company's incremental borrowing rate. Generally, the Company uses its incremental borrowing rate as the discount rate. The lease liability is subsequently measured at amortized cost using the effective interest method.

The lease liability is remeasured when there is a change in future lease payments resulting from a change in index or rate or if the Company changes its assessment of whether it will exercise an option to extend, purchase or terminate. Should the corresponding right-of-use asset have been reduced to zero when the lease liability is remeasured, the adjustment would be recorded through profit or loss. The Company has exercised judgment to determine both the applicable discount rate as well as the lease term for lease contracts that contain renewal options.

**4. Material accounting policy information**

The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied to all the years presented, unless otherwise stated.

**4. Material accounting policy information** *(Continued from previous page)*

***Cash resources***

Cash resources comprise of a short-term GIC and balances with banks. Cash subject to restrictions that prevent its use for current purposes is included in restricted cash.

***Employee benefits***

The Company's post employment benefit programs consist of a defined contribution plan.

Contributions to defined contribution plans are recognized as an expense when employees have rendered service to the Company during the year, entitling them to the contributions.

***Harmonized sales tax***

Revenue, expenses and assets are recognized net of the amount of harmonized sales tax (HST). The net amount of HST payable to the taxation authority is included as part of accounts payable. Cash flows are included in the cash flow statement on a net basis. The HST component of cash flows arising from investing and financing activities which is recoverable from, or payable to, the taxation authority is classified as operating cash flows.

***Property, plant and equipment***

All property, plant and equipment is stated at cost less accumulated depreciation and impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, and the cost of dismantling and removing the items and restoring the site on which they are located.

The cost of major inspections, overhauls and replacement parts of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The cost of day-to-day maintenance of property, plant and equipment is recognized immediately in profit or loss as incurred.

All assets having limited useful lives are depreciated using the straight-line method over their estimated useful lives. Land has an unlimited useful life and is therefore not depreciated. Assets are depreciated from the date of acquisition. Internally constructed assets are depreciated from the time an asset is available for use.

The useful life applicable for each class of asset during the current and comparative period are as follows:

|                                      |                |
|--------------------------------------|----------------|
| Station equipment                    | 10 to 50 years |
| Poles and fixtures                   | 15 to 40 years |
| Overhead conductors and devices      | 15 to 60 years |
| Buildings                            | 15 to 40 years |
| Automotive and other equipment       | 2 to 10 years  |
| Contributions in aid of construction | 10 to 60 years |
| Non-regulated building and equipment | 5 to 40 years  |
| Right of use assets                  | 40 years       |

The residual value, useful life and depreciation method applied to each class of assets are reassessed at each reporting date.

**4. Material accounting policy information** *(Continued from previous page)*

***Fund accounting***

The Company uses fund accounting procedures resulting in a self-balancing set of accounts for each fund established by legal, contractual or voluntary actions. Funds are maintained as follows:

General Fund - reports on the general transmission activities of the Company.

Capital Fund - reports on the property, plant and equipment of the Company, together with related financing.

Insurance Reserve Fund - reports on the cash funded appropriated retained earnings set aside for damages to poles, fixtures, overhead conductors and devices.

***Revenue recognition***

The following describes the Company's principal activities from which it generates revenue.

**Transmission Revenue**

Transmission revenues consist of transmission tariffs, which are collected through Ontario Energy Board (OEB) approved Uniform Transmission Rates (UTR) and the monthly peak demand for electricity across FNEI's high-voltage network as a percentage of total demand across all networks in Ontario. OEB approved UTR is based on an approved revenue requirement that includes a rate of return. The transmission tariffs are designed to recover revenues necessary to support the Company's transmission system with sufficient capacity to accommodate the maximum expected demand which is influenced by weather and economic conditions. Transmission revenues are recognized over time as electricity is transmitted and delivered to customers. Revenue is recognized using an output method at the amount of consideration to which the Company has a right to invoice, as the amount invoiced corresponds directly with the value to the customer for each incremental unit of electricity transferred to the customer. Amounts are invoiced to the IESO on a monthly basis, with payment terms due on receipt.

**Miscellaneous Revenue**

The Company generates revenue from administrative fees which are incurred as part of the Connection and Cost Recovery Agreement with De Beers Canada (DBC). Performance obligations are satisfied as long as the Company is in compliance with its obligations as a transmitter under the OEB administered Transmission System Code as well as provides operation and maintenance services to the twinned transmission line from Moosonee to Kashechewan and the modification to the substation in Kashechewan and Attawapiskat.

Revenue is recognized when an invoice for all expenditures incurred for the aforementioned services is prepared. Consideration is typically due from the receipt of the invoice. The transaction price is predetermined as a set rate under the CCRA which intends to cover internal administrative costs incurred for the performance of allowable services.

**Interest Revenue**

The Company generates revenue from interest earned under a banking agreement with Bank of Montreal. Under the agreement, the bank is obligated to pay the Company interest on their bank balance and outstanding guaranteed investment certificates (GICs).

Revenue is recognized over the term of the GIC as interest is earned. Consideration is typically due at the end of the term. Revenue is recognized at the settlement date for interest revenue earned on their bank balance. Consideration is typically due at the end of the month. The transaction price is the determined based on the ending bank balance and the Bank of Canada prime rate.

The Company expects interest revenues from BMO to be recoverable as BMO is a well established bank and the probability of BMO becoming insolvent and not being able to meet its interest payment obligations is remote.

**Contributions in Aid of Construction Revenue**

As a condition of connecting the Victor Mine to the transmission grid, De Beers Canada was required to construct and transfer to the Company a second transmission line between Moosonee and Kashechewan. The cost of constructing the second line was recorded as deferred revenue with revenue being recognized on a straight-line basis over the 15 year term of the contract. Deferred revenue was fully recognized as revenue during the 2022 fiscal year as a result of the Victor mine being disconnected from the system by DBC.

**4. Material accounting policy information** *(Continued from previous page)*

**Financial instruments**

**Financial assets**

**Recognition and initial measurement**

The Company recognizes financial assets when it becomes party to the contractual provisions of the instrument. Financial assets are measured initially at their fair value plus, in the case of financial assets not subsequently measured at fair value through profit or loss, transaction costs that are directly attributable to their acquisition. Transaction costs attributable to the acquisition of financial assets subsequently measured at fair value through profit or loss are expensed in profit or loss when incurred.

**Classification and subsequent measurement**

Subsequent to initial recognition, all financial assets are classified and subsequently measured at amortized cost. Interest revenue is calculated using the effective interest method and gains or losses arising from impairment, foreign exchange and derecognition are recognized in profit or loss. Financial assets measured at amortized cost are comprised of accounts receivable and investments.

**Reclassifications**

The Company reclassifies debt instruments only when its business model for managing those financial assets has changed. Reclassifications are applied prospectively from the reclassification date and any previously recognized gains, losses or interest are not restated.

**Impairment**

The Company recognizes a loss allowance for the expected credit losses associated with its financial assets. Expected credit losses are measured to reflect a probability-weighted amount, the time value of money, and reasonable and supportable information regarding past events, current conditions and forecasts of future economic conditions.

The Company applies the simplified approach for trade receivables. Using the simplified approach, the Company records a loss allowance equal to the expected credit losses resulting from all possible default events over the assets' contractual lifetime.

The Company assesses whether a financial asset is credit-impaired at the reporting date. For financial assets assessed as credit-impaired at the reporting date, the Company continues to recognize a loss allowance equal to lifetime expected credit losses.

Loss allowances for expected credit losses are presented in the statement of financial position as follows:

- For financial assets measured at amortized cost, as a deduction from the gross carrying amount of the financial asset

Financial assets are written off when the Company has no reasonable expectations of recovering all or any portion thereof.

**Derecognition of financial assets**

The Company derecognizes a financial asset when its contractual rights to the cash flows from the financial asset expire.

**Financial liabilities**

**Recognition and initial measurement**

The Company recognizes a financial liability when it becomes party to the contractual provisions of the instrument. At initial recognition, the Company measures financial liabilities at their fair value plus transaction costs that are directly attributable to their issuance, with the exception of financial liabilities subsequently measured at fair value through profit or loss for which transaction costs are immediately recorded in profit or loss.

Where an instrument contains both a liability and equity component, these components are recognized separately based on the substance of the instrument, with the liability component measured initially at fair value and the equity component assigned the residual amount.



**4. Material accounting policy information** *(Continued from previous page)*

**Financial instruments** *(Continued from previous page)*

**Classification and subsequent measurement**

Subsequent to initial recognition, all financial liabilities are measured at amortized cost using the effective interest rate method. Interest, gains and losses relating to a financial liability are recognized in profit or loss.

**Derecognition of financial liabilities**

The Company derecognizes a financial liability only when its contractual obligations are discharged, cancelled or expire.

**Community support**

The Company accrues non-regulated community support expenditures only once all criteria have been met by the recipient.

**Leases**

At the lease commencement date, the Company recognizes a right-of-use asset and a lease liability. The right-of-use asset is initially measured at cost. The cost of the right-of-use asset is comprised of the initial amount of the lease liability, any lease payments made at or before the commencement date less any lease incentives received, initial direct costs incurred by the Company, and an estimate of the costs to be incurred by the Company in dismantling and removing the underlying asset and restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

After the commencement date, the Company measures right-of-use assets related to MNR and Albany 67 Land use by applying the cost model, whereby the right-of-use asset is measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liability. The right-of-use asset is depreciated using the straight-line method from the commencement date to the end of the lease term or the end of the useful life of the right-of-use asset. The estimated useful life of the right-of-use assets are determined on the same basis as those of property, plant and equipment. The determination of the depreciation period is dependent on whether the Company expects that the ownership of the underlying asset will transfer to the Company by the end of the lease term or if the cost of the right-of-use asset reflects that the Company will exercise a purchase option.

The lease liability is initially measured at the present value of the lease payments not paid at the lease commencement date, discounted using the interest rate implicit in the lease or the Company's incremental borrowing rate, if the interest rate implicit in the lease cannot be readily determined. The lease payments included in the measurement of the lease liability comprise of fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or rate, amounts expected to be payable by the Company under a residual value guarantee, the exercise price of a purchase option that the Company is reasonably certain to exercise, and payment of penalties for terminating the lease if the lease term reflects the Company exercising an option to terminate the lease. After the commencement date, the Company measures the lease liability at amortized cost using the effective interest method.

The Company remeasures the lease liability when there is a change in the lease term, a change in the Company's assessment of an option to purchase the underlying asset, a change in the Company's estimate of amounts expected to be payable under a residual value guarantee, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments. On remeasurement of the lease liability, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2023

**5. Property, Plant and Equipment**

|                                  | Station<br>Equipment | Poles and<br>fixtures | Overhead<br>conductors<br>and devices | Land and<br>buildings | Automotive<br>and other<br>equipment | Non-regulated<br>building and<br>equipment | Less:<br>Contributions<br>in aid of<br>construction | Total             |
|----------------------------------|----------------------|-----------------------|---------------------------------------|-----------------------|--------------------------------------|--------------------------------------------|-----------------------------------------------------|-------------------|
| <b>Cost</b>                      |                      |                       |                                       |                       |                                      |                                            |                                                     |                   |
| Balance at January 1, 2022       | 41,860,566           | 52,532,584            | 20,451,558                            | 5,303,274             | 3,023,339                            | 452,592                                    | (34,405,460)                                        | 89,218,453        |
| Additions                        | 623,425              | -                     | -                                     | 18,584                | 109,491                              | 2,131                                      | -                                                   | 753,631           |
| Balance at December 31, 2022     | 42,483,991           | 52,532,584            | 20,451,558                            | 5,321,858             | 3,132,830                            | 454,723                                    | (34,405,460)                                        | 89,972,084        |
| Additions                        | 712,077              | -                     | 9,256                                 | -                     | 133,906                              | -                                          | -                                                   | 855,239           |
| Balance at December 31, 2023     | 43,196,068           | 52,532,584            | 20,460,814                            | 5,321,858             | 3,266,736                            | 454,723                                    | (34,405,460)                                        | 90,827,323        |
| <b>Depreciation</b>              |                      |                       |                                       |                       |                                      |                                            |                                                     |                   |
| Balance at January 1, 2022       | 19,266,185           | 31,217,938            | 10,595,068                            | 1,553,623             | 1,787,930                            | 132,381                                    | (20,004,124)                                        | 44,549,001        |
| Depreciation charge for the year | 3,643,222            | 5,320,629             | 1,739,204                             | 185,327               | 332,563                              | 21,959                                     | (821,288)                                           | 10,421,616        |
| Balance at December 31, 2022     | 22,909,407           | 36,538,567            | 12,334,272                            | 1,738,950             | 2,120,493                            | 154,340                                    | (20,825,412)                                        | 54,970,617        |
| Depreciation charge for the year | 1,110,182            | 899,773               | 266,109                               | 186,096               | 266,744                              | 21,986                                     | (821,288)                                           | 1,929,602         |
| Balance at December 31, 2022     | 24,019,589           | 37,438,340            | 12,600,381                            | 1,925,047             | 2,387,238                            | 176,326                                    | (21,646,700)                                        | 56,900,221        |
| <b>Net book value</b>            |                      |                       |                                       |                       |                                      |                                            |                                                     |                   |
| At December 31, 2022             | 19,574,584           | 15,994,017            | 8,117,286                             | 3,582,908             | 1,012,337                            | 300,383                                    | (13,580,048)                                        | 35,001,467        |
| <b>At December 31, 2023</b>      | <b>19,176,479</b>    | <b>15,094,244</b>     | <b>7,860,433</b>                      | <b>3,396,811</b>      | <b>879,498</b>                       | <b>278,397</b>                             | <b>(12,758,760)</b>                                 | <b>33,927,102</b> |

Contributions in aid of construction consist of Indigenous Services Canada (ISC) funding received for the acquisition and construction of station equipment, poles and fixtures and overhead conductors and devices. Refer to Note 11 for information pertaining to the Company's lease arrangements in which it is a lessee.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2023

**6. Related party transactions**

***Key management compensation of the Company***

Key management personnel remuneration includes the following expenses:

|                   | 2023           | 2022           |
|-------------------|----------------|----------------|
| Salaries          | 642,936        | 795,838        |
| Employee benefits | 126,259        | 105,614        |
|                   | <b>769,195</b> | <b>901,452</b> |

***Transactions with entities with significant influence over the company***

The Company is related to the individual First Nations and their respective power corporations by virtue of significant influence. Accounts receivable includes the following amounts due for services in the regular course of business:

|                                | 2023           | 2022          |
|--------------------------------|----------------|---------------|
| Attawapiskat Power Corporation | 40,808         | 16,617        |
| Fort Albany Power Corporation  | 16,478         | 8,205         |
| Kashechewan Power Corporation  | 67,847         | 19,478        |
| Kashechewan First Nation       | 10,228         | 10,228        |
|                                | <b>135,361</b> | <b>54,528</b> |

Accounts payable and accrued liabilities include the following amounts due for services in the regular course of business:

|                                     | 2023             | 2022           |
|-------------------------------------|------------------|----------------|
| Attawapiskat First Nation (Note 16) | 1,287,000        | -              |
| Attawapiskat Power Corporation      | 48,835           | 15,595         |
| Fort Albany First Nation            | 2,565            | 2,065          |
| Fort Albany Power Corporation       | 15,532           | 72,944         |
| Kashechewan First Nation            | 13,658           | 13,158         |
| Kashechewan Power Corporation       | 18,202           | -              |
|                                     | <b>1,385,792</b> | <b>103,762</b> |

***The Company purchases goods and services from the member power corporations in the normal course of operations including the following:***

|                                                 | 2023           | 2022           |
|-------------------------------------------------|----------------|----------------|
| Electricity at OEB approved rates               | 65,519         | 44,171         |
| Station checks at exchange amount               | 43,167         | 39,000         |
| Construction and maintenance at exchange amount | 186,140        | 148,733        |
|                                                 | <b>294,826</b> | <b>231,904</b> |

**7. Bank indebtedness**

The Company has an authorized operating facility of \$500,000 with the Bank of Montreal bearing interest at bank prime rate. The facility has not been utilized as at December 31, 2023 or December 31, 2022.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2023*

**8. Long-term debt**

|                                                                                                                                                                                                                                                          | 2023             | 2022      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------|
| The Manufacturers Life Insurance Company loan payable bearing interest at 5.5%, secured by a general security agreement, repayable in blended monthly payments of \$75,246, maturing February 2028.                                                      | <b>3,300,144</b> | 4,002,979 |
| The Manufacturers Life Insurance Company loan payable bearing interest at 4.71% secured by a general security agreement, repayable in blended monthly payments of \$37,365, maturing October 2035.                                                       | <b>4,062,455</b> | 4,312,961 |
| Bank of Montreal loan payable, secured by land and office building with a net book value of \$2,920,837 and a general security agreement, bearing interest at 3.03% per annum, repayable in blended monthly payments of \$9,576, maturing November 2027. | <b>983,201</b>   | 1,066,940 |
| Less: Finance acquisition costs related to The Manufacturers Life Insurance Company loan maturing October 2035.                                                                                                                                          | <b>(47,737)</b>  | (51,771)  |
|                                                                                                                                                                                                                                                          | <b>8,298,063</b> | 9,331,109 |
| Less: Current portion                                                                                                                                                                                                                                    | <b>1,090,320</b> | 1,037,081 |
|                                                                                                                                                                                                                                                          | <b>7,207,743</b> | 8,294,028 |

Principal repayments on long-term debt in each of the next five years and thereafter, assuming long-term debt subject to refinancing is renewed, are estimated as follows:

|            |                  |
|------------|------------------|
| 2024       | 1,086,286        |
| 2025       | 1,143,424        |
| 2026       | 1,203,039        |
| 2027       | 1,265,803        |
| 2028       | 484,854          |
| Thereafter | 3,114,657        |
|            | <b>8,298,063</b> |

**9. Insurance Reserve Fund**

Under the terms of The Manufacturers Life Insurance Company loans payable, the Company must maintain an insurance reserve fund of \$4,000,000. Cash set aside for the insurance reserve is reported as restricted deposits.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2023*

**10. Leases**

***Right-of-use assets***

The following table illustrates the right-of-use asset balances during the period:

|                                     | <i>Albany 67</i> | <i>MNR Land Use</i> | <i>Total</i>     |
|-------------------------------------|------------------|---------------------|------------------|
| <b>Cost</b>                         |                  |                     |                  |
| Balance at January 1, 2023          | 2,191,681        | 720,897             | 2,912,578        |
| Depreciation                        | (60,880)         | (20,568)            | (81,448)         |
| Consumer price index adjustment     | -                | 19,565              | 19,565           |
| <b>Balance at December 31, 2023</b> | <b>2,191,681</b> | <b>719,894</b>      | <b>2,850,695</b> |

***Lease liabilities***

The following table sets out a maturity analysis of lease liabilities:

|                                                                  | <i>2023</i>      | <i>2022</i>      |
|------------------------------------------------------------------|------------------|------------------|
| <b>Maturity analysis – contractual undiscounted cash flows</b>   |                  |                  |
| Less than one year                                               | 175,259          | 174,089          |
| One to five years                                                | 701,034          | 696,356          |
| More than five years                                             | 5,257,756        | 5,396,763        |
| <b>Total undiscounted lease liabilities at December 31, 2023</b> | <b>6,134,049</b> | <b>6,267,208</b> |

|                                                                            | <i>2023</i>      | <i>2022</i>      |
|----------------------------------------------------------------------------|------------------|------------------|
| <b>Maturity analysis - contractual discounted cash flows under IFRS 16</b> |                  |                  |
| Current                                                                    | 37,014           | 35,134           |
| Non-current                                                                | 3,059,041        | 3,075,397        |
| <b>Total discounted lease liabilities at December 31, 2023</b>             | <b>3,096,065</b> | <b>3,110,531</b> |

***Amounts recognized in the statement of income and comprehensive income***

|                                       | <i>2023</i> | <i>2022</i> |
|---------------------------------------|-------------|-------------|
| Interest expense on lease liabilities | 139,888     | 140,462     |

***Amounts recognized in the statement of cash flows***

|                                               | <i>2023</i>    | <i>2022</i>    |
|-----------------------------------------------|----------------|----------------|
| Cash outflow for MNR land use lease           | 44,259         | 43,089         |
| Cash outflow for Albany 67 land use lease     | 131,000        | 131,000        |
| <b>Total cash outflow for land use leases</b> | <b>175,259</b> | <b>174,089</b> |

**11. Capital management**

The Company's objective when managing capital is to continue as a going concern to protect its ability to meet its on-going liabilities and to minimize expenditures over the long term. Protecting the ability to pay current and future liabilities includes maintaining capital above minimum debt covenant levels and internally determined capital guidelines based on risk management policies.

The Company sets the amount of capital in proportion to risk and manages the capital structure and makes adjustments to it in light of changes to economic conditions and the risk characteristics of the underlying assets, as well as with consideration of externally imposed capital requirements. Capital is comprised of the company's utility equity and debt. As at December 31, 2023, the company's utility equity was \$34,907,354 (2022 - \$34,888,849), and its total outstanding debt and lease obligations were \$11,394,118 (2022 - \$12,441,640).

The Manufacturers Life Insurance Company debt is subject to loan covenants which require the company to maintain a minimum debt service ratio of 1.20:1 and a debt to equity ratio of 1.50:1. For the purposes of the debt to equity ratio, equity is calculated as utility equity plus 30% of contributions in aid as disclosed in Note 5.

The Company was in compliance with these covenants at December 31, 2023 and 2022.

**12. Commitments and contingencies**

The Company has an Operating Services Agreement with Hydro One Networks Inc. which renews annually on December 31 and may be terminated either by mutual agreement or by either party providing one years written notice. Under the agreement, the Company is obligated to make minimum annual payments of \$282,946.

The Company is involved in claims and litigation arising in the normal course of business. Any settlements or awards will be reflected in the period in which they become determinable. It is managements opinion that no amounts will be payable by the Company as a result of these claims and litigation.

The Company agreed to pay \$130,000 per year (\$54,340 to Fort Albany First Nation and \$75,660 to Kashechewan First Nation) in respect to the transmission line's right of way across the Albany 67 reserve lands near the communities of Kashechewan and Fort Albany, Ontario. This commitment has been classified as a lease pursuant to IFRS 16.

The Company has a long term Land Use Permit with the Province of Ontario expiring December 31, 2025. Under the agreement, the Company must pay \$35,559 per year for the transmission line's right of way across Public Lands and \$13,132 per year for the fibre optic communication line. The agreement renews for five year periods. This commitment has been classified as a lease pursuant to IFRS 16.

The Company has recently become aware of a potential liability for the remediation and cleanup related to a fuel leak. The costs associated with the cleanup are not determinable at this time.

**13. Employee benefits**

***Defined contribution plan***

The Company has a defined contribution plan under which both the Company and employees make contributions. The Company's maximum contribution is between 5% and 9% of earnings, based on different criteria. The stipulations of this plan are that the employee must work a minimum of 20 hours a week. Company contributions and corresponding expense totaled \$259,651 in 2023 (2022 – \$229,262).

**14. Financial instruments**

The Company as part of its operations carries a number of financial instruments. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from these financial instruments except as otherwise disclosed.

**Credit Risk**

Credit risk is the risk of financial loss to the Company because a counter party to a financial instrument fails to discharge its contractual obligations. Credit risk primarily arises from trade receivables.

**Risk management process**

The Company manages its credit risk by performing regular credit assessments of its customers and considering the credit ratings of counterparties.

Credit-impaired financial assets are identified through regular reviews of past due balances and credit assessments of its customers. The Company considers past due information of its balances and information about the customer available through regular commercial dealings.

**Measurement of expected credit losses**

The Company measures expected credit losses for trade receivables on an individual customer basis.

When measuring lifetime expected credit losses, the Company considers its past credit experience and estimates the timing, probability and magnitude of any cash shortfalls to determine the present value of expected credit losses at the reporting date. Forward-looking information is incorporated into the determination of expected credit loss by collecting information available from regular commercial dealings with its customers and other publicly available information and considering the effect such information could have on any assumptions or inputs used in the measurement of expected credit losses.

**Write-offs**

Financial assets are written off when the customer has filed for bankruptcy and the trustee has indicated that no additional funds will be paid. Where an asset has been written off but is still subject to enforcement activity, the asset remains on a list of delinquent accounts. Where information becomes available indicating the Company will receive funds such amounts are recognized at their fair value.

**Exposure to credit risk**

The following table sets out information about the credit quality of financial instruments assessed for impairment under IFRS 9 *Financial instruments*. All classes of financial instruments shown are assessed for impairment using the simplified approach as permitted in IFRS 9, whereby the loss allowance is always measured at an amount equal to lifetime expected credit losses. The gross carrying amount represents the maximum exposure to credit risk for that class of financial asset.

|                                    | 2023           | 2022             |
|------------------------------------|----------------|------------------|
| <b>Accounts receivable</b>         |                |                  |
| 1-30 days aged                     | 878,289        | 1,084,885        |
| > 90 days aged                     | 38,294         | 76,806           |
| <b>Total gross carrying amount</b> | <b>916,583</b> | <b>1,161,691</b> |
| Less: Loss allowance               | -              | -                |
| <b>Total carrying amount</b>       | <b>916,583</b> | <b>1,161,691</b> |

**Concentrations of credit risk**

A credit concentration exists relating to trade receivables. As at December 31, 2023, one customer accounted for 83% (2022 – two customers accounted for 91%) of trade receivables.

**14. Financial instruments** (Continued from previous page)

**Amounts arising from expected credit losses**

There were no significant changes in the gross carrying amount of financial instruments during the year that contributed to changes in the loss allowance.

**Interest rate risk**

Interest rate risk is the risk that the value of a financial instrument might be adversely affected by a change in the interest rates. Changes in market interest rates may have an effect on the cash flows associated with some financial assets and liabilities, known as cash flow risk, and on the fair value of other financial assets or liabilities, known as price risk. In seeking to minimize the risks from interest rate fluctuations, the Company manages exposure through the acquisition of financial instruments with fixed, long-term rates, which modify the maturity characteristics of financial assets and liabilities. The Company is exposed to interest rate risk primarily relating to the following financial assets and liabilities. The table summarizes the carrying amounts of financial instruments exposed to interest rate risk by the earlier of the contractual maturity dates.

**Financial instruments exposed to interest rate risk:**

|                                                      | 2023             | 2022             |
|------------------------------------------------------|------------------|------------------|
| <b>Financial assets</b>                              |                  |                  |
| BMO GIC, matured December 2023 at 2.7% (2022 - 2.4%) | -                | 500,000          |
| BMO Insurance Reserve, BMO prime* less 1.85%         | 4,000,000        | 4,000,000        |
| Cash Treasury Account, BMO prime* less 1.85%         | 250,000          | 250,000          |
|                                                      | <b>4,250,000</b> | <b>4,750,000</b> |

\* BMO prime 7.2% (2022 - 5.45%)

**Financial liabilities**

|                                                                             |                  |                  |
|-----------------------------------------------------------------------------|------------------|------------------|
| Bank of Montreal loan payable, 3.03% (2022 - 3.03%)                         | 983,201          | 1,066,940        |
| The Manufacturers Life Insurance Company loan payable, 5.5% (2022 - 5.5%)   | 3,300,144        | 4,002,979        |
| The Manufacturers Life Insurance Company loan payable, 4.71% (2022 - 4.71%) | 4,062,455        | 4,312,961        |
|                                                                             | <b>8,345,800</b> | <b>9,382,880</b> |

**Liquidity risk**

Liquidity risk is the risk that the Company is unable to generate or obtain sufficient cash or its equivalents in a cost-effective manner to fund its obligations as they come due. The following table summarizes the maturity profile of the Company's financial liabilities as at December 31, 2023 and 2022.

Due in less than a year:

|                                     | 2023             | 2022             |
|-------------------------------------|------------------|------------------|
| Accounts payable                    | 1,901,489        | 643,600          |
| Current portion of long-term debt   | 1,466,247        | 1,466,247        |
| Current portion of lease obligation | 175,259          | 174,089          |
| <b>Total</b>                        | <b>3,542,995</b> | <b>2,283,936</b> |



**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2023*

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**15. Revenue from contracts with customers**

The Company has recognized the following revenue amounts in the statement of income and other comprehensive income.

|                                              | <b>2023</b>      | 2022       |
|----------------------------------------------|------------------|------------|
| <b>Revenue from contracts with customers</b> |                  |            |
| Transmission services                        | <b>8,590,109</b> | 8,420,990  |
| Contributions in aid of construction         | -                | 8,462,583  |
| <b>Revenue from other sources</b>            |                  |            |
| Miscellaneous services                       | <b>21,004</b>    | 168,032    |
| Interest income                              | <b>464,462</b>   | 218,248    |
| <b>Total revenue</b>                         | <b>9,075,575</b> | 17,269,853 |

The Company has included all consideration from contracts with customers in the amounts presented above.

**16. Events after the reporting period**

Subsequent to the reporting date, the Company has entered into negotiations with Attawapiskat First Nation relating to the past usage of the First Nation's lands. The likely compensation for past usage has been estimated to be \$1,287,000.

**Five Nations Energy Inc.**  
**Schedule 1 - Schedule of Expenses - Administrative and General**  
*For the year ended December 31, 2023*

|                                      | 2023             | 2022             |
|--------------------------------------|------------------|------------------|
| <b>Administrative and general</b>    |                  |                  |
| Administrative salaries and expenses | 1,116,732        | 1,227,058        |
| Community relations                  | 10,946           | 133,740          |
| Insurance                            | 655,155          | 561,677          |
| Maintenance of general plant         | 120,227          | 125,393          |
| Office and other                     | 103,819          | 107,454          |
| Outside services                     | 128,934          | 222,109          |
| Regulatory expenses                  | 180,682          | 124,573          |
| Travel                               | 226,600          | 178,165          |
|                                      | <b>2,543,095</b> | <b>2,680,169</b> |

**Schedule 2 - Schedule of Expenses - Depreciation**  
*For the year ended December 31, 2023*

|                                        | 2023             | 2022              |
|----------------------------------------|------------------|-------------------|
| <b>Depreciation</b>                    |                  |                   |
| Property, plant and equipment (Note 5) | 1,911,016        | 10,399,658        |
| Right-of-use assets (Note 10)          | 81,448           | 80,905            |
|                                        | <b>1,992,464</b> | <b>10,480,563</b> |

**Schedule 3 - Schedule of Expenses - Interest**  
*For the year ended December 31, 2023*

|                           | 2023           | 2022           |
|---------------------------|----------------|----------------|
| <b>Interest</b>           |                |                |
| Lease Liability (Note 10) | 139,881        | 140,462        |
| Long-term debt            | 429,167        | 480,253        |
| Other                     | 15,365         | 22,505         |
|                           | <b>584,413</b> | <b>643,220</b> |

**Schedule 4 - Schedule of Expenses - Transmission Maintenance**  
*For the year ended December 31, 2023*

|                                 | 2023           | 2022           |
|---------------------------------|----------------|----------------|
| <b>Transmission maintenance</b> |                |                |
| Towers, poles and structures    | 323,925        | 442,872        |
| Transformer station equipment   | 416,810        | 376,974        |
|                                 | <b>740,735</b> | <b>819,846</b> |

**Five Nations Energy Inc.**  
**Schedule 5 - Schedule of Expenses - Transmission Operations**  
*For the year ended December 31, 2023*

|                                | <b>2023</b>      | <b>2022</b> |
|--------------------------------|------------------|-------------|
| <b>Transmission operations</b> |                  |             |
| Load dispatching               | <b>367,434</b>   | 259,391     |
| Rent                           | <b>1,287,000</b> | -           |
| Station buildings and fixtures | <b>82,875</b>    | 63,583      |
| Station operations wages       | <b>538,168</b>   | 592,942     |
|                                | <b>2,275,477</b> | 915,916     |

**Schedule 6 - Schedule of Expenses - Non-regulated**  
*For the year ended December 31, 2023*

|                       | <b>2023</b>    | <b>2022</b> |
|-----------------------|----------------|-------------|
| <b>Non-regulated</b>  |                |             |
| Community support     | <b>523,650</b> | 569,525     |
| Professional fees     | <b>375,250</b> | 464,050     |
| Depreciation (Note 5) | <b>21,986</b>  | 21,959      |
| Other                 | <b>-</b>       | 2,082       |
|                       | <b>920,886</b> | 1,057,616   |

**Five Nations Energy Inc.**  
**Financial Statements**  
*December 31, 2024*

**Five Nations Energy Inc.**  
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# Independent Auditor's Report

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To the Board of Directors and Members of Five Nations Energy Inc.:

## Opinion

We have audited the financial statements of Five Nations Energy Inc. (the "Company"), which comprise the statement of financial position as at December 31, 2024, and the statements of income and other comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of material accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2024, and its financial performance and its cash flows for the year then ended in accordance with IFRS® Accounting Standards as issued by the International Accounting Standards Board.

## Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS® Accounting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

## Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Timmins, Ontario  
April 16, 2025



Chartered Professional Accountants  
Licensed Public Accountants

# Five Nations Energy Inc.

## Statement of Financial Position

As at December 31, 2024

|                                                              | 2024              | 2023              |
|--------------------------------------------------------------|-------------------|-------------------|
| <b>Assets</b>                                                |                   |                   |
| <b>Current</b>                                               |                   |                   |
| Cash                                                         | 5,819,311         | 6,005,443         |
| Accounts receivable (Note 6), (Note 14)                      | 870,620           | 916,583           |
| Prepaid expenses                                             | 245,481           | 503,138           |
|                                                              | <b>6,935,412</b>  | <b>7,425,164</b>  |
| <b>Non-current</b>                                           |                   |                   |
| Property, plant and equipment (Note 5)                       | 33,333,599        | 33,927,102        |
| Restricted deposits (Note 9)                                 | 4,000,000         | 4,000,000         |
| Right-of-use assets (Note 10)                                | 3,941,117         | 2,850,695         |
|                                                              | <b>41,274,716</b> | <b>40,777,797</b> |
|                                                              | <b>48,210,128</b> | <b>48,202,961</b> |
| <b>Liabilities</b>                                           |                   |                   |
| <b>Current</b>                                               |                   |                   |
| Accounts payable and accrued liabilities (Note 6), (Note 14) | 689,985           | 1,901,489         |
| Current portion of long-term debt (Note 8)                   | 1,147,458         | 1,090,320         |
| Current portion of lease obligation (Note 10)                | 62,978            | 37,014            |
| Current portion of note payable (Note 6), (Note 12)          | 28,191            | -                 |
|                                                              | <b>1,928,612</b>  | <b>3,028,823</b>  |
| <b>Non-current</b>                                           |                   |                   |
| Long-term debt (Note 8)                                      | 6,064,319         | 7,207,743         |
| Long-term lease obligation (Note 10)                         | 4,109,372         | 3,059,041         |
| Notes payable (Note 6), (Note 12), (Note 14)                 | 692,663           | -                 |
|                                                              | <b>12,794,966</b> | <b>13,295,607</b> |
| <b>Commitments and contingencies</b> (Note 12)               |                   |                   |
| <b>Events after the reporting period</b> (Note 16)           |                   |                   |
| <b>Utility Equity</b>                                        |                   |                   |
| Equity in general fund                                       | 5,293,342         | 5,278,318         |
| Equity in capital fund                                       | 26,121,820        | 25,629,036        |
| Equity in insurance reserve fund (Note 9)                    | 4,000,000         | 4,000,000         |
|                                                              | <b>35,415,162</b> | <b>34,907,354</b> |
|                                                              | <b>48,210,128</b> | <b>48,202,961</b> |

### Approved on behalf of the Board

e-Signed by Henry Koosies  
2025-04-16 14:52:02:02 EDT

Director

e-Signed by Derek Archibald  
2025-04-16 14:44:29:29 EDT

Director

The accompanying notes are an integral part of these financial statements



**Five Nations Energy Inc.**  
**Statement of Income and Other Comprehensive Income**

*For the year ended December 31, 2024*

|                                                  | <b>2024</b>      | <b>2023</b> |
|--------------------------------------------------|------------------|-------------|
| <b>Revenue (Note 15)</b>                         |                  |             |
| Transmission services                            | <b>8,550,547</b> | 8,590,109   |
| Interest income                                  | <b>486,795</b>   | 464,462     |
| Miscellaneous services                           | <b>2,909</b>     | 21,004      |
|                                                  | <b>9,040,251</b> | 9,075,575   |
| <b>Administrative and general (Schedule 1)</b>   | <b>3,539,758</b> | 2,543,095   |
| <b>Depreciation (Schedule 2)</b>                 | <b>1,982,189</b> | 1,992,464   |
| <b>Interest (Schedule 3)</b>                     | <b>592,650</b>   | 584,413     |
| <b>Transmission maintenance (Schedule 4)</b>     | <b>1,083,834</b> | 740,735     |
| <b>Transmission operations (Schedule 5)</b>      | <b>777,547</b>   | 2,275,477   |
| <b>Total expenses</b>                            | <b>7,975,978</b> | 8,136,184   |
| <b>Income from regulated operations</b>          | <b>1,064,273</b> | 939,391     |
| <b>Non-regulated expenses (Schedule 6)</b>       | <b>556,465</b>   | 920,886     |
| <b>Net income and other comprehensive income</b> | <b>507,808</b>   | 18,505      |

*The accompanying notes are an integral part of these financial statements*

**Five Nations Energy Inc.**  
**Statement of Changes in Equity**  
*For the year ended December 31, 2024*

|                                               | <i>General<br/>Fund</i> | <i>Capital<br/>Fund</i> | <i>Insurance<br/>Reserve<br/>Fund<br/>(Note 9)</i> | <i>Total equity</i> |
|-----------------------------------------------|-------------------------|-------------------------|----------------------------------------------------|---------------------|
| <b>Balance January 1, 2023</b>                | <b>5,218,496</b>        | <b>25,670,353</b>       | <b>4,000,000</b>                                   | <b>34,888,849</b>   |
| Net income for the year                       | 18,505                  | -                       | -                                                  | 18,505              |
| Property, plant and equipment additions - net | (855,239)               | 855,239                 | -                                                  | -                   |
| Depreciation (Note 5)                         | 1,929,602               | (1,929,602)             | -                                                  | -                   |
| Repayment of long-term debt                   | (1,033,046)             | 1,033,046               | -                                                  | -                   |
| <b>Balance January 1, 2024</b>                | <b>5,278,318</b>        | <b>25,629,036</b>       | <b>4,000,000</b>                                   | <b>34,907,354</b>   |
| Net income for the year                       | 507,808                 | -                       | -                                                  | 507,808             |
| Property, plant and equipment additions - net | (1,279,344)             | 1,279,344               | -                                                  | -                   |
| Depreciation - net of disposals (Note 5)      | 1,872,847               | (1,872,847)             | -                                                  | -                   |
| Repayment of long-term debt                   | (1,086,287)             | 1,086,287               | -                                                  | -                   |
| <b>Balance December 31, 2024</b>              | <b>5,293,342</b>        | <b>26,121,820</b>       | <b>4,000,000</b>                                   | <b>35,415,162</b>   |

*The accompanying notes are an integral part of these financial statements*

**Five Nations Energy Inc.**  
**Statement of Cash Flows**  
*For the year ended December 31, 2024*

|                                                             | <b>2024</b>        | <b>2023</b> |
|-------------------------------------------------------------|--------------------|-------------|
| <b>Cash provided by (used for) the following activities</b> |                    |             |
| <b>Operating activities</b>                                 |                    |             |
| Cash received from customers                                | <b>8,599,421</b>   | 8,793,358   |
| Cash paid to suppliers and employees                        | <b>(5,973,580)</b> | (5,434,641) |
| Interest paid                                               | <b>(592,650)</b>   | (584,413)   |
| Interest receipts                                           | <b>486,795</b>     | 464,462     |
|                                                             | <b>2,519,986</b>   | 3,238,766   |
| <b>Financing activities</b>                                 |                    |             |
| Repayments of long-term debt                                | <b>(1,086,287)</b> | (1,033,046) |
| Repayments of finance leases                                | <b>(289,007)</b>   | (175,259)   |
| Repayments of notes payable                                 | <b>(51,480)</b>    | -           |
|                                                             | <b>(1,426,774)</b> | (1,208,305) |
| <b>Investing activities</b>                                 |                    |             |
| Proceeds on disposal of long-term investment                | <b>-</b>           | 500,000     |
| Purchases and construction of property, plant and equipment | <b>(1,279,344)</b> | (855,239)   |
|                                                             | <b>(1,279,344)</b> | (355,239)   |
| <b>Increase (decrease) in cash resources</b>                | <b>(186,132)</b>   | 1,675,222   |
| <b>Cash resources, beginning of year</b>                    | <b>6,005,443</b>   | 4,330,221   |
| <b>Cash resources, end of year</b>                          | <b>5,819,311</b>   | 6,005,443   |

*The accompanying notes are an integral part of these financial statements*

**1. Reporting entity**

Five Nations Energy Inc. (the "Company") is a not-for-profit corporation incorporated in Canada without share capital on September 30, 1997. The Company is domiciled in Canada. The Company owns and operates electricity transmission lines along the western James Bay coast to the three First Nation communities of Attawapiskat, Kashechewan and Fort Albany, Ontario.

The address of the Company's registered office is located in Moose Factory, Ontario. Its administration and operations office is located at 725 Highway 655, Timmins, Ontario. The Board of Directors is controlled by representatives of the participating First Nation communities.

The members are Attawapiskat Power Corporation, Fort Albany Power Corporation, Kashechewan Power Corporation with the ultimate parents being the respective First Nations of the Power Corporations. Additional members are Moose Cree First Nation and Taykwa Tagamou Nation.

The Company is exempt from tax pursuant to section 149 of the Income Tax Act.

**2. Statement of compliance**

The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") and interpretations adopted by the International Accounting Standards Board ("IASB").

**3. Basis of preparation**

***Basis of measurement***

The financial statements have been prepared on the historical basis except for the revaluation of certain non-current assets and financial instruments. The principal accounting policies are set out in Note 4.

These financial statements were authorized for issuance by the Board of Directors on April 16, 2025.

***Functional and presentation currency***

These financial statements are presented in Canadian dollars, which is the Company's functional currency. All financial information presented in Canadian dollars has been rounded to the nearest dollar.

***Significant accounting judgments, estimates and assumptions***

The preparation of the Company's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the reporting date. These estimates and assumptions have been made using careful judgment; however, uncertainties could result in outcomes that would require a material adjustment to the carrying amount of the asset or liability affected in the future.

The estimates and underlying assumptions are prepared based on management's best knowledge of current events and actions that the Company may undertake in the future. These estimates and underlying assumptions are reviewed on an ongoing basis and revisions to accounting estimates are recognized prospectively in comprehensive income in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date are discussed below.

**3. Basis of preparation** *(Continued from previous page)*

***Impairment of non-financial assets***

The Company assesses non-financial assets for impairment at the end of each reporting period. If impairment indicators exist, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

The recoverable amount is the higher of fair value less costs to sell and value in use. Value in use is the present value of estimated future cash flows discounted using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units. Otherwise corporate assets are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss unless the relevant asset is carried at a revalued amount in which case the impairment loss is treated as a revaluation decrease.

The carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss unless that asset is carried at a revalued amount in which case an impairment reversal is treated as a revaluation increase.

***Useful life of property, plant and equipment***

Management is required to use judgment when determining the useful life and the residual value of the items included in property, plant and equipment. Differences in the estimated lives and residual values from those determined by management could result in material differences in the carrying amount of the assets and the depreciation recorded as an expense.

***Allowance for expected credit losses***

It is management's opinion that accounts receivable are fully collectable and as such, no allowance for expected credit losses is required.

***Leases***

At inception of a contract, the Company assesses whether a contract is, or contains, a lease, depending on if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company recognizes a right-of-use asset, initially measured at cost and subsequently depreciated using the straight-line method over the shorter of the asset's useful life (determined on the same basis as capital assets) or the end of the lease term. A corresponding lease liability is recognized, initially measured at the present value of the future lease payments (which include payments under extension options that the Company is reasonably certain to exercise), discounted using the interest rate implicit in the lease or, if not readily determinable, the Company's incremental borrowing rate. Generally, the Company uses its incremental borrowing rate as the discount rate. The lease liability is subsequently measured at amortized cost using the effective interest method.

The lease liability is remeasured when there is a change in future lease payments resulting from a change in index or rate or if the Company changes its assessment of whether it will exercise an option to extend, purchase or terminate. Should the corresponding right-of-use asset have been reduced to zero when the lease liability is remeasured, the adjustment would be recorded through profit or loss. The Company has exercised judgment to determine both the applicable discount rate as well as the lease term for lease contracts that contain renewal options.

**4. Material accounting policy information**

The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied to all the years presented, unless otherwise stated.

***Cash resources***

Cash resources comprise of a short-term GIC and balances with banks. Cash subject to restrictions that prevent its use for current purposes is included in restricted cash.

***Employee benefits***

The Company's post employment benefit programs consist of a defined contribution plan.

Contributions to defined contribution plans are recognized as an expense when employees have rendered service to the Company during the year, entitling them to the contributions.

***Harmonized sales tax***

Revenue, expenses and assets are recognized net of the amount of harmonized sales tax (HST). The net amount of HST payable to the taxation authority is included as part of accounts payable. Cash flows are included in the cash flow statement on a net basis. The HST component of cash flows arising from investing and financing activities which is recoverable from, or payable to, the taxation authority is classified as operating cash flows.

***Property, plant and equipment***

All property, plant and equipment is stated at cost less accumulated depreciation and impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, and the cost of dismantling and removing the items and restoring the site on which they are located.

The cost of major inspections, overhauls and replacement parts of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The cost of day-to-day maintenance of property, plant and equipment is recognized immediately in profit or loss as incurred.

All assets having limited useful lives are depreciated using the straight-line method over their estimated useful lives. Land has an unlimited useful life and is therefore not depreciated. Assets are depreciated from the date of acquisition. Internally constructed assets are depreciated from the time an asset is available for use.

The useful life applicable for each class of asset during the current and comparative period are as follows:

|                                      |                |
|--------------------------------------|----------------|
| Station equipment                    | 10 to 50 years |
| Poles and fixtures                   | 15 to 40 years |
| Overhead conductors and devices      | 15 to 60 years |
| Buildings                            | 15 to 40 years |
| Automotive and other equipment       | 2 to 10 years  |
| Contributions in aid of construction | 10 to 60 years |
| Non-regulated building and equipment | 5 to 40 years  |
| Right of use assets                  | 40 years       |

The residual value, useful life and depreciation method applied to each class of assets are reassessed at each reporting date.

**4. Material accounting policy information** *(Continued from previous page)*

***Fund accounting***

The Company uses fund accounting procedures resulting in a self-balancing set of accounts for each fund established by legal, contractual or voluntary actions. Funds are maintained as follows:

General Fund - reports on the general transmission activities of the Company.

Capital Fund - reports on the property, plant and equipment of the Company, together with related financing.

Insurance Reserve Fund - reports on the cash funded appropriated retained earnings set aside for damages to poles, fixtures, overhead conductors and devices.

***Revenue recognition***

The following describes the Company's principal activities from which it generates revenue.

**Transmission Revenue**

Transmission revenues consist of transmission tariffs, which are collected through Ontario Energy Board (OEB) approved Uniform Transmission Rates (UTR) and the monthly peak demand for electricity across FNEI's high-voltage network as a percentage of total demand across all networks in Ontario. OEB approved UTR is based on an approved revenue requirement that includes a rate of return. The transmission tariffs are designed to recover revenues necessary to support the Company's transmission system with sufficient capacity to accommodate the maximum expected demand which is influenced by weather and economic conditions. Transmission revenues are recognized over time as electricity is transmitted and delivered to customers. Revenue is recognized using an output method at the amount of consideration to which the Company has a right to invoice, as the amount invoiced corresponds directly with the value to the customer for each incremental unit of electricity transferred to the customer. Amounts are invoiced to the IESO on a monthly basis, with payment terms due on receipt.

**Miscellaneous Revenue**

The Company generates revenue from administrative fees which are incurred as part of the Connection and Cost Recovery Agreement with De Beers Canada (DBC). Performance obligations are satisfied as long as the Company is in compliance with its obligations as a transmitter under the OEB administered Transmission System Code as well as provides operation and maintenance services to the twinned transmission line from Moosonee to Kashechewan and the modification to the substation in Kashechewan and Attawapiskat.

Revenue is recognized when an invoice for all expenditures incurred for the aforementioned services is prepared. Consideration is typically due from the receipt of the invoice. The transaction price is predetermined as a set rate under the CCRA which intends to cover internal administrative costs incurred for the performance of allowable services.

**Interest Revenue**

The Company generates revenue from interest earned under a banking agreement with Bank of Montreal. Under the agreement, the bank is obligated to pay the Company interest on their bank balance and outstanding guaranteed investment certificates (GICs).

Revenue is recognized over the term of the GIC as interest is earned. Consideration is typically due at the end of the term. Revenue is recognized at the settlement date for interest revenue earned on their bank balance. Consideration is typically due at the end of the month. The transaction price is the determined based on the ending bank balance and the Bank of Canada prime rate.

The Company expects interest revenues from BMO to be recoverable as BMO is a well established bank and the probability of BMO becoming insolvent and not being able to meet its interest payment obligations is remote.

**4. Material accounting policy information** *(Continued from previous page)*

**Financial instruments**

**Financial assets**

**Recognition and initial measurement**

The Company recognizes financial assets when it becomes party to the contractual provisions of the instrument. Financial assets are measured initially at their fair value plus, in the case of financial assets not subsequently measured at fair value through profit or loss, transaction costs that are directly attributable to their acquisition. Transaction costs attributable to the acquisition of financial assets subsequently measured at fair value through profit or loss are expensed in profit or loss when incurred.

**Classification and subsequent measurement**

Subsequent to initial recognition, all financial assets are classified and subsequently measured at amortized cost. Interest revenue is calculated using the effective interest method and gains or losses arising from impairment, foreign exchange and derecognition are recognized in profit or loss. Financial assets measured at amortized cost are comprised of accounts receivable and investments.

**Reclassifications**

The Company reclassifies debt instruments only when its business model for managing those financial assets has changed. Reclassifications are applied prospectively from the reclassification date and any previously recognized gains, losses or interest are not restated.

**Impairment**

The Company recognizes a loss allowance for the expected credit losses associated with its financial assets. Expected credit losses are measured to reflect a probability-weighted amount, the time value of money, and reasonable and supportable information regarding past events, current conditions and forecasts of future economic conditions.

The Company applies the simplified approach for trade receivables. Using the simplified approach, the Company records a loss allowance equal to the expected credit losses resulting from all possible default events over the assets' contractual lifetime.

The Company assesses whether a financial asset is credit-impaired at the reporting date. For financial assets assessed as credit-impaired at the reporting date, the Company continues to recognize a loss allowance equal to lifetime expected credit losses.

Loss allowances for expected credit losses are presented in the statement of financial position as follows:

- For financial assets measured at amortized cost, as a deduction from the gross carrying amount of the financial asset

Financial assets are written off when the Company has no reasonable expectations of recovering all or any portion thereof.

**Derecognition of financial assets**

The Company derecognizes a financial asset when its contractual rights to the cash flows from the financial asset expire.

**Financial liabilities**

**Recognition and initial measurement**

The Company recognizes a financial liability when it becomes party to the contractual provisions of the instrument. At initial recognition, the Company measures financial liabilities at their fair value plus transaction costs that are directly attributable to their issuance, with the exception of financial liabilities subsequently measured at fair value through profit or loss for which transaction costs are immediately recorded in profit or loss.

Where an instrument contains both a liability and equity component, these components are recognized separately based on the substance of the instrument, with the liability component measured initially at fair value and the equity component assigned the residual amount.



**4. Material accounting policy information** *(Continued from previous page)*

**Financial instruments** *(Continued from previous page)*

**Classification and subsequent measurement**

Subsequent to initial recognition, all financial liabilities are measured at amortized cost using the effective interest rate method. Interest, gains and losses relating to a financial liability are recognized in profit or loss.

**Derecognition of financial liabilities**

The Company derecognizes a financial liability only when its contractual obligations are discharged, cancelled or expire.

**Community support**

The Company accrues non-regulated community support expenditures only once all criteria have been met by the recipient.

**Leases**

At the lease commencement date, the Company recognizes a right-of-use asset and a lease liability. The right-of-use asset is initially measured at cost. The cost of the right-of-use asset is comprised of the initial amount of the lease liability, any lease payments made at or before the commencement date less any lease incentives received, initial direct costs incurred by the Company, and an estimate of the costs to be incurred by the Company in dismantling and removing the underlying asset and restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

After the commencement date, the Company measures right-of-use assets related to MNR, Albany 67, and Attawapiskat First Nation (AFN) Land use by applying the cost model, whereby the right-of-use asset is measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liability. The right-of-use asset is depreciated using the straight-line method from the commencement date to the end of the lease term or the end of the useful life of the right-of-use asset. The estimated useful life of the right-of-use assets are determined on the same basis as those of property, plant and equipment. The determination of the depreciation period is dependent on whether the Company expects that the ownership of the underlying asset will transfer to the Company by the end of the lease term or if the cost of the right-of-use asset reflects that the Company will exercise a purchase option.

The lease liability is initially measured at the present value of the lease payments not paid at the lease commencement date, discounted using the interest rate implicit in the lease or the Company's incremental borrowing rate, if the interest rate implicit in the lease cannot be readily determined. The lease payments included in the measurement of the lease liability comprise of fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or rate, amounts expected to be payable by the Company under a residual value guarantee, the exercise price of a purchase option that the Company is reasonably certain to exercise, and payment of penalties for terminating the lease if the lease term reflects the Company exercising an option to terminate the lease. After the commencement date, the Company measures the lease liability at amortized cost using the effective interest method.

The Company remeasures the lease liability when there is a change in the lease term, a change in the Company's assessment of an option to purchase the underlying asset, a change in the Company's estimate of amounts expected to be payable under a residual value guarantee, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments. On remeasurement of the lease liability, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

**4. Material accounting policy information** *(Continued from previous page)*

***Standards issued but not yet effective***

The Company has not yet applied the following new standards, interpretations and amendments to standards that have been issued as at December 31, 2024 but are not yet effective. Unless otherwise stated, the Company does not plan to early adopt any of these new or amended standards and interpretations.

***IFRS 18 Presentation and Disclosure in Financial Statements***

IFRS 18, issued in April 2024, replaces IAS 1 *Presentation of Financial Statements* and establishes the overall requirements for presentation and disclosures in the financial statements, including a new defined structure for the Statement of Profit or Loss and specific disclosure requirements related to management-defined performance measures. IFRS 18 also enhances guidance on how to group information within the financial statements.

IFRS 18 is effective for annual periods beginning on or after January 1, 2027, including for interim financial statements. The Company has not yet determined the impact of these amendments on its financial statements.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2024

**5. Property, Plant and Equipment**

|                                  | Station<br>Equipment | Poles and<br>fixtures | Overhead<br>conductors<br>and devices | Land and<br>buildings | Automotive<br>and other<br>equipment | Non-regulated<br>building and<br>equipment | Contributions<br>in aid of<br>construction | Less:<br>Total |
|----------------------------------|----------------------|-----------------------|---------------------------------------|-----------------------|--------------------------------------|--------------------------------------------|--------------------------------------------|----------------|
| Cost                             |                      |                       |                                       |                       |                                      |                                            |                                            |                |
| Balance at January 1, 2023       | 42,483,991           | 52,532,584            | 20,451,558                            | 5,321,858             | 3,132,830                            | 454,723                                    | (34,405,460)                               | 89,972,084     |
| Additions - net                  | 712,077              | -                     | 9,256                                 | -                     | 133,906                              | -                                          | -                                          | 855,239        |
| Balance at December 31, 2023     | 43,196,068           | 52,532,584            | 20,460,814                            | 5,321,858             | 3,266,736                            | 454,723                                    | (34,405,460)                               | 90,827,323     |
| Additions - net                  | 1,059,959            | 48,062                | -                                     | -                     | 171,323                              | -                                          | -                                          | 1,279,344      |
| Balance at December 31, 2024     | 44,256,027           | 52,580,646            | 20,460,814                            | 5,321,858             | 3,438,059                            | 454,723                                    | (34,405,460)                               | 92,106,667     |
| Depreciation                     |                      |                       |                                       |                       |                                      |                                            |                                            |                |
| Balance at January 1, 2023       | 22,909,407           | 36,538,567            | 12,334,272                            | 1,738,951             | 2,120,494                            | 154,340                                    | (20,825,412)                               | 54,970,619     |
| Depreciation charge for the year | 1,110,182            | 899,773               | 266,109                               | 186,096               | 266,744                              | 21,986                                     | (821,288)                                  | 1,929,602      |
| Balance at December 31, 2023     | 24,019,589           | 37,438,340            | 12,600,381                            | 1,925,047             | 2,387,238                            | 176,326                                    | (21,646,700)                               | 56,900,221     |
| Depreciation charge for the year | 1,113,654            | 900,133               | 266,202                               | 186,098               | 220,843                              | 21,163                                     | (821,287)                                  | 1,886,806      |
| Disposals                        | -                    | -                     | -                                     | -                     | (13,959)                             | -                                          | -                                          | (13,959)       |
| Balance at December 31, 2024     | 25,133,243           | 38,338,473            | 12,866,583                            | 2,111,145             | 2,594,122                            | 197,489                                    | (22,467,987)                               | 58,773,068     |
| Net book value                   |                      |                       |                                       |                       |                                      |                                            |                                            |                |
| At December 31, 2023             | 19,176,479           | 15,094,244            | 7,860,433                             | 3,396,811             | 879,498                              | 278,397                                    | (12,758,760)                               | 33,927,102     |
| At December 31, 2024             | 19,122,784           | 14,242,173            | 7,594,231                             | 3,210,713             | 843,937                              | 257,234                                    | (11,937,473)                               | 33,333,599     |

Contributions in aid of construction consist of Indigenous Services Canada (ISC) funding received for the acquisition and construction of station equipment, poles and fixtures and overhead conductors and devices. Refer to Note 10 for information pertaining to the Company's lease arrangements in which it is a lessee.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2024

**6. Related party transactions**

***Key management compensation of the Company***

Key management personnel remuneration includes the following expenses:

|                   | <b>2024</b>    | 2023    |
|-------------------|----------------|---------|
| Salaries          | <b>624,470</b> | 642,936 |
| Employee benefits | <b>235,780</b> | 126,259 |
|                   | <b>860,250</b> | 769,195 |

***Transactions with entities with significant influence over the company***

The Company is related to the individual First Nations and their respective power corporations by virtue of significant influence. Accounts receivable includes the following amounts due for services in the regular course of business:

|                                | <b>2024</b>   | 2023    |
|--------------------------------|---------------|---------|
| Attawapiskat Power Corporation | <b>17,034</b> | 40,808  |
| Fort Albany Power Corporation  | <b>16,547</b> | 16,478  |
| Kashechewan First Nation       | <b>10,228</b> | 10,228  |
| Kashechewan Power Corporation  | <b>8,899</b>  | 67,847  |
|                                | <b>52,708</b> | 135,361 |

Accounts payable and accrued liabilities include the following amounts due for services in the regular course of business:

|                                | <b>2024</b>    | 2023      |
|--------------------------------|----------------|-----------|
| Attawapiskat First Nation      | <b>39,408</b>  | 1,287,000 |
| Attawapiskat Power Corporation | <b>44,284</b>  | 48,835    |
| Fort Albany First Nation       | <b>20,778</b>  | 2,565     |
| Fort Albany Power Corporation  | <b>60,380</b>  | 15,532    |
| Kashechewan First Nation       | <b>22,805</b>  | 13,658    |
| Kashechewan Power Corporation  | <b>16,860</b>  | 18,202    |
|                                | <b>204,515</b> | 1,385,792 |

The Company purchases goods and services from the member power corporations in the normal course of operations including the following:

|                                                 | <b>2024</b>    | 2023    |
|-------------------------------------------------|----------------|---------|
| Electricity at OEB approved rates               | <b>69,095</b>  | 65,519  |
| Station checks at exchange amount               | <b>39,000</b>  | 43,167  |
| Construction and maintenance at exchange amount | <b>250,970</b> | 186,140 |
|                                                 | <b>359,065</b> | 294,826 |

As at December 31, 2024, the Company had outstanding commitments with Attawapiskat First Nation in the amount of \$692,663 (2023 - Nil), that relates to a note payable for historic usage of land, secured by a signed promissory note, repayable in blended annual payments of \$51,480 commencing June 1, 2024 and escalating at 3.5% per annum, maturing May 2038.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2024*

**7. Bank indebtedness**

The Company has an authorized operating facility of \$500,000 with the Bank of Montreal bearing interest at bank prime rate. The facility has not been utilized as at December 31, 2024 or December 31, 2023.

**8. Long-term debt**

|                                                                                                                                                                                                                                                          | <b>2024</b>      | <b>2023</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|
| The Manufacturers Life Insurance Company loan payable bearing interest at 5.5%, secured by a general security agreement, repayable in blended monthly payments of \$75,246, maturing February 2028.                                                      | <b>2,558,166</b> | 3,300,144   |
| The Manufacturers Life Insurance Company loan payable bearing interest at 4.71% secured by a general security agreement, repayable in blended monthly payments of \$37,365, maturing October 2035.                                                       | <b>3,800,425</b> | 4,062,455   |
| Bank of Montreal loan payable, secured by land and office building with a net book value of \$2,752,274 and a general security agreement, bearing interest at 3.03% per annum, repayable in blended monthly payments of \$9,576, maturing November 2027. | <b>896,889</b>   | 983,201     |
| Less: Finance acquisition costs related to The Manufacturers Life Insurance Company loan maturing October 2035.                                                                                                                                          | <b>(43,703)</b>  | (47,737)    |
|                                                                                                                                                                                                                                                          | <b>7,211,777</b> | 8,298,063   |
| Less: Current portion                                                                                                                                                                                                                                    | <b>1,147,458</b> | 1,090,320   |
|                                                                                                                                                                                                                                                          | <b>6,064,319</b> | 7,207,743   |

Principal repayments on long-term debt in each of the next five years and thereafter, assuming long-term debt subject to refinancing is renewed, are estimated as follows:

|            |                  |
|------------|------------------|
| 2025       | 1,147,458        |
| 2026       | 1,203,039        |
| 2027       | 1,265,803        |
| 2028       | 484,854          |
| 2029       | 428,527          |
| Thereafter | 2,682,096        |
|            | <b>7,211,777</b> |

**9. Insurance Reserve Fund**

Under the terms of The Manufacturers Life Insurance Company loans payable, the Company must maintain an insurance reserve fund of \$4,000,000. Cash set aside for the insurance reserve is reported as restricted deposits.

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
For the year ended December 31, 2024

**10. Leases**

***Right-of-use assets***

The following table illustrates the right-of-use asset balances during the period:

|                                     | <i>Albany 67</i> | <i>MNR</i>     | <i>AFN</i>       | <i>Total</i>     |
|-------------------------------------|------------------|----------------|------------------|------------------|
| <b>Cost</b>                         |                  |                |                  |                  |
| Balance at January 1, 2024          | 2,130,801        | 719,894        | -                | 2,850,695        |
| Additions                           | -                | -              | 1,075,432        | 1,075,432        |
| Depreciation                        | (60,880)         | (23,721)       | (10,754)         | (95,355)         |
| Consumer price index adjustment     | -                | 110,345        | -                | 110,345          |
| <b>Balance at December 31, 2024</b> | <b>2,069,921</b> | <b>806,518</b> | <b>1,064,678</b> | <b>3,941,117</b> |

***Lease liabilities***

The following table sets out a maturity analysis of lease liabilities:

|                                                                  | <i>2024</i>      | <i>2023</i>      |
|------------------------------------------------------------------|------------------|------------------|
| <b>Maturity analysis – contractual undiscounted cash flows</b>   |                  |                  |
| Less than one year                                               | 249,599          | 175,259          |
| One to five years                                                | 998,398          | 701,034          |
| More than five years                                             | 6,596,593        | 5,257,756        |
| <b>Total undiscounted lease liabilities at December 31, 2024</b> | <b>7,844,590</b> | <b>6,134,049</b> |

|                                                                            | <i>2024</i>      | <i>2023</i>      |
|----------------------------------------------------------------------------|------------------|------------------|
| <b>Maturity analysis - contractual discounted cash flows under IFRS 16</b> |                  |                  |
| Current                                                                    | 62,978           | 37,014           |
| Non-current                                                                | 4,109,372        | 3,059,041        |
| <b>Total discounted lease liabilities at December 31, 2024</b>             | <b>4,172,350</b> | <b>3,096,055</b> |

***Amounts recognized in the statement of income and other comprehensive income***

|                                       | <i>2024</i> | <i>2023</i> |
|---------------------------------------|-------------|-------------|
| Interest expense on lease liabilities | 196,751     | 139,881     |

***Amounts recognized in the statement of cash flows***

|                                                           | <i>2024</i>    | <i>2023</i>    |
|-----------------------------------------------------------|----------------|----------------|
| Cash outflow for MNR land use lease                       | 51,042         | 44,259         |
| Cash outflow for Albany 67 land use lease                 | 131,000        | 131,000        |
| Cash outflow for Attawapiskat First Nation land use lease | 106,965        | -              |
| <b>Total cash outflow for land use leases</b>             | <b>289,007</b> | <b>175,259</b> |

**11. Capital management**

The Company's objective when managing capital is to continue as a going concern to protect its ability to meet its on-going liabilities and to minimize expenditures over the long term. Protecting the ability to pay current and future liabilities includes maintaining capital above minimum debt covenant levels and internally determined capital guidelines based on risk management policies.

The Company sets the amount of capital in proportion to risk and manages the capital structure and makes adjustments to it in light of changes to economic conditions and the risk characteristics of the underlying assets, as well as with consideration of externally imposed capital requirements. Capital is comprised of the company's utility equity, lease liabilities, note payable and debt. As at December 31, 2024, the company's utility equity was \$35,415,162 (2023 - \$34,907,354), and its total outstanding debt, note payable and lease obligations were \$12,108,753 (2023 - \$11,394,118).

The Manufacturers Life Insurance Company debt is subject to loan covenants which require the company to maintain a minimum debt service ratio of 1.20:1 and a debt to equity ratio of 1.50:1. For the purposes of the debt to equity ratio, equity is calculated as utility equity plus 30% of contributions in aid as disclosed in Note 5.

The Company was in compliance with these covenants at December 31, 2024 and 2023.

**12. Commitments and contingencies**

The Company has an Operating Services Agreement with Hydro One Networks Inc. which renews annually on December 31 and may be terminated either by mutual agreement or by either party providing one years written notice. Under the agreement, the Company is obligated to make minimum annual payments of \$258,066.

The Company is involved in claims and litigation arising in the normal course of business. Any settlements or awards will be reflected in the period in which they become determinable. It is managements opinion that no amounts will be payable by the Company as a result of these claims and litigation.

The Company agreed to pay \$130,000 per year (\$54,340 to Fort Albany First Nation and \$75,660 to Kashechewan First Nation) in respect to the transmission line's right of way across the Albany 67 reserve lands near the communities of Kashechewan and Fort Albany, Ontario. This commitment has been classified as a lease pursuant to IFRS 16.

The Company has a long term Land Use Permit with the Province of Ontario expiring December 31, 2025. Under the agreement, the Company must pay \$39,172 per year for the transmission line's right of way across Public Lands and \$13,132 per year for the fibre optic communication line. The agreement renews for five year periods. This commitment has been classified as a lease pursuant to IFRS 16.

The Company agreed to pay \$67,557 per year to Attawapiskat First Nation in respect to the access and use of reserve land near the community of Attawapiskat, Ontario. This commitment has been classified as a lease pursuant to IFRS 16. Included in the agreement was an additional annual payment of \$51,480 relating to the past usage of the reserve land, with payments escalating at 3.5% per annum and being made until May 2038.

The Company has recently become aware of a potential liability for the remediation and cleanup related to a fuel leak. The costs associated with the cleanup are not determinable at this time.

**13. Employee benefits**

***Defined contribution plan***

The Company has a defined contribution plan under which both the Company and employees make contributions. The Company's maximum contribution is between 5% and 9% of earnings, based on different criteria. The stipulations of this plan are that the employee must work a minimum of 20 hours a week. Company contributions and corresponding expense totaled \$494,135 in 2024 (2023 - \$259,651).

**14. Financial instruments**

The Company as part of its operations carries a number of financial instruments. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from these financial instruments except as otherwise disclosed.

**Credit Risk** *Financial Instruments*

Credit risk is the risk of financial loss to the Company because a counter party to a financial instrument fails to discharge its contractual obligations. Credit risk primarily arises from trade receivables.

**Risk management process**

The Company manages its credit risk by performing regular credit assessments of its customers and considering the credit ratings of counterparties.

Credit-impaired financial assets are identified through regular reviews of past due balances and credit assessments of its customers. The Company considers past due information of its balances and information about the customer available through regular commercial dealings.

**Measurement of expected credit losses**

The Company measures expected credit losses for trade receivables on an individual customer basis.

When measuring lifetime expected credit losses, the Company considers its past credit experience and estimates the timing, probability and magnitude of any cash shortfalls to determine the present value of expected credit losses at the reporting date. Forward-looking information is incorporated into the determination of expected credit loss by collecting information available from regular commercial dealings with its customers and other publicly available information and considering the effect such information could have on any assumptions or inputs used in the measurement of expected credit losses.

**Write-offs**

Financial assets are written off when the customer has filed for bankruptcy and the trustee has indicated that no additional funds will be paid. Where an asset has been written off but is still subject to enforcement activity, the asset remains on a list of delinquent accounts. Where information becomes available indicating the Company will receive funds such amounts are recognized at their fair value.

**Exposure to credit risk**

The following table sets out information about the credit quality of financial instruments assessed for impairment under IFRS 9 *Financial instruments*. All classes of financial instruments shown are assessed for impairment using the simplified approach as permitted in IFRS 9, whereby the loss allowance is always measured at an amount equal to lifetime expected credit losses. The gross carrying amount represents the maximum exposure to credit risk for that class of financial asset.

|                                    | <b>2024</b>    | 2023    |
|------------------------------------|----------------|---------|
| <b>Accounts receivable</b>         |                |         |
| 1-30 days aged                     | <b>827,333</b> | 878,289 |
| > 90 days aged                     | <b>43,287</b>  | 38,294  |
| <b>Total gross carrying amount</b> | <b>870,620</b> | 916,583 |
| Less: Loss allowance               | -              | -       |
| <b>Total carrying amount</b>       | <b>870,620</b> | 916,583 |

*Concentrations of credit risk*

A credit concentration exists relating to trade receivables. As at December 31, 2024, one customer accounted for 92% (2023 – one customers accounted for 83%) of trade receivables.



**14. Financial instruments** (Continued from previous page)

**Amounts arising from expected credit losses**

There were no significant changes in the gross carrying amount of financial instruments during the year that contributed to changes in the loss allowance.

**Interest rate risk**

Interest rate risk is the risk that the value of a financial instrument might be adversely affected by a change in the interest rates. Changes in market interest rates may have an effect on the cash flows associated with some financial assets and liabilities, known as cash flow risk, and on the fair value of other financial assets or liabilities, known as price risk. In seeking to minimize the risks from interest rate fluctuations, the Company manages exposure through the acquisition of financial instruments with fixed, long-term rates, which modify the maturity characteristics of financial assets and liabilities. The Company is exposed to interest rate risk primarily relating to the following financial assets and liabilities. The table summarizes the carrying amounts of financial instruments exposed to interest rate risk by the earlier of the contractual maturity dates.

**Financial instruments exposed to interest rate risk:**

|                                                                             | <b>2024</b>      | <b>2023</b>  |
|-----------------------------------------------------------------------------|------------------|--------------|
|                                                                             | <b>Total</b>     | <b>Total</b> |
| <b>Financial assets</b>                                                     |                  |              |
| BMO Insurance Reserve, BMO prime* less 1.85%                                | <b>4,000,000</b> | 4,000,000    |
| Cash Treasury Account, BMO prime* less 1.85%                                | <b>5,819,311</b> | 6,005,443    |
|                                                                             | <b>9,819,311</b> | 10,005,443   |
| * BMO prime 5.45% (2023 - 7.2%)                                             |                  |              |
| <b>Financial liabilities</b>                                                |                  |              |
| Bank of Montreal loan payable, 3.03% (2023 - 3.03%)                         | <b>896,889</b>   | 983,201      |
| The Manufacturers Life Insurance Company loan payable, 5.5% (2023 - 5.5%)   | <b>2,558,166</b> | 3,300,144    |
| The Manufacturers Life Insurance Company loan payable, 4.71% (2023 - 4.71%) | <b>3,800,425</b> | 4,062,455    |
| Attawapiskat First Nation note payable, 3.5%                                | <b>720,854</b>   | -            |
|                                                                             | <b>7,976,334</b> | 8,345,800    |

**Liquidity risk**

Liquidity risk is the risk that the Company is unable to generate or obtain sufficient cash or its equivalents in a cost-effective manner to fund its obligations as they come due. The following table summarizes the maturity profile of the Company's financial liabilities as at December 31, 2024 and 2023.

Due in less than a year:

|                                        | <b>2024</b>      | <b>2023</b> |
|----------------------------------------|------------------|-------------|
| Accounts payable                       | <b>689,985</b>   | 1,901,489   |
| Note payable inclusive of interest     | <b>53,282</b>    | -           |
| Long-term debt inclusive of interest   | <b>1,466,247</b> | 1,466,247   |
| Lease obligation inclusive of interest | <b>249,599</b>   | 175,259     |
| <b>Total</b>                           | <b>2,459,113</b> | 3,542,995   |

**Five Nations Energy Inc.**  
**Notes to the Financial Statements**  
*For the year ended December 31, 2024*

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**15. Revenue from contracts with customers**

The Company has recognized the following revenue amounts in the statement of income and other comprehensive income.

|                                              | <b>2024</b>      | 2023      |
|----------------------------------------------|------------------|-----------|
| <b>Revenue from contracts with customers</b> |                  |           |
| Transmission services                        | <b>8,550,547</b> | 8,590,109 |
| Miscellaneous services                       | <b>2,909</b>     | 21,004    |
| <b>Revenue from other sources</b>            |                  |           |
| Interest income                              | <b>486,795</b>   | 464,462   |
| <b>Total revenue</b>                         | <b>9,040,251</b> | 9,075,575 |

The Company has included all consideration from contracts with customers in the amounts presented above.

**16. Events after the reporting period**

Subsequent to year end, the United States government announced new tariffs on imported goods. The Canadian government then announced retaliatory tariffs and other measures. This has caused significant economic uncertainty and the effects on the Company are currently uncertain.

**Five Nations Energy Inc.**  
**Schedule 1 - Schedule of Expenses - Administrative and General**  
*For the year ended December 31, 2024*

|                                     | 2024             | 2023             |
|-------------------------------------|------------------|------------------|
| <b>Administrative and general</b>   |                  |                  |
| Administrative salaries and expense | 1,377,669        | 1,116,732        |
| Community relations                 | 64,468           | 10,946           |
| Insurance                           | 735,953          | 655,155          |
| Maintenance of general plant        | 129,544          | 120,227          |
| Office and other                    | 106,634          | 103,819          |
| Outside services                    | 346,363          | 128,934          |
| Regulatory expenses                 | 488,994          | 180,682          |
| Travel                              | 290,133          | 226,600          |
|                                     | <b>3,539,758</b> | <b>2,543,095</b> |

**Schedule 2 - Schedule of Expenses - Depreciation**  
*For the year ended December 31, 2024*

|                               | 2024             | 2023             |
|-------------------------------|------------------|------------------|
| <b>Depreciation</b>           |                  |                  |
| Property, plant and equipment | 1,886,833        | 1,911,016        |
| Right-of-use assets (Note 10) | 95,356           | 81,448           |
|                               | <b>1,982,189</b> | <b>1,992,464</b> |

**Schedule 3 - Schedule of Expenses - Interest**  
*For the year ended December 31, 2024*

|                           | 2024           | 2023           |
|---------------------------|----------------|----------------|
| <b>Interest</b>           |                |                |
| Lease Liability (Note 10) | 196,751        | 139,881        |
| Long-term debt            | 375,927        | 429,167        |
| Other                     | 19,972         | 15,365         |
|                           | <b>592,650</b> | <b>584,413</b> |

**Schedule 4 - Schedule of Expenses - Transmission Maintenance**  
*For the year ended December 31, 2024*

|                                 | 2024             | 2023           |
|---------------------------------|------------------|----------------|
| <b>Transmission maintenance</b> |                  |                |
| Towers, poles and structures    | 296,687          | 323,925        |
| Transformer station equipment   | 787,147          | 416,810        |
|                                 | <b>1,083,834</b> | <b>740,735</b> |

**Five Nations Energy Inc.**  
**Schedule 5 - Schedule of Expenses - Transmission Operations**  
*For the year ended December 31, 2024*

|                                | <b>2024</b>    | <b>2023</b> |
|--------------------------------|----------------|-------------|
| <b>Transmission operations</b> |                |             |
| Load dispatching               | <b>360,931</b> | 367,434     |
| Rent                           | <b>-</b>       | 1,287,000   |
| Station buildings and fixtures | <b>85,433</b>  | 82,875      |
| Station operations wages       | <b>331,183</b> | 538,168     |
|                                | <b>777,547</b> | 2,275,477   |

**Five Nations Energy Inc.**  
**Schedule 6 - Schedule of Expenses - Non-regulated**  
*For the year ended December 31, 2024*

|                              | <b>2024</b>     | <b>2023</b> |
|------------------------------|-----------------|-------------|
| <b>Non-regulated</b>         |                 |             |
| Community support            | <b>571,774</b>  | 523,650     |
| Professional fees (recovery) | <b>(36,472)</b> | 375,250     |
| Depreciation                 | <b>21,163</b>   | 21,986      |
|                              | <b>556,465</b>  | 920,886     |

## **EXHIBIT 2 – Transmission System Plan**

### **2026 Cost of Service**

**Five Nations Energy Inc.  
EB-2025-0129**

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**TRANSMISSION SYSTEM PLAN**

**1 PLAN OVERVIEW**

This 2026 - 2030 Transmission System Plan ("TSP") was developed to support FNEI's application for a Revenue Cap index plan. The TSP describes the asset monitoring and investment planning processes that contributed to the development of each project proposed in the five-year capital expenditure plan.

The TSP satisfies the requirements established in Section 2.4 of the Ontario Energy Board document: *Filing Requirements for Electricity Transmission Applications, Chapter 2, Revenue Requirement Applications* dated February 11, 2016.

The information included in the TSP has been organized in four main sections:

- Plan Overview
- Asset Management
- Investment Planning
- Capital Expenditures

The TSP also specifically responds to findings in the decision of the Ontario Energy Board on FNEI's last cost of service application (EB-2016-0231). Section 1.3 of the TSP describes the establishment of benchmarking activities and considers benchmarking data provided and proposed by other transmission system owners, while Section 4.1 of the TSP sets out a five-year capital plan.

## 1.1 The Transmission System

The FNEI transmission system is located along the western shore of James Bay, in coastal wetlands. The area it serves is the most remote region connected to Ontario's electrical grid. Except for a few weeks in winter, the transmission lines cannot be accessed by ground transportation. It is only during the coldest weeks of the winter that the ground is hard enough to enable vehicles to reach the transmission lines.

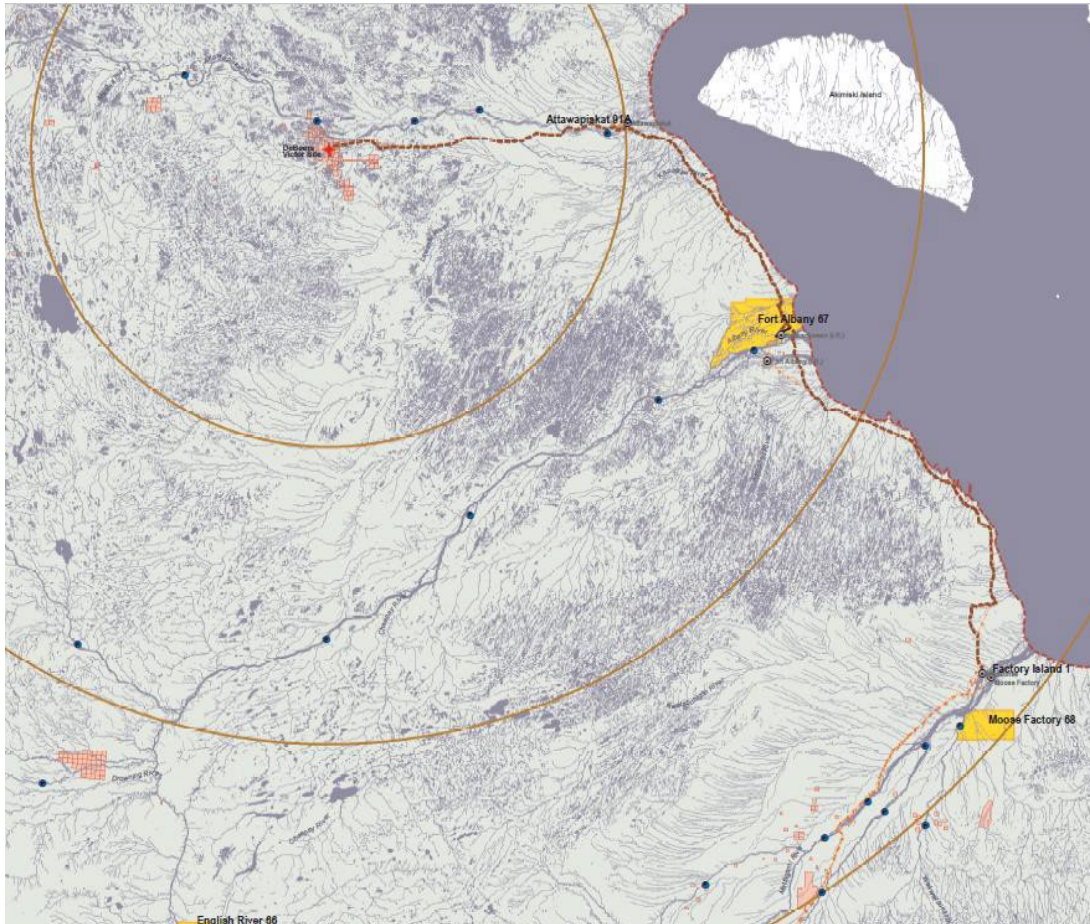
The FNEI transmission system has a capacity of 80 MW. It is supplied by a connection to the Hydro One Networks Inc. ("HONI") 115kV transmission system at Moosonee Sub Station ("SS"). From Moosonee SS two transmission lines, installed on separate poles, traverse approximately 170 kilometers to reach Kashechewan Transformer Station ("TS"). Prior to reaching Kashechewan TS, one of the transmission lines is tapped to supply Fort Albany TS. A single transmission line carries on from Kashechewan TS to Attawapiskat TS. Each TS supplies its respective local distribution company (collectively the "Power Corporations") serving the community. A change with FNEI's transmission system since its last cost of service application, is the decommissioning of the private transmission line to the DeBeers Victor Mine.

A map of the FNEI transmission system is included in in Figure 1 below:



1

**Figure 1 FNEI Transmission System Map**



2

3

## 4 **1.2 Customer Engagement**

5 The three Power Corporations are also members of FNEI. As a result, representatives of the  
 6 Power Corporations routinely serve as directors on the FNEI Board. This places FNEI in the  
 7 unique position of having most of its customers represented on its board of directors, enabling  
 8 the needs and preferences of FNEI customers to be directly presented to the FNEI Board.

9 Due to the remote nature of the FNEI transmission system, the three Power Corporations  
 10 provide operational services for FNEI. This relationship requires frequent communication,  
 11 between the technical staff of the Power Corporations and the technical staff of FNEI. During

these communications the Power Corporations often present their technical needs and preferences to FNEI.

As part of this Application, FNEI committed to perform a targeted Customer Engagement exercise with its three Power Corporation customers. FNEI sent out customer engagement surveys to its three member Power Corporations that are filed in Appendix 1 – Customer Engagement Surveys of this Exhibit.

The findings from the three Power Corporations customer surveys are summarized as follows:

- Overall, the three Power Corporations indicated that FNEI provides good support to each of its communities, and reliable electricity service.
- Two of the three Power Corporations identified an increase in frequency of meetings and communication going forward.
- Identified local workforce development as a priority for the future.
- Introduction of new technology such as grid modernization investments to improve monitoring and system performance.

### **1.3 Performance Measurement**

FNEI recognizes the insights benchmarking provides can be used to enhance the efficiency of its business. To gain further insight into the performance measurement adopted by electricity transmitters in Ontario, FNEI reviewed the scorecards from similar transmitters<sup>1</sup>. The output of FNEI's assessment is summarized in Exhibit 2 of this Application.

## **2 ASSET MANAGEMENT PLAN**

In the last rate application submitted by FNEI (EB-2016-0231) the Asset Management Plan ("AMP") for FNEI was to manage and maintain its existing infrastructure, while implementing additional capital projects focused on improving reliability. This plan was followed during the

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<sup>1</sup> B2M EB-2024-0116, Niagara Reinforcement Limited, EB-2024-0117, UCT2, EB-2020-0150, Hydro One Sault Ste Marie, EB-2018-0218

years leading up to this application, as evidenced by the projects completed in this period set out in Section 4 (Capital Expenditures).

Moving forward, FNEI's AMP is to continue its management of the installed infrastructure while investing in assets that enhance safety, reliability and efficiency.

## **2.1 Policy, Strategy & Investment Prioritization**

FNEI's AMP policy and strategy sets out that its primary objective is to perform proactive maintenance of infrastructure to enable asset investments that ensure the reliability of its transmission system. This primary objective stems from FNEI's transmission system being installed in remote locations that endure harsh conditions. Where the system is situated presents significant access challenges in the event of a failure. FNEI's approach to asset management is to mitigate failures to maintain its reliability and minimize unplanned, costly investments.

FNEI prioritizes its investments through an evaluation of empirical data, third party expert guidance and management's evaluation of its situational circumstances. FNEI develops five year investment plans which are first formed through a third party procured Asset Condition Assessment ("ACA"). From the baseline set of investments identified through the ACA, FNEI's management prioritizes additional investments based requirements identified from its customer engagement with its Power Corporations, and general plant requirements. FNEI's five-year investment plan is reviewed by its Board of Directors and annual budgets are approved prior to the fiscal year. The following sections describes FNEI's investment planning methodology for each of its three main asset categories, which are:

(i) transmission lines,

(ii) transformer stations, and

(iii) telecommunications.

## **Transmission Lines**

FNEI manages transmission line assets through a visual inspection process carried out semi-annually, with the first inspection in the spring and the second in the fall. The inspections are conducted through a mix of ground and aerial surveys carried out by FNEI employees working in conjunction with consultants that have experience in assessing the conditions of poles, conductors, and insulators. The inspections permit FNEI to identify and assess general conditions, structural problems, safety hazards, and environmental issues.

Non-emergency repairs and preventative line maintenance are completed on a rotating annual basis over a two-year cycle, with the northern and southern halves of the system being subject to such maintenance in alternating years. The non-emergency nature of such maintenance permits completion during the winter months when the ground is frozen and traversable, thereby reducing access costs. Such work is largely completed by trained workers from Attawapiskat, Kashechewan, and Fort Albany.

Identified problems that require prompt attention are resolved on an expedited basis, which can be completed at any time during the year using pre-established emergency procedures for access and the conduct of the work, including helicopter services and special muskeg pole support systems. In the event of a large-scale line failure FNEI has the ability to leverage contractor resources and Power Corporations resources to provide support.

FNEI is not solely dependent on the semi-annual inspections to identify issues with the transmission lines, as FNEI also utilizes a SCADA system to collect and monitor real-time data regarding power flow, faults, and power quality.

## **Transformer Stations**

Transformer stations are reviewed on an ongoing basis through visual inspections, functional tests, infra-red inspections, oil sampling, and dissolved gas inspections. A maintenance schedule for high and medium voltage equipment has been included as Appendix 2 – Equipment

Maintenance Schedule. FNEI also utilizes a SCADA system to collect and monitor real-time data regarding power flow, faults, and power quality. The majority of transformer station data is collected by FNEI staff, while the testing, analysis, data interpretation, and trouble-shooting is often performed by third party experts and equipment manufacturers.

Non-emergency repairs and preventative maintenance are addressed on an ongoing basis through either periodic maintenance or discrete capital projects. Identified problems that require prompt attention are resolved quickly and, if necessary, through emergency procedures.

### **Telecommunications**

The health of the FNEI telecommunications system is important for monitoring the components of its transmission system and to communicate during outages and emergency repairs. The condition of the communication system is monitored using real-time data and regularly scheduled inspections. A maintenance schedule for the telecommunications equipment has been included as Appendix 2 – Equipment Maintenance Schedule. Preventative maintenance is carried out on a periodic basis and includes cleaning and testing of the equipment.

## **2.2 Asset Inventory**

FNEI maintains detailed records regarding all transmission system assets, including, as applicable:

- a unique asset identification number;
- asset description;
- asset classification;
- quantity of units (of length in the case of lines);
- manufacturer;
- model number;
- serial number;
- pole class, type, and height;
- asset location;

- date on which asset was acquired or constructed;
- replacement cost;
- acquisition cost;
- useful life;
- remaining useful life;
- accumulated depreciation; and
- net book value;

The inventory of FNEI assets, presented by asset class, has been included as part of Appendix 3 – Kinectrics Asset Condition Assessment.

### 2.3 Asset Condition Assessment

Kinectrics Inc. (“Kinectrics”) issued its final ACA report to FNEI on April 30, 2024, based on asset condition data at the end of 2023. FNEI recognizes that the need to perform an ACA is a crucial part of its asset management strategy and provides a systematic process for determining and justifying its near and long-term investment needs. At the core of the ACA is health indexing and risk assessment. The Health Index (“HI”) expresses the condition of an asset as a single number, and risk assessment accounts for the consequence of asset failure.

Kinectrics used FNEI’s 2023 asset information and Kinectrics’ up-to-date methodologies to develop HI distributions and estimate action plans based on the asset condition. The ACA was designed to quantify the extent of aging and to estimate the number of assets that likely need to be addressed in the near future. The categories of assets included in this study are as follows:

- Power Transformers
- Reactors
- Circuit Breakers
- Circuit Switchers
- Disconnect Switches
- Ground Switches
- Metal-clad Switchgear
- Voltage Regulators
- Pole Lines

- Capacitive Voltage Transformers (CVTs)
- Line Traps
- Line Tuners
- Power Line Carrier Communication (PLCC)
- Relays
- Battery Banks (including charger)
- SCADA

For each asset category, the following empirical quantified or qualitative assessment were included:

- HI formula
- Age distribution
- HI distribution
- Condition-based flagged for action (FFA) Plan
- Prioritized list of assets requiring attention
- Assessment of data availability and a data gap analysis

This report presents the results of Kinectrics' assessment is found in Appendix 3 – Kinectrics Asset Condition Assessment.

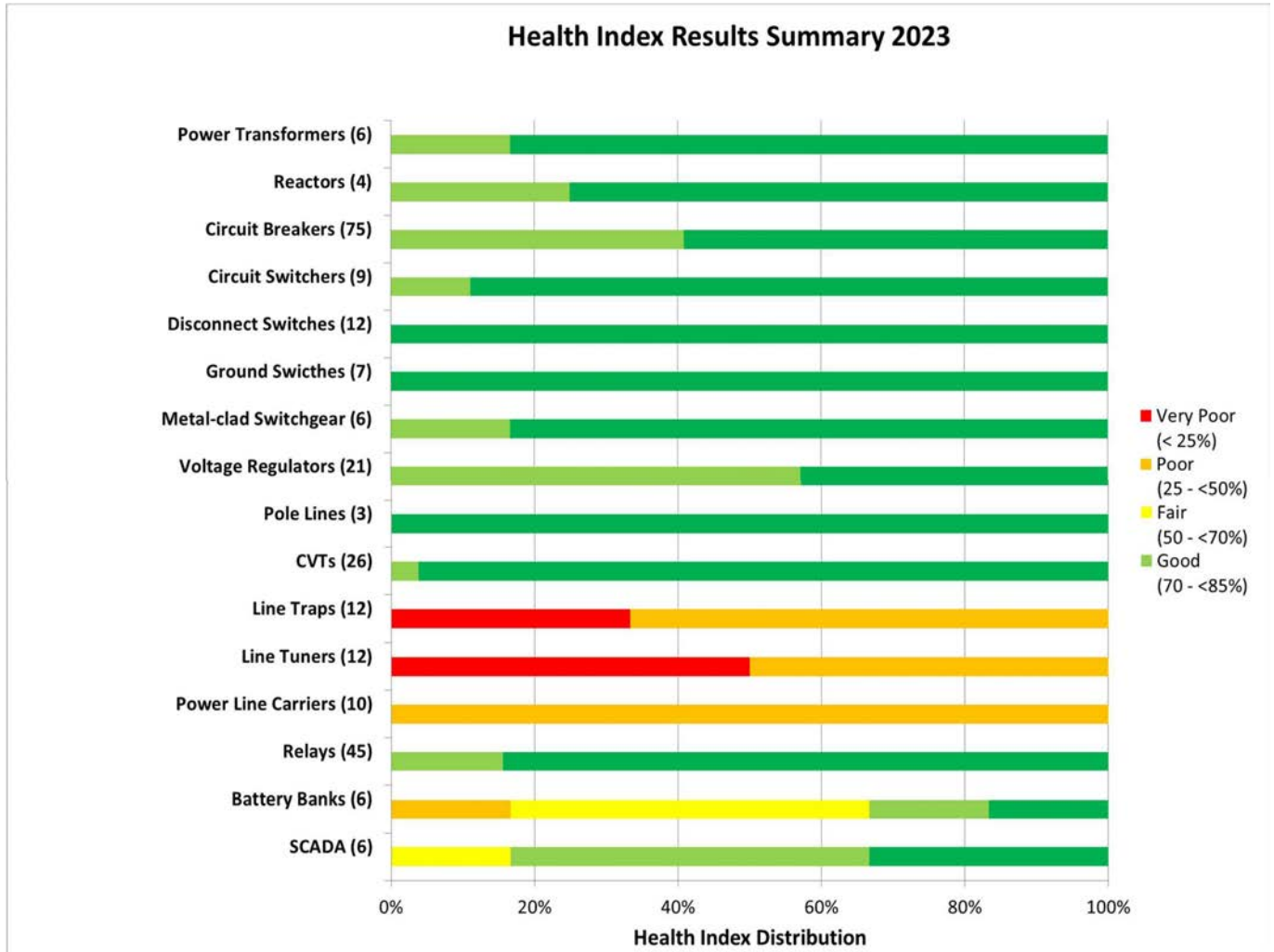
### **Health Index Summary**

Overall Kinectrics assessment found that across the majority of asset categories, FNEI had no units in poor or very poor condition. The assessment did find that Line Traps, Line Tuners and Power Line Carriers had all the asset units classified in poor or very poor category. This was not due to defects found during inspections, but rather a result of age limiting as per industry statistics. Additionally, there was one battery bank that was classified as poor, due to a noticeable increase in measured intercell resistance and cell impedance in the past year.

Figure 1 below provides the Health Index Summary from Kinectrics ACA:

1

Figure 2 FNEI Health Index Summary



2

3 The Kinectrics ACA also provided FNEI management with its Condition-Based Flagged for Action  
 4 (“FFA”) asset categories where action plans should be implemented. As noted by Kinectrics, the  
 5 FFA plan estimates the number of units expected to require attention in a given year per their  
 6 ACA methodology.

7 The FFA recommendations by Kinectrics flagged a larger number of assets for action in the first  
 8 year than in subsequent year. The ACA noted that this represents a backlog of assets that  
 9 require attention and the reason being that a large quantity of assets is at or near the end of



their expected service lives. Given these assets have a higher likelihood of failure, attention should be paid to them in the first year. The assessment methodology assumes that all units flagged for action are addressed, the quantities flagged for action in year 2 or later may be significantly less than that of the first year.

The FFA identified Line Traps and Line Tuners being the most flagged for action and FNEI was recommended to review the actual life expectancy of these asset groups based on FNEI practice. Additionally, Relays have one unit flagged for action annually in the next 10 years and one battery bank classified as very poor was flagged for action. Table 1 below provides a summary list of the FFA action plan:

**Table 1 Kinectrics Condition-Based Flagged for Action Plan Listing**

|                       | Flagged for Action Plan by Year |   |   |   |   |   |   |   |   |   |    | Now (Year 0)    |                          | Years 0-5 Inclusive   |                |
|-----------------------|---------------------------------|---|---|---|---|---|---|---|---|---|----|-----------------|--------------------------|-----------------------|----------------|
|                       | 0                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Number of Units | Percentage of Population | Total Number of Units | Yearly Average |
| Power Transformers    | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Reactors              | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Circuit Breakers      | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Circuit Switchers     | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Disconnect Switches   | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Ground Switches       | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Metal-clad Switchgear | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Voltage Regulators    | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Pole Lines            | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| CVTs                  | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Line Traps            | 3                               | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 3               | 25.0%                    | 10                    | <2             |
| Line Tuners           | 3                               | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 3               | 25.0%                    | 10                    | <2             |
| Power Line Carriers   | 2                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0  | 2               | 20.0%                    | 7                     | <2             |

|               | Flagged for Action Plan by Year |   |   |   |   |   |   |   |   |   |    | Now (Year 0)    |                          | Years 0-5 Inclusive   |                |
|---------------|---------------------------------|---|---|---|---|---|---|---|---|---|----|-----------------|--------------------------|-----------------------|----------------|
|               | 0                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Number of Units | Percentage of Population | Total Number of Units | Yearly Average |
| Relays        | 1                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1               | 2.2%                     | 6                     | 1              |
| Battery Banks | 1                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1               | 16.7%                    | 1                     | <1             |
| SCADA         | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 0               | 0.0%                     | 0                     | 0              |

### Kinectrics ACA Recommendations

The Kinectrics ACA identified the following recommendations:

- One battery bank was placed in the poor or very poor category and flagged for action within the next 10 years.
- All the asset units in Line Traps, Line Tuners and Power Line Carriers were in poor or very poor condition. This was not due to their inspection defect findings, but due to age limiting as a consequence of their approaching design life expectancy as per industry statistics.
- Observations pertaining to the data used in this study were made. Where they exist, data gaps were also identified for each asset category.
  - o Relative to the other asset categories, Power Transformers, Reactors Circuit Breakers, Circuit Switchers and Disconnect Switches had the most complete data set, in terms of quality and quantity (i.e. data gap or concern and DAI).
  - o Battery Banks had no major data gap but needs to improve its DAI.
  - o Metal-Clad Switchgear and Pole Lines had good DAI but need to fill the outstanding data gaps.

1           o Voltage Regulators had relatively low DAI and multiple test data gaps. This needs  
2           to be followed up.

3           o All other asset groups had good DAI and no data gap.

4           o It is recommended that data be collected in a prioritized manner so that such  
5           data can be used in future assessments. It is also recommended that the DAI be  
6           improved for each asset category by ensuring that ultimately the complete  
7           health index data set is made available for each asset.

8           • One asset group that was not addressed in this study was communication buildings, due  
9           to the fact that the asset information was not available in extractable format at the time  
10          of study. In case of a need for asset condition assessment, the asset condition of such  
11          group can be approximately estimated by its age. Based on industrial practice, it is  
12          reasonable to assume that such an asset group has a service life within the range of 50 –  
13          80 years, after which reconstruction or major renovation is needed. It is recommended  
14          that FNEI take into account its routine inspection and maintenance feedback to  
15          determine a service life that reflects the practice at FNEI.

16          • For future assessments, FNEI should consider collecting and incorporating work order  
17          information. Total work orders and severity of each work order give an overall indication  
18          of whether a unit is historically problematic.

19          • FNEI should also consider collecting removal data to enable the development of FNEI  
20          specific asset life curves. The curves used in the current assessment are currently based  
21          on a combination of FNEI's asset demographics and typical industry experience. Using  
22          actual removal curves will result in more accurate life curves.

- The data used in this assessment was manually extracted from different locations (e.g. numerous spreadsheets or PDF files). For more efficient record keeping and ease of future assessments, FNEI may wish to consider implementing platform that consolidates asset information and condition data (e.g. nameplate information, test results, operational information, inspection records, etc.) and that can perform live asset analytics.
- It is important to note that the Flagged for Action plan presented in this study is based primarily on asset condition. It is worth noting that there are numerous other considerations that may influence FNEI's asset management plan. Among these are obsolescence, system growth, corporate priorities, technological advancements, etc.

FNEI plans to implement practices over its next five-year rate term that address the Kinectrics recommendations.

### **3 INVESTMENT PLANNING**

FNEI is responsible for managing a small number of connection points, served by a network that is uniform. These factors permit FNEI to operate with a small team, incorporating third-party experts as needed to conduct its investment planning.

The smaller size and lesser complexity of FNEI's transmission system has not required substantive procedures or systems to determine asset condition or customer needs. FNEI's approach is structured around asset management processes aimed at optimizing its data gathering, and its allocation of physical and financial resources in a prudent manner that addresses current and future needs.

The geographic location of FNEI does present substantive challenges. As noted throughout this Exhibit and application, access to transmission assets often requires transporting personnel and materials to remote locations that can generally only be reached by air travel throughout the

majority of the year. This primary challenge has been addressed in its investment planning processes by it utilizing monitoring and visual inspection tools to establish asset investment requirements. Strategic Objectives of Investment Planning Process

The strategic objectives for FNEI have at its centre the principle of minimizing outages and ensuring reliability. As such, the focus of FNEI has been on providing the reliable transmission of electricity, and capital investments are aimed at improving the reliability of the existing system and mitigating risks. Over the next five-year period, the communities served by FNEI are not expected to require significant increases to capacity. These factors have established FNEI's planning principles for the 2026 to 2031 rate term. Prioritization and Selection of Investments

FNEI identifies potential capital projects on the basis of need ascertained through the predictive, preventative, and corrective maintenance regime, as well as general technological developments and evolving industry practices. FNEI prepares a summary of each material project that includes:

technical description;

- operational need;
- impact on customers;
- regional planning requirements;
- timing of implementation;
- FNEI capability to implement;
- capital cost estimate;
- impact on OM&A;
- alternative solutions;
- risks associated with not implementing or delaying implementation; and
- general recommendations.

Potential capital projects in excess of \$50,000 must be approved by either the Board of Directors or the Finance Committee prior to implementation. The more common method of potential projects being approved is through the FNEI capital budgeting process, which involves

the Board of Directors approving an overall capital budget on an annual basis, which includes specific capital projects. The capital budget is developed by the Operations Manager and the Controller, and it is updated on a quarterly basis.

In the event the need for a capital project is identified after the completion of the capital budget for a particular year and in circumstances where the project should be initiated prior to the subsequent annual capital budget approval, then the project must be approved by the Finance Committee. An instance of when such a requirement may arise is when deficiencies are discovered in the course of executing the Asset Management Plan.

The approval process for a specific project, whether by the Board of Directors or the Finance Committee, involves consideration of the information provided by the operations department and a prioritization of all capital projects currently proposed or approved. The prioritization and selection criteria employed by the Board of Directors and Finance Committee includes consideration, both on a project specific basis and on a project-to-project basis, of:

- project urgency;
- project benefit as compared to cost;
- impact on system reliability;
- impact on OM&A;
- responsiveness to customer needs;
- regional planning requirements;
- alignment with FNEI strategic objectives; and
- risks associated with delaying or not implementing at the current time.

Approval of a specific project is communicated to the operations department and the FNEI capital budget is updated accordingly. Following the authorization to proceed, each project is implemented by the operations department and monitored by FNEI management through regular reporting and status updates tailored to the specific project.

### 3.1 Regional Planning Considerations

FNEI is the lead transmitter for the North of Moosonee region for the purposes of regional planning set out in Section 3C of the Transmission System Code (“TSC”). To comply with its obligations under Section 3C.2 of the TSC, FNEI completed a needs assessment for the North of Moosonee region and provided a report to the IESO and all licensed distributors within the region in 2021. The scope of the needs assessment was limited to 10 years due to the scale of the FNEI transmission system and the resulting significance of a single new connection. Using historical load data and load growth expectations provided by the four customers connected to the transmission system, the needs assessment determined that the transmission system has capacity to serve its customers beyond the planning horizon. The needs assessment also confirmed that the restoration times for transmission system contingencies complied with the Ontario Resource and Transmission Assessment Criteria (“ORTAC”), but reliability should be improved through enhancements to switching capabilities on low-voltage busses. Based on these conclusions, the needs assessment confirmed that a Regional Infrastructure Plan is not required at this time. Barring unexpected load or demand growth, a subsequent needs assessment will not be required until 2021. However, regional planning will continue to be a relevant consideration in the capital project assessment process.

A copy of the Needs Assessment report is included in Appendix 4 – Regional Planning Needs Assessment I of this Schedule.

### Optimization Between Capital Projects and OM&A

FNEI is cognizant of the relationship between capital projects and OM&A costs and this is one of the elements considered in the identification, selection, and prioritization of capital projects, as set out in Section 3.2 of this Schedule. Capital projects for the previous seven years are set out in Section 4.1.

One example of how FNEI's investment management practices is optimized between its capital and OM&A expenditures is its acquisition of the brush clearing equipment. FNEI does not clear brush via pesticide use, which means that clearing work must be performed manually. However, in light of the remote location of the FNEI transmission line, coupled with the fact that it is only accessible by ground vehicles in the winter, the cost of retaining third party contractors and equipment was significant. The impact of this mandatory activity on FNEI's OM&A expenses has been substantively reduced by investing in equipment that allows FNEI staff to perform brush clearing each winter without third party support. This investment One example of how FNEI's investment management practices is optimized between its capital and OM&A expenditures is its acquisition of the brush clearing equipment. FNEI does demonstrates FNEI's commitment to operational efficiency and efficient use of ratepayer funding. Recent Investments and the Strategic Plan

As addressed in Section 2.0, the primary focus of FNEI's strategic objectives are to reduce outages and enhance reliability. Capital projects for the previous seven years are set out in Section 4 and specific examples of projects that fit within FNEI's strategic plan of improving reliability include the Fort Albany garage, relay replacement, emergency communications equipment, and the ongoing bus isolation project. Please refer to the specific project summaries for detailed information on the impact of such projects on reliability.

#### **4 IN-SERVICE ADDITIONS AND CAPITAL EXPENDITURES**

The asset management plan and investment planning process result in a portfolio of capital expenditures and in-service additions that address the needs of the FNEI transmission system. FNEI has categorized its historical and forecast in-service capital additions to align with the Ontario Energy Board Uniform System of Accounts (UsoA). A summary of annual capital in-service additions is provided in the following Table 2.



**Table 2 FNEI In-Service Additions 2017 to 2030**

| OEB<br>Account | Asset Class                                        | 2017A  |              | 2018A  |            | 2019A  |              | 2020A  |            | 2021A  |            |
|----------------|----------------------------------------------------|--------|--------------|--------|------------|--------|--------------|--------|------------|--------|------------|
|                |                                                    | Budget | Actual       | Budget | Actual     | Budget | Actual       | Budget | Actual     | Budget | Actual     |
| 1609           | Capital Contributions Paid                         |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1611           | Computer Software (Formally known as Account 1925) |        | \$ -         |        | \$ -       |        | \$ 7,697     |        | \$ -       |        | \$ -       |
| 1612           | Land Rights (Formally known as Account 1906)       |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1705           | Land                                               |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1708           | Buildings                                          |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1810           | Leasehold Improvements                             |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1715           | Transformer Station Equipment >50 kV               |        | \$ 1,350,787 |        | \$ 718,148 |        | \$ 1,461,281 |        | \$ 815,466 |        | \$ 670,865 |
| 1820           | Distribution Station Equipment <50 kV              |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1725           | Storage Battery Equipment                          |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1730           | Poles, Towers & Fixtures                           |        | \$ -         |        | \$ 38,105  |        | \$ 1,100,214 |        | \$ 460,760 |        | \$ 15,432  |
| 1835           | Overhead Conductors & Devices                      |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1840           | Underground Conduit                                |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1845           | Underground Conductors & Devices                   |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1850           | Line Transformers                                  |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1855           | Services (Overhead & Underground)                  |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1860           | Meters                                             |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1860           | Meters (Smart Meters)                              |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 2075           | Land                                               |        | \$ -         |        | \$ 53,032  |        | \$ 408,500   |        | \$ 35,425  |        | \$ -       |
| 1908           | Buildings & Fixtures                               |        | \$ 7,825     |        | \$ 13,207  |        | \$ -         |        | \$ 16,467  |        | \$ 227,129 |
| 1910           | Leasehold Improvements                             |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1915           | Office Furniture & Equipment (10 years)            |        | \$ -         |        | \$ 8,450   |        | \$ 663       |        | \$ 879     |        | \$ 7,739   |
| 1915a          | Office Furniture & Equipment (5 years)             |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1920           | Computer Equipment - Hardware                      |        | \$ 9,364     |        | \$ 12,284  |        | \$ 11,150    |        | \$ 38,868  |        | \$ 19,512  |
| 1920a          | Computer Equip.-Hardware(Post Mar. 22/04)          |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1920b          | Computer Equip.-Hardware(Post Mar. 19/07)          |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1925           | Transportation Equipment                           |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1930           | Transportation Equipment                           |        | \$ -         |        | \$ -       |        | \$ 21,874    |        | \$ 679,303 |        | \$ -       |
| 1935           | Stores Equipment                                   |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1940           | Tools, Shop & Garage Equipment                     |        | \$ 12,059    |        | \$ 6,357   |        | \$ 1,905     |        | \$ 17,651  |        | \$ 19,276  |
| 1945           | Measurement & Testing Equipment                    |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -       |        | \$ -       |
| 1950           | Power Operated Equipment                           |        | \$ -         |        | \$ 130,807 |        | \$ 226,934   |        | \$ 48,240  |        | \$ 3,753   |

| OEB<br>Account | Asset Class                                | 2017A  |              | 2018A  |            | 2019A  |              | 2020A  |              | 2021A  |              |
|----------------|--------------------------------------------|--------|--------------|--------|------------|--------|--------------|--------|--------------|--------|--------------|
|                |                                            | Budget | Actual       | Budget | Actual     | Budget | Actual       | Budget | Actual       | Budget | Actual       |
| 1955           | Communications Equipment                   |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1955           | Communication Equipment (Smart Meters)     |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1960           | Miscellaneous Equipment                    |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1970           | Load Management Controls Customer Premises |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1975           | Load Management Controls Utility Premises  |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1980           | System Supervisor Equipment                |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1985           | Miscellaneous Fixed Assets                 |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1990           | Other Tangible Property                    |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 1995           | Contributions & Grants                     |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 2440           | Deferred Revenue                           |        | \$ -         |        | \$ -       |        | \$ -         |        | \$ -         |        | \$ -         |
| 2005           | Property Under Finance Lease               |        | \$ -         |        | \$ -       |        | \$ 2,944,463 |        | \$ 89,496    |        | \$ 187,686   |
|                | Total In-Service Additions                 |        | \$ 1,380,035 |        | \$ 980,389 |        | \$ 6,184,681 |        | \$ 2,202,555 |        | \$ 1,151,393 |

| OEB<br>Account | Asset Class                                        | 2023A  |            | 2024A  |              | 2025B  |              |
|----------------|----------------------------------------------------|--------|------------|--------|--------------|--------|--------------|
|                |                                                    | Budget | Actual     | Budget | Actual       | Budget | Actual       |
| 1609           | Capital Contributions Paid                         |        | \$ -       |        | \$ -         |        | \$ -         |
| 1611           | Computer Software (Formally known as Account 1925) |        | \$ 461     |        | \$ -         |        | \$ 2,000     |
| 1612           | Land Rights (Formally known as Account 1906)       |        | \$ -       |        | \$ -         |        | \$ -         |
| 1705           | Land                                               |        | \$ -       |        | \$ -         |        | \$ -         |
| 1708           | Buildings                                          |        | \$ -       |        | \$ -         |        | \$ -         |
| 1810           | Leasehold Improvements                             |        | \$ -       |        | \$ -         |        | \$ -         |
| 1715           | Transformer Station Equipment >50 kV               |        | \$ 712,077 |        | \$ 1,059,959 |        | \$ 1,304,167 |
| 1820           | Distribution Station Equipment <50 kV              |        | \$ -       |        | \$ -         |        | \$ -         |
| 1725           | Storage Battery Equipment                          |        | \$ -       |        | \$ -         |        | \$ -         |
| 1730           | Poles, Towers & Fixtures                           |        | \$ 9,256   |        | \$ 48,063    |        | \$ 20,000    |
| 1835           | Overhead Conductors & Devices                      |        | \$ -       |        | \$ -         |        | \$ -         |
| 1840           | Underground Conduit                                |        | \$ -       |        | \$ -         |        | \$ -         |
| 1845           | Underground Conductors & Devices                   |        | \$ -       |        | \$ -         |        | \$ -         |
| 1850           | Line Transformers                                  |        | \$ -       |        | \$ -         |        | \$ -         |
| 1855           | Services (Overhead & Underground)                  |        | \$ -       |        | \$ -         |        | \$ -         |
| 1860           | Meters                                             |        | \$ -       |        | \$ -         |        | \$ -         |

| OEB<br>Account | Asset Class                                | 2023A  |                   | 2024A  |                     | 2025B  |                     |
|----------------|--------------------------------------------|--------|-------------------|--------|---------------------|--------|---------------------|
|                |                                            | Budget | Actual            | Budget | Actual              | Budget | Actual              |
| 1860           | Meters (Smart Meters)                      |        | \$ -              |        | \$ -                |        | \$ -                |
| 2075           | Land                                       |        | \$ -              |        | \$ -                |        | \$ -                |
| 1908           | Buildings & Fixtures                       |        | \$ -              |        | \$ -                |        | \$ -                |
| 1910           | Leasehold Improvements                     |        | \$ -              |        | \$ -                |        | \$ -                |
| 1915           | Office Furniture & Equipment (10 years)    |        | \$ 17,597         |        | \$ -                |        | \$ 2,500            |
| 1915a          | Office Furniture & Equipment (5 years)     |        | \$ -              |        | \$ -                |        | \$ -                |
| 1920           | Computer Equipment - Hardware              |        | \$ 2,498          |        | \$ 15,556           |        | \$ 10,000           |
| 1920a          | Computer Equip.-Hardware(Post Mar. 22/04)  |        | \$ -              |        | \$ -                |        | \$ -                |
| 1920b          | Computer Equip.-Hardware(Post Mar. 19/07)  |        | \$ -              |        | \$ -                |        | \$ -                |
| 1925           | Transportation Equipment                   |        | \$ -              |        | \$ -                |        | \$ -                |
| 1930           | Transportation Equipment                   |        | \$ 29,001         |        | \$ 97,484           |        | \$ 133,167          |
| 1935           | Stores Equipment                           |        | \$ -              |        | \$ -                |        | \$ -                |
| 1940           | Tools, Shop & Garage Equipment             |        | \$ 84,349         |        | \$ 58,284           |        | \$ 46,500           |
| 1945           | Measurement & Testing Equipment            |        | \$ -              |        | \$ -                |        | \$ -                |
| 1950           | Power Operated Equipment                   |        | \$ -              |        | \$ -                |        | \$ 6,667            |
| 1955           | Communications Equipment                   |        | \$ -              |        | \$ -                |        | \$ -                |
| 1955           | Communication Equipment (Smart Meters)     |        | \$ -              |        | \$ -                |        | \$ -                |
| 1960           | Miscellaneous Equipment                    |        | \$ -              |        | \$ -                |        | \$ -                |
| 1970           | Load Management Controls Customer Premises |        | \$ -              |        | \$ -                |        | \$ -                |
| 1975           | Load Management Controls Utility Premises  |        | \$ -              |        | \$ -                |        | \$ -                |
| 1980           | System Supervisor Equipment                |        | \$ -              |        | \$ -                |        | \$ -                |
| 1985           | Miscellaneous Fixed Assets                 |        | \$ -              |        | \$ -                |        | \$ -                |
| 1990           | Other Tangible Property                    |        | \$ -              |        | \$ -                |        | \$ -                |
| 1995           | Contributions & Grants                     |        | \$ -              |        | \$ -                |        | \$ -                |
| 2440           | Deferred Revenue                           |        | \$ -              |        | \$ -                |        | \$ -                |
| 2005           | Property Under Finance Lease               |        | \$ 19,565         |        | \$ 1,185,778        |        | \$ 0                |
|                | <b>Total In-Service Additions</b>          |        | <b>\$ 874,803</b> |        | <b>\$ 2,465,123</b> |        | <b>\$ 1,525,000</b> |

| OEB<br>Account | Asset Class                                        | 2026F  |              | 2027F  |              | 2028F  |            | 2029F  |              | 2030F  |            |
|----------------|----------------------------------------------------|--------|--------------|--------|--------------|--------|------------|--------|--------------|--------|------------|
|                |                                                    | Budget | Actual       | Budget | Actual       | Budget | Actual     | Budget | Actual       | Budget | Actual     |
| 1609           | Capital Contributions Paid                         |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1611           | Computer Software (Formally known as Account 1925) |        | \$ 2,000     |        | \$ 2,000     |        | \$ 2,000   |        | \$ 2,000     |        | \$ 2,000   |
| 1612           | Land Rights (Formally known as Account 1906)       |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1705           | Land                                               |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1708           | Buildings                                          |        | \$ -         |        | \$ -         |        | -          |        | -            |        | -          |
| 1810           | Leasehold Improvements                             |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1715           | Transformer Station Equipment >50 kV               |        | \$ 1,292,500 |        | \$ 1,292,500 |        | 952,500.00 |        | 1,202,500.00 |        | 902,500.00 |
| 1820           | Distribution Station Equipment <50 kV              |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1725           | Storage Battery Equipment                          |        | \$ -         |        | \$ 10,000    |        | \$ 60,000  |        | \$ 60,000    |        | \$ 120,000 |
| 1730           | Poles, Towers & Fixtures                           |        | \$ 20,000    |        | \$ 10,000    |        | \$ 60,000  |        | \$ 60,000    |        | \$ 60,000  |
| 1835           | Overhead Conductors & Devices                      |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1840           | Underground Conduit                                |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1845           | Underground Conductors & Devices                   |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1850           | Line Transformers                                  |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1855           | Services (Overhead & Underground)                  |        | \$ -         |        | \$ -         |        | -          |        | -            |        | -          |
| 1860           | Meters                                             |        | \$ -         |        | \$ -         |        | -          |        | -            |        | -          |
| 1860           | Meters (Smart Meters)                              |        | \$ -         |        | \$ -         |        | -          |        | -            |        | -          |
| 2075           | Land                                               |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1908           | Buildings & Fixtures                               |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1910           | Leasehold Improvements                             |        | \$ -         |        | \$ -         |        | -          |        | -            |        | -          |
| 1915           | Office Furniture & Equipment (10 years)            |        | \$ 2,500     |        | \$ 2,500     |        | \$ 2,500   |        | \$ 2,500     |        | \$ 2,500   |
| 1915a          | Office Furniture & Equipment (5 years)             |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1920           | Computer Equipment - Hardware                      |        | \$ 10,000    |        | \$ 10,000    |        | \$ 10,000  |        | \$ 10,000    |        | \$ 10,000  |
| 1920a          | Computer Equip.-Hardware(Post Mar. 22/04)          |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1920b          | Computer Equip.-Hardware(Post Mar. 19/07)          |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1925           | Transportation Equipment                           |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1930           | Transportation Equipment                           |        | \$ 126,500   |        | \$ 126,500   |        | \$ 111,500 |        | \$ 111,500   |        | \$ 111,500 |
| 1935           | Stores Equipment                                   |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1940           | Tools, Shop & Garage Equipment                     |        | \$ 46,500    |        | \$ 46,500    |        | \$ 46,500  |        | \$ 46,500    |        | \$ 46,500  |
| 1945           | Measurement & Testing Equipment                    |        | \$ -         |        | -            |        | -          |        | -            |        | -          |
| 1950           | Power Operated Equipment                           |        | \$ -         |        | -            |        | \$ 250,000 |        | -            |        | \$ 250,000 |

| OEB<br>Account | Asset Class                                | 2026F  |              | 2027F  |              | 2028F  |              | 2029F  |              | 2030F  |              |
|----------------|--------------------------------------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|
|                |                                            | Budget | Actual       | Budget | Actual       | Budget | Actual       | Budget | Actual       | Budget | Actual       |
| 1955           | Communications Equipment                   |        | \$ -         |        | -            |        |              |        | -            |        | -            |
| 1955           | Communication Equipment (Smart Meters)     |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1960           | Miscellaneous Equipment                    |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1970           | Load Management Controls Customer Premises |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1975           | Load Management Controls Utility Premises  |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1980           | System Supervisor Equipment                |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1985           | Miscellaneous Fixed Assets                 |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1990           | Other Tangible Property                    |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 1995           | Contributions & Grants                     |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 2440           | Deferred Revenue                           |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
| 2005           | Property Under Finance Lease               |        | \$ -         |        | -            |        | -            |        | -            |        | -            |
|                | Total In-Service Additions                 |        | \$ 1,500,000 |        | \$ 1,500,000 |        | \$ 1,495,000 |        | \$ 1,495,000 |        | \$ 1,505,000 |

#### **4.1 Summary of Capital Projects Proposed for the Next Five Years**

FNEI's capital expenditures from 2024 actuals through to 2030 forecast are provided in Table 3 below. Additionally, the material capital projects currently in progress or proposed by FNEI for the next five years are listed subsequent to Table 3.

**Table 3 FNEI Capital Expenditures 2024 to 2030**

| OEB Account    | Capital Projects                                           | 2024 Actual   | 2025 Budget | 2026 Budget | 2027 Budget | 2028 Budget | 2029 Budget | 2030 Budget |
|----------------|------------------------------------------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1715/1878/1887 | Bus Isolation Project (\$4.5MM)                            | \$ 105,759.07 | 20,000      |             |             |             |             |             |
|                | Panel Refurbishment Attawapiskat/Kashechewan               |               |             |             |             |             |             |             |
| 1715           | Relay Replacement (Fort Albany, Kashechewan, Attawapiskat) | \$ 148,689.43 | 150,000     | 200,000     | 200,000     | 200,000     | 200,000     | 200,000     |
|                | Distance to Fault Project - Atta-Kash-Moose                |               |             | 150,000     | 150,000     |             |             |             |
| 1887           | Brushing equipment for the pole line                       |               |             |             |             | 250,000     |             | 250,000     |
| 1715           | Station Fence extension, storage (Albany)                  | \$ 123,119.81 | 25,000      | 25,000      | 25,000      |             |             |             |
| 1715           | Station Buildings Insulation upgrades                      | \$ 1,870.14   |             |             |             |             |             |             |
| 1715           | Stone replacement substation sites (1 sub./ year)          | \$ 82,408.07  |             |             |             |             |             |             |
| 1725           | Albany River Crossing Erosion-Capital Component            |               |             |             |             |             |             |             |
| 1715           | Oil Containment transformer well Upgrades                  |               |             |             |             |             |             |             |
| 1715           | Fibre Shelters Backup Generators                           | \$ 362.11     |             |             |             |             |             |             |
|                | E2 Control Building Back-up Generators                     |               |             |             | 100,000     | 100,000     | 100,000     |             |
| 1715           | Spare MV Regulators (1 set per year/3 yr plan)             |               | 150,000     |             | 150,000     | 200,000     |             |             |
| 1884           | Tools etc. - Testing Equipment(Doppler, Relay, etc.)       |               | 30,000      | 30,000      | 30,000      | 30,000      | 30,000      | 30,000      |
| 1878           | Vehicle replacement                                        |               | 125,000     | 125,000     | 125,000     | 110,000     | 110,000     | 110,000     |
| <b>1715</b>    | Oil Preservation System                                    |               |             |             |             |             |             |             |
| 1715           | E2 Battery replacement                                     |               |             | 125,000     | 125,000     |             |             |             |
| 1715           | PLCC spare equipment                                       |               | 50,000      | 50,000      | 50,000      | 50,000      | 50,000      | 50,000      |
| 1856           | New Office Building                                        |               |             |             |             |             |             |             |
|                | Office IT Room DC Power Supply                             |               |             |             |             |             |             |             |
| 1715/1884      | Station Emergency Communications upgrades                  | \$ 9,849.24   | 25,000      | 25,000      | 25,000      | 25,000      | 25,000      | 25,000      |
| 1860           | Albany Garage (FAPC Yard)                                  |               |             |             |             |             |             |             |
|                | Accommodations in Kashechewan/Attawapiskat                 |               |             |             |             |             |             |             |
| 1715           | Attawapiskat Feeder 4                                      | \$ 565.95     | 20,000      |             |             |             |             |             |
|                | Fort Albany Feeder 3                                       |               |             |             |             |             | 400,000     |             |

| OEB Account | Capital Projects                                             | 2024 Actual   | 2025 Budget | 2026 Budget | 2027 Budget | 2028 Budget | 2029 Budget | 2030 Budget |
|-------------|--------------------------------------------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1715        | Kashechewan Feeder 4                                         |               | 400,000     |             |             |             |             |             |
| 1725        | M9K spare structure                                          |               |             |             |             |             |             | 60,000      |
| 1715        | Station Server/Microscada replacement FA-1 Kash-2 Atta - 2   |               | 10,000      |             | 20,000      |             |             |             |
| 1862        | Extend Kashechewan Garage by 12 ft                           |               |             |             |             |             |             |             |
| 1715        | Foundations repair 1 station per year                        |               | 20,000      | 20,000      | 20,000      |             |             |             |
| 1715        | Security cameras replacement                                 | \$ 110,957.79 | 50,000      |             |             |             |             |             |
| 1715        | Fiberoptic Transport Equipment Replacement                   |               |             |             |             |             |             |             |
| 1715        | Spare Circuit switcher                                       |               |             |             |             |             |             | 150,000     |
|             | Spare Alstom Disconnect Switch                               |               |             |             |             |             |             | 200,000     |
|             | Replace/Upgrade Kashechewan Disconnect Switches M3K/M9K      |               |             |             |             | 250,000     | 250,000     |             |
| 1715/1730   | UPS Upgrade for Communication equipment                      |               |             |             |             |             |             |             |
| 1715        | Replacement ABB MV Breakers for FA/Kash/Atta                 |               | 200,000     | 200,000     | 200,000     |             |             | 100,000     |
|             | MV Breaker Retro Fit/Siemens-FA/Atta                         |               | 100,000     | 400,000     | 200,000     |             |             |             |
|             | Fiber Shelter HVAC Upgrade                                   |               | 50,000      | 50,000      |             |             | 50,000      | 50,000      |
|             | Fibre Shelter Roof Replacement-Moose/FA/Kash/Atta            |               |             |             |             | 50,000      | 50,000      | 50,000      |
| 1715        | Protection cover for control buildings foundations-Atta-Kash |               | 20,000      | 20,000      |             |             |             |             |
| 1715        | Battery Chargers Replacement (1/yr)                          |               | 30,000      | 30,000      | 30,000      | 30,000      | 30,000      | 30,000      |
| 1715        | AC units for Enclosures (old)                                |               |             |             |             |             |             |             |
| 1730        | Contingency for major failure-Lines and Overhead devices     |               |             |             |             | 50,000      | 50,000      | 50,000      |
| 1725        | Contingency for major failure-Poles                          |               |             |             |             | 50,000      | 50,000      | 50,000      |
| 1715        | Contingency for major failure-Stations                       |               |             |             |             | 50,000      | 50,000      | 50,000      |
| 1730        | Restrung HV M3K Skywire Crossing Kashechewan                 |               |             |             |             |             |             |             |
| 1878        | Replacement for Argo's-Fat Truck                             |               |             |             |             |             |             |             |
| 1878        | Disposition of 2005 Blue Dodge                               |               |             |             |             |             |             |             |
| 1715        | Attawapiskat Feeder 3                                        |               |             |             |             |             |             |             |
| 1715        | Upgrade remote control & security systems                    |               |             |             |             |             |             |             |
| 1725/1730   | 80 km Purchase                                               |               |             |             |             |             |             |             |
| 1715        | Completion of Kash 2nd Transformer                           |               |             |             |             |             |             |             |
| 1715        | Second Medium Voltage Feeder into Kashechewan                |               |             |             |             |             |             |             |



| OEB Account | Capital Projects                                       | 2024 Actual   | 2025 Budget | 2026 Budget | 2027 Budget | 2028 Budget | 2029 Budget | 2030 Budget |
|-------------|--------------------------------------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
|             | Subtotal Capital Projects Budget:                      | \$ 583,581    | 1,475,000   | 1,450,000   | 1,450,000   | 1,445,000   | 1,445,000   | 1,455,000   |
|             | Misc Capital Budget Items Total Not to Exceed \$50,000 |               |             |             |             |             |             |             |
| 1715        | Station Equipment                                      | \$ 387,958.00 | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      |
| 1725        | Poles and Fixtures                                     |               | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      |
| 1730        | Overhead Conductors and Devices                        |               | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      |
| 1866        | Leasehold Improvements-Office Renovations              |               |             |             |             |             |             |             |
| 1869        | Office Furniture and Equipment                         |               | 2,500       | 2,500       | 2,500       | 2,500       | 2,500       | 2,500       |
| 1872        | Computer Equipment-Hardware                            |               | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      | 10,000      |
| 1875        | Computer Software                                      |               | 2,000       | 2,000       | 2,000       | 2,000       | 2,000       | 2,000       |
| 1878        | Transportation Equipment                               |               | 1,500       | 1,500       | 1,500       | 1,500       | 1,500       | 1,500       |
| 1884        | Tools, Shop and Garage Equipment                       |               | 4,000       | 4,000       | 4,000       | 4,000       | 4,000       | 4,000       |
|             | Subtotal Misc. Capital Budget:                         | \$ 387,958    | 50,000      | 50,000      | 50,000      | 50,000      | 50,000      | 50,000      |
|             | Total Annual Capital Budget:                           | \$ 971,539    | 1,525,000   | 1,500,000   | 1,500,000   | 1,495,000   | 1,495,000   | 1,505,000   |

1 The following tables summarize a select set of FNEI's proposed capital investments over the  
 2 period of 2026 to 2030.

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|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------|
| <b>Project Name:</b>                            | <b>Distance to Fault</b>                                                                                                                                                                                                                                                                                                     |                                      |              |
| <b>Investment Driver:</b>                       | Grid modernization and improving service reliability                                                                                                                                                                                                                                                                         |                                      |              |
| <b>Proposed<br/>Start Date:</b>                 | 2025 to 2030                                                                                                                                                                                                                                                                                                                 | <b>Proposed<br/>In-Service Date:</b> | 2025 to 2030 |
| <b>Forecast Capital<br/>Expenditure:</b>        | \$300,000                                                                                                                                                                                                                                                                                                                    |                                      |              |
| <b>Project Description:</b>                     | FNEI is planning to install Qualitrol TWS FL-8 which is a Travelling Wave Fault Locator system that would give a precise location of faults that occur on the high voltage over head lines.                                                                                                                                  |                                      |              |
| <b>Alternatives:</b>                            | We continue to use the current fault locator programmed in our Protection relays with lower precision and would lead to longer downtime when faults occur.                                                                                                                                                                   |                                      |              |
| <b>Priority and Risk of<br/>Not Proceeding:</b> | This is a high priority investment that ensures, safety and reliability. With the High voltage lines near the half life, we would want to be proactive in the tracking of fault information for future maintenance tasks. This results in FNEI identifying a more precise location for the fault resulting in less downtime. |                                      |              |

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| <b>Project Name:</b>                        | <b>Spare MV Regulators (1 set per year/3 yr plan)</b>                                                                                                                                                                                                                                                                                                |                                  |                  |
| <b>Investment Driver:</b>                   | System reliability and mitigation of asset downtime                                                                                                                                                                                                                                                                                                  |                                  |                  |
| <b>Proposed Start Date:</b>                 | 2025, 2027, 2028                                                                                                                                                                                                                                                                                                                                     | <b>Proposed In-Service Date:</b> | 2025, 2027, 2028 |
| <b>Forecast Capital Expenditure:</b>        | \$500,000                                                                                                                                                                                                                                                                                                                                            |                                  |                  |
| <b>Project Description:</b>                 | Inventory of spare MV regulators for replacement upon failures                                                                                                                                                                                                                                                                                       |                                  |                  |
| <b>Alternatives:</b>                        | The alternative would be to by-pass the voltage regulators upon failure and would cause the voltage levels not to be regulated to +/- 5 % tolerance for distribution in the community.                                                                                                                                                               |                                  |                  |
| <b>Priority and Risk of Not Proceeding:</b> | This investment is high priority to ensure safety and reliability, meeting FNEI standards. The risk of not proceeding could result in voltage not being regulated upon failure which could affect electrical equipment in community. The investment requires high lead time for orders as a result of shipping limitations due to FNEI's remote area |                                  |                  |

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| <b>Project Name:</b>                        | <b>Replacement ABB MV Breakers for FA/Kash/Atta</b>                                                                                                                             |                                  |                  |
| <b>Investment Driver:</b>                   | Identified in Asset Condition Assessment                                                                                                                                        |                                  |                  |
| <b>Proposed Start Date:</b>                 | 2026 - 2030                                                                                                                                                                     | <b>Proposed In-Service Date:</b> | 2026, 2027, 2030 |
| <b>Forecast Capital Expenditure:</b>        | \$500,000                                                                                                                                                                       |                                  |                  |
| <b>Project Description:</b>                 | Replacement of current ABB MV breakers that are in service for the 20+ years and currently the vacuum interrupter is obsolete for the units.                                    |                                  |                  |
| <b>Alternatives:</b>                        | No reasonable alternative because if FNEI does not replace the breakers, this will increase likelihood of failures which would result in loss of power to a specific community. |                                  |                  |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority investment that ensures, safety and reliability. There is no replacement available with current model, and we would want to keep spare inventory.       |                                  |                  |

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| <b>Project Name:</b>                        | <b>Battery Replacement</b>                                                                                                                                                                                                                                                                                                                                 |                                  |           |
| <b>Investment Driver:</b>                   | Per Asset Condition Assessment                                                                                                                                                                                                                                                                                                                             |                                  |           |
| <b>Proposed Start Date:</b>                 | 2026                                                                                                                                                                                                                                                                                                                                                       | <b>Proposed In-Service Date:</b> | 2026-2030 |
| <b>Forecast Capital Expenditure:</b>        | 150,000                                                                                                                                                                                                                                                                                                                                                    |                                  |           |
| <b>Project Description:</b>                 | FNEI is planning on replacement/upgrade current DC battery bank in the control rooms due to end-of-life and failing test results. During the service of the stations, there was upgrades to protection and control, communication and additions for security which it requires a larger rated battery bank in some cases.                                  |                                  |           |
| <b>Alternatives:</b>                        | There is no alternative to the DC battery bank in service as they serve the DC load required to operate all equipment for protection and monitoring in the stations during normal operation and power outages.                                                                                                                                             |                                  |           |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority to ensure safety and reliability. All of the protection and control requires DC battery service to operate so complete failure would be catastrophic to the equipment. There would be no capacity for the DC service during an outage causing longer delays. The current battery banks are at end of life or has failed past tests |                                  |           |

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| <b>Project Name:</b>                        | <b>E2 Control Room Back-up Generator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |           |
| <b>Investment Driver:</b>                   | Per Asset Condition Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |           |
| <b>Proposed Start Date:</b>                 | 2028                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Proposed In-Service Date:</b> | 2028-2029 |
| <b>Forecast Capital Expenditure:</b>        | 200,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |           |
| <b>Project Description:</b>                 | FNEI is planning on installing back-up generators for the E2 control room that would be capable of supplying power for the equipment operation during maintenance and power outages from the powerlines and distribution system. The community generators do not have the capacity to supply the community with their back-up generators which would affect the operation of the substations during power outages.                                                                                                                                                                                                                                                                                                                                                                                           |                                  |           |
| <b>Alternatives:</b>                        | No alternative, FNEI does not currently have back-up generators installed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |           |
| <b>Priority and Risk of Not Proceeding:</b> | <p>This is a top priority for FNEI. The installation will make the transformer station more reliable with a secondary power source to allow the station service to be unaffected during any outage that may occur. This would allow the station to keep the HVAC operating to keep station equipment in the ideal atmosphere for operation and DC battery banks charged/ready for service when power returns. Currently, Fort Albany does not have back-up generators for the community and the other 2 communities have back-up generators but with limited capacity and reliability.</p> <p>This would allow the transformer stations to be self-reliant during any power outages and be ready to return to service once power is restored with no effect on the reliability and safety of the system.</p> |                                  |           |

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| <b>Project Name:</b>                            | <b>Vehicle Replacement</b>                                                                                                                                                                                                                                                                                                          |                                      |             |
| <b>Investment Driver:</b>                       | Per Asset Condition Assessment                                                                                                                                                                                                                                                                                                      |                                      |             |
| <b>Proposed<br/>Start Date:</b>                 | 2026                                                                                                                                                                                                                                                                                                                                | <b>Proposed<br/>In-Service Date:</b> | 2026 - 2030 |
| <b>Forecast Capital<br/>Expenditure:</b>        | 580,000                                                                                                                                                                                                                                                                                                                             |                                      |             |
| <b>Project Description:</b>                     | Station Vehicles for the operations in each community.                                                                                                                                                                                                                                                                              |                                      |             |
| <b>Alternatives:</b>                            | The only alternative would be not to proceed with the purchase of new station vehicles for everyday operations.                                                                                                                                                                                                                     |                                      |             |
| <b>Priority and Risk of<br/>Not Proceeding:</b> | The purchase of the new station vehicles is a top priority because we need reliable vehicles in the communities, we serve in order to travel to designated sites. The vehicles are used during winter months for the right-of way clearing operations which requires safe and reliable vehicles to carry out the winter operations. |                                      |             |

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| <b>Project Name:</b>                        | <b>Spare Circuit Switcher and Spare Alstom Disconnect Switch</b>                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |      |
| <b>Investment Driver:</b>                   | Per Asset Condition Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                  |      |
| <b>Proposed Start Date:</b>                 | 2030                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Proposed In-Service Date:</b> | 2030 |
| <b>Forecast Capital Expenditure:</b>        | 350,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |      |
| <b>Project Description:</b>                 | FNEI is planning on improving the spare parts available for emergency situations that may affect major equipment that would affect the reliability for delivery power to our customers. We want to add a spare S&C Circuit Switcher, which is part of the protection and control of our transformers and reactors.                                                                                                                                                      |                                  |      |
| <b>Alternatives:</b>                        | No alternative. FNEI does not keep spare inventory for the S&C Circuit Switcher and upon failure we have a long lead time for repair                                                                                                                                                                                                                                                                                                                                    |                                  |      |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority to ensure safety and reliability, and mitigate the community not being able to expand/upgrade their distribution grid. With the remote area that FNEI serves, it is imperative we have spare inventory for equipment that would have an impact on the delivery of power to the customers. Customer locations are limited for delivery during most of the year for larger equipment and equipment manufacturers have long lead times for orders. |                                  |      |

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| <b>Project Name:</b>                        | <b>Replace/Upgrade Kashechewan Disconnect Switch M3K/M9K</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |           |
| <b>Investment Driver:</b>                   | Per Asset Condition Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |           |
| <b>Proposed Start Date:</b>                 | 2028                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Proposed In-Service Date:</b> | 2028-2029 |
| <b>Forecast Capital Expenditure:</b>        | 500,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |           |
| <b>Project Description:</b>                 | FNEI is planning on replacing/upgrading the bus side disconnect switches in this rate period due to the current model switches being obsolete and no spare parts for replacement or repair.                                                                                                                                                                                                                                                                                                                                                                                                          |                                  |           |
| <b>Alternatives:</b>                        | No alternative, if FNEI does not replace the disconnect switches and a resulting failure occurs, we have no replacement parts or similar switch available                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |           |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority to ensure safety and reliability, and mitigate the community not being able to expand/upgrade their distribution grid. The current switches that are in service are obsolete and FNEI does not have spare parts in case of failure. In the past years we had issues operating the switches to open that raised concern for the safety and reliability for the system. Installation of the new switches would improve the reliability of the system and safety for the worker since these switches are manually operated, which requires worker to be at the switch location. |                                  |           |

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| <b>Project Name:</b>                        | <b>MV Breaker Retro Fit/Siemens-FA/Atta</b>                                                                                                                                                                                                                                                      |                                  |      |
| <b>Investment Driver:</b>                   | Per Asset Condition Assessment                                                                                                                                                                                                                                                                   |                                  |      |
| <b>Proposed Start Date:</b>                 | 2026 - 2027                                                                                                                                                                                                                                                                                      | <b>Proposed In-Service Date:</b> | 2027 |
| <b>Forecast Capital Expenditure:</b>        | 600,000                                                                                                                                                                                                                                                                                          |                                  |      |
| <b>Project Description:</b>                 | In Kashechewan/Attawapiskat, we will be retrofitting the existing Medium Voltage Siemens Switchgear as the equipment is now obsolete and no longer supported. Kashechewan is planning on expanding the community and upgrading existing infrastructure which will require a future feeder.       |                                  |      |
| <b>Alternatives:</b>                        | No alternative, Kashechewan would not be able to expand/upgrade with no spare MV breakers                                                                                                                                                                                                        |                                  |      |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority to ensure safety and reliability, and mitigate the community not being able to expand/upgrade their distribution grid. The risk of not proceeding is that there are no spare breaker/parts for any failures, and no replacement/support with current MV breaker line-up. |                                  |      |

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## 4.2 Summary of Capital Projects Completed since Last Rate Application

The capital projects undertaken and completed by FNEI during the past seven years are listed below in the order of capital expenditure, from greatest to least.

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |                            |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|
| Project Name:                        | Bus Isolation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                            |
| Investment Driver:                   | System Service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |                            |
| Proposed Start Date:                 | 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Proposed In-Service Date:   | September 2023 Kashechewan |
| Forecast Capital Expenditure:        | \$4,900,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Actual Capital Expenditure: | \$4,965,970                |
| Project Description:                 | FNEI has currently upgraded each transformer station by splitting the bus system on both the high and medium voltage sides of the transformers and installing additional disconnects. FNEI is currently in the administration process for splitting the high voltage bus system in Kashechewan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |                            |
| Alternatives:                        | The only alternative would be to not to complete the project. Not completing the project would have a negative impact on reliability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                            |
| Priority and Risk of Not Proceeding: | The project is a high priority for FNEI because it will allow a transformer station to remain in operation while maintenance work is performed on a redundant piece of equipment, thereby permitting the transformer station to provide the community with electricity without interruption. If this project is not completed then maintenance work on almost every piece of equipment would require the complete shutdown of the transformer station, which would result in the loss of service to the entire community served by the transformer station, as well as, in the case of Kashechewan, the loss of service to Attawapiskat. The potential for routine maintenance operations to result in the loss of electrical service represents a significant reliability risk and would prevent FNEI from meeting its reliability standards. This project will eliminate this reliability risk. |                             |                            |
| Variance Drivers                     | <ul style="list-style-type: none"> <li>Budget was established originally set at \$4,900K as a high-level estimate</li> <li>Procurement resulted in cost of investments being greater than estimated</li> <li>Project costs increased due to inflation post COVID-19 pandemic: <ul style="list-style-type: none"> <li>Flight costs for contractors and third-party support doubled</li> <li>Material costs doubled or greater</li> <li>Labour costs also increased</li> <li>Implementation of safety protocols added cost</li> </ul> </li> <li>Required to change construction contractor due to their going out of business</li> </ul>                                                                                                                                                                                                                                                            |                             |                            |

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|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | Oil Preservation System                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                    |           |
| <b>Investment Driver:</b>                   | System Service                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |           |
| <b>Proposed Start Date:</b>                 | 2016                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Proposed In-Service Date:</b>   | 2017      |
| <b>Forecast Capital Expenditure:</b>        | \$180,000                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Actual Capital Expenditure:</b> | \$189,925 |
| <b>Project Description:</b>                 | FNEI has installed ABB Oil Preservation System on 6 transformers and 3 reactors. The OPS will help maintain positive pressure in each piece of equipment with nitrogen air which will keep out air and moisture. The blanket of nitrogen air will protect the transformer and reactor's oil from deterioration caused from air and moisture.                                                                                                            |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would have been to not proceed with the project.                                                                                                                                                                                                                                                                                                                                                                                   |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project is high priority for FNEI because the equipment is subjected to harsh weather conditions with dramatic temperature swings that affect seals and internal pressure of the transformers and reactors. This system will allow the equipment to keep a steady positive pressure which won't allow any moisture or air to enter the equipment and prevent oil deterioration, which would be very detrimental to the operation of the equipment. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>• Budget was established as a high-level estimate.</li> <li>• OPS original installation needed upgrading for harsh environmental conditions. Equipment was leaking at joints and seals were not maintaining pressure. Upgraded hoses, and pressure adjusting infrastructure to accommodate conditions.</li> <li>• Procurement resulted in cost of investments being greater than estimated</li> </ul>            |                                    |           |

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2 Picture above is one of eight units installed in our transformers and reactors

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | Attawapiskat Feeder 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |           |
| <b>Investment Driver:</b>                   | System Service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |           |
| <b>Proposed Start Date:</b>                 | 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Proposed In-Service Date:</b>   | 2024      |
| <b>Forecast Capital Expenditure:</b>        | \$590,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Actual Capital Expenditure:</b> | \$592,628 |
| <b>Project Description:</b>                 | Attawapiskat is a growing community that required an additional feeder circuit to supply the demand. A feeder was added to do so which involved the addition of a feeder cell and voltage regulators                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                    |           |
| <b>Alternatives:</b>                        | The only alternative was not to put in the additional feeder, which would hinder the growth of the community and place more stress on the feeders that are currently in service.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project was a high priority for FNEI, as the load demand in the winter months in Attawapiskat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>• Budget was established as a high-level.</li> <li>• Added scope to project. Installed additional switch-gear because the Feeder did not have additional space to add connections. Looked to gain economies of scale by combining future project for adding a switch-gear to the feeder to the existing two switch-gears. It was more cost effective than replacing the existing switch-gear to make room for the feeder.</li> <li>• Procurement resulted in cost of investments being greater than estimated</li> <li>• Project costs increased due to inflation post COVID-19 pandemic</li> </ul> |                                    |           |

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3 Picture above has feeder 4 on the right that was under construction, feeder 3 is on the left

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|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------|
| <b>Project Name:</b>                        | Oil Containment Pit Upgrade                                                                                                                                                                                                                                                                                                                 |                                    |          |
| <b>Investment Driver:</b>                   | System Renewal                                                                                                                                                                                                                                                                                                                              |                                    |          |
| <b>Proposed Start Date:</b>                 | 2018                                                                                                                                                                                                                                                                                                                                        | <b>Proposed In-Service Date:</b>   | 2019     |
| <b>Forecast Capital Expenditure:</b>        | \$95,228                                                                                                                                                                                                                                                                                                                                    | <b>Actual Capital Expenditure:</b> | \$95,228 |
| <b>Project Description:</b>                 | FNEI has installed 4 Imbiber Beads Containment Shut-Off Systems in all of the containment pits in three of the substations located in Fort Albany, Kashechewan and Attawapiskat.                                                                                                                                                            |                                    |          |
| <b>Alternatives:</b>                        | The only alternative was not to proceed with the project and keep using the deteriorated and aged units in place.                                                                                                                                                                                                                           |                                    |          |
| <b>Priority and Risk of Not Proceeding:</b> | This was a high priority project due to the age and deterioration of replaced units. There could have been a negative impact to the environment if a spill or leak would have occurred in the replaced units. The new units are SPCC compliant and will prevent leaks or spills of oil and only allow water to drain from containment area. |                                    |          |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>No variance</li> </ul>                                                                                                                                                                                                                                                                               |                                    |          |

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5 Current and previous oil containment units



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| <b>Project Name:</b>                        | Station Server/MicroScada Replacement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |           |
| <b>Investment Driver:</b>                   | System Renewal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |           |
| <b>Proposed Start Date:</b>                 | 2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Proposed In-Service Date:</b>   | 2023      |
| <b>Forecast Capital Expenditure:</b>        | \$235,123                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Actual Capital Expenditure:</b> | \$291,436 |
| <b>Project Description:</b>                 | FNEI is in the process of installing ABB MicroScada Pro SYS600C in Substation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would have been to not proceed with the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project is high priority for FNEI because the original MicroScada servers and software is out of date, which is proven to be unreliable for the control and operation of your electrical system. It is imperative that we have optimal control and reliable operation of the switchyard in case of any contingencies that may occur. This upgrade allows us to update our communication protocol to IEC61850 for our future upgrades to equipment that require IEC61850 protocol. The new servers and relay replacement currently in process go hand in hand due to the communication protocol requirements of the relays. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Original scoped microprocessor in MicroScada was upgraded post installation to improve processing and outputs.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |           |

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4 Picture Above: One of two servers replaced the top server is existing and the bottom is the new  
5 server

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|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | Relay Replacement                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |           |
| <b>Investment Driver:</b>                   | System Renewal                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |           |
| <b>Proposed Start Date:</b>                 | 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Proposed In-Service Date:</b>   | 2019      |
| <b>Forecast Capital Expenditure:</b>        | \$290,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Actual Capital Expenditure:</b> | \$293,995 |
| <b>Project Description:</b>                 | Replacement of ABB protective relays                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would be to not replace the ABB protective relays, which was an unacceptable option for the reasons provided in the next subsection.                                                                                                                                                                                                                                                                                                                     |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project was a high priority for FNEI. In 2014 several ABB protective relays had internal failures. The failure of an ABB protective relay can result in a potentially catastrophic event, as the relays detect over/under voltage, line faults, etc. and in those situations the relay issues commands that will open the breaker, thereby protecting equipment and ensuring public safety. Not proceeding with the project was held by FNEI to be an unacceptable risk. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>• Budget established as a high-level estimate</li> <li>• When materials were procured, the cost of investments were greater than the original estimate</li> </ul>                                                                                                                                                                                                                                                                      |                                    |           |

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4 Pictured above, on the left are relay replacements done for the reactor protection relays in Fort  
5 Albany. On the right, are relay replacements done for the K5A line protection relays

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|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | <b>Right of Way Clearing Costs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |           |
| <b>Investment Driver:</b>                   | General Plant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |           |
| <b>Start Date:</b>                          | 2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>In-Service Date:</b>            | 2021      |
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |           |
| <b>Forecast Capital Expenditure:</b>        | \$418, 763                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Actual Capital Expenditure:</b> | \$415,763 |
| <b>Project Description:</b>                 | Right of Way clearing of high voltage lines feeding northern communities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would be to not proceed with the purchase of the required machinery and clear the right of way manually, which would not be probable with the amount of area that requires clearing and time constraints due to short access period.                                                                                                                                                                                                                                                                                                                                                      |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project is a high priority for FNEI, with out the proper and required clearing of the ROW, brush would grow to heights that would interfere with the lines and cause outages to northern communities. As the brush clearing in the right of way is an ongoing activity that has to be done in the winter months due to the restrictions of herbicide use to control the growth of brush, this gives FNEI a short window in the winter months to clear problem areas on the line when it becomes accessible. Proper machinery and equipment are needed to clear as much ROW as possible in a short period. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>No variance</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |           |



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2 Picture Above: An operator with one of the brush-clearing units

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| <b>Project Name:</b>                        | <b>Station Fence and Storage Extensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                    |             |
| <b>Investment Driver:</b>                   | General Plant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                    |             |
| <b>Proposed Start Date:</b>                 | 2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Proposed In-Service Date:</b>   | 2025        |
| <b>Forecast Capital Expenditure:</b>        | \$1,300,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Actual Capital Expenditure:</b> | \$1,378,884 |
| <b>Project Description:</b>                 | The station in each community required more space for storage of equipment and material that is required for on-going projects and emergencies. The expansion of the station yards required additional fencing for security purposes.                                                                                                                                                                                                                                                                             |                                    |             |
| <b>Alternatives:</b>                        | The only alternative would be to not to proceed with the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                    |             |
| <b>Priority and Risk of Not Proceeding:</b> | This project is on-going and is a high priority to complete. The expansion and storage enabled FNEI to store equipment and material safely and securely onsite for any emergencies that may arise. With out proper storage and security for equipment and material, weather conditions/environment can deteriorate the condition greatly and make equipment and material unusable in a short period of time. Also, the fencing gives the station yard expansion with the required security and for public safety. |                                    |             |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>• Budget was established originally set as a high-level</li> <li>• Procurement resulted in cost of investments being greater than estimated</li> <li>• Project costs increased due to inflation post COVID-19 pandemic.</li> </ul>                                                                                                                                                                                                                                         |                                    |             |



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3 Picture on the left is Fort Albany CTS and on the right is the fibre shelter and storage in  
4 Moosonee near the Hydro One SS

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|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Project Name:</b>                        | <b>Transformer Station Stone Replacement</b>                                                                                                                                                                                                                                                                                                                                                                                            |                                    |                                                                                              |
| <b>Investment Driver:</b>                   | System Renewal                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |                                                                                              |
| <b>Start Date:</b>                          | 2014                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>In-Service Date:</b>            | September 2016 (Fort Albany)<br>September 2023 (Attawapiskat)<br>September 2024(Kashechewan) |
| <b>Forecast Capital Expenditure:</b>        | \$1,000,000                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Actual Capital Expenditure:</b> | \$ 1,107,484 to date                                                                         |
| <b>Project Description:</b>                 | Replacement of stone at transformer stations in Attawapiskat, Fort Albany, and Kashechewan. Fort Albany is complete and Kashechewan and Attawapiskat is on-going due to travel restrictions from Covid-19.                                                                                                                                                                                                                              |                                    |                                                                                              |
| <b>Alternatives:</b>                        | Substation stone with proper insulating properties is necessary to meet health and safety requirements in relation to step voltages. Over time the stone at transformer stations becomes contaminated with particles and organics requiring that the stone be cleaned or replaced. The replacement of the transformer station stone with locally sourced materials was the most economic option to meet health and safety requirements. |                                    |                                                                                              |
| <b>Priority and Risk of Not Proceeding:</b> | The replacement of the transformer station stone is a high priority for FNEI to maintain compliance with health and safety requirements. Not proceeding with the replacement (or cleaning of the stone) is not an option.                                                                                                                                                                                                               |                                    |                                                                                              |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>• Budget was established originally set as a high-level estimate</li> <li>• Procurement resulted in cost of investments being greater than estimated. Material being processed and shipping resulted in costs being much greater than estimated</li> <li>• Project costs increased due to inflation post COVID-19 pandemic</li> </ul>                                                            |                                    |                                                                                              |





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2 Above shows one of the substations after stone was replaced and, on the right, shows a stone  
3 screening operation for the stone material required for the substations.

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|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | <b>Back-Up Generators at Fibre Shelters</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |           |
| <b>Investment Driver:</b>                   | System Service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                    |           |
| <b>Start Date:</b>                          | July 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>In-Service Date:</b>            | July 2016 |
| <b>Forecast Capital Expenditure:</b>        | \$250,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Actual Capital Expenditure:</b> | \$259,912 |
| <b>Project Description:</b>                 | Installation of diesel generators to provide back-up power at the fibre optic shelters in Attawapiskat, Fort Albany, and Kashechewan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would be to not proceed with the project, which would leave the fibre optic shelters reliant on batteries for back-up power.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project is a high priority for FNEI, as the fibre optic shelters would otherwise only have batteries that provide back-up power. The battery back-up systems alone are insufficient, as they do not operate the heating and cooling system for the shelters, which are necessary to maintain the temperatures within permissible operating ranges for the equipment. The generators ensure that in the event of an extended transmission line outage the communication equipment is protected and continues to allow FNEI to remotely operate equipment and communicate with local technicians. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Budget established as a high-level estimate</li> <li>Procurement resulted in cost of investments being greater than estimated</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |           |



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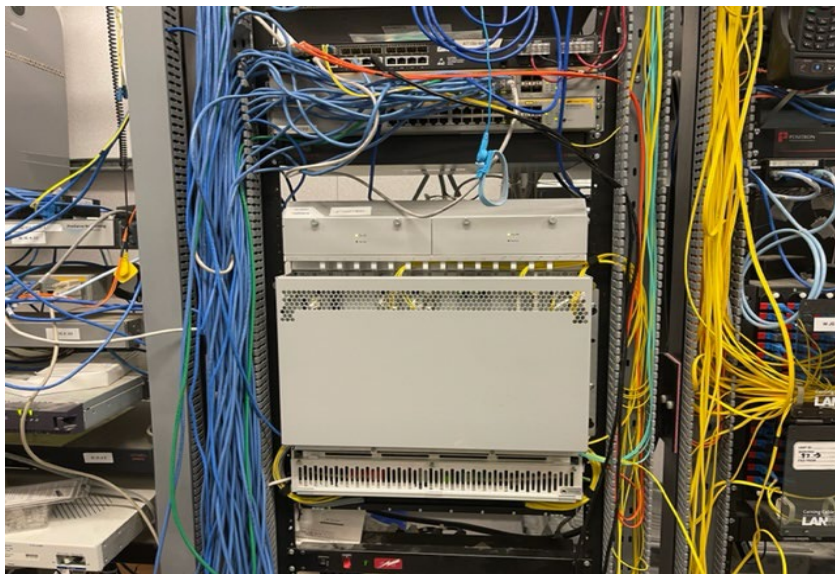
3 Picture above is one of four generators installed for the back-up power for the fibre shelters to  
 4 ensure continuity of service during outages

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|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | <b>Fibre Optic Project</b>                                                                                                                                                                                                                                                                                                                                                  |                                    |           |
| <b>Investment Driver:</b>                   | System Service                                                                                                                                                                                                                                                                                                                                                              |                                    |           |
| <b>Start Date:</b>                          | 2016                                                                                                                                                                                                                                                                                                                                                                        | <b>In-Service Date:</b>            | 2018      |
| <b>Forecast Capital Expenditure:</b>        | \$476,904                                                                                                                                                                                                                                                                                                                                                                   | <b>Actual Capital Expenditure:</b> | \$504,431 |
| <b>Project Description:</b>                 | Fibre Optic Communications Upgrade                                                                                                                                                                                                                                                                                                                                          |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would be to not replace the equipment, which was an unacceptable option for the reasons provided in the next subsection.                                                                                                                                                                                                                               |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This project is a high priority for FNEI, the Meriton equipment was well past the End of Life and the company that made it was no longer in business which posed a risk in the event of failure due to lack of support, service and spare parts. FNEI relies on the communication network to allow us to remotely operate equipment and communicate with local technicians. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Minimal variance between actuals and budget. Cost of equipment slightly greater than original budget</li> </ul>                                                                                                                                                                                                                      |                                    |           |

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4 Above is the communication unit that was replaced due to end of life of the older unit. The four  
5 fibre shelter units required this unit to be replaced.

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|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|
| <b>Project Name:</b>                        | <b>Albany Crossing 2018 Subsidence</b>                                                                                                                                                                                                                                                                                                                                                  |                                    |             |
| <b>Investment Driver:</b>                   | System Service                                                                                                                                                                                                                                                                                                                                                                          |                                    |             |
| <b>Proposed</b>                             |                                                                                                                                                                                                                                                                                                                                                                                         | <b>Proposed</b>                    |             |
| <b>Start Date:</b>                          | 2018                                                                                                                                                                                                                                                                                                                                                                                    | <b>In-Service Date:</b>            | 2020        |
| <b>Forecast Capital Expenditure:</b>        | \$1,415,515                                                                                                                                                                                                                                                                                                                                                                             | <b>Actual Capital Expenditure:</b> | \$1,416,515 |
| <b>Project Description:</b>                 | Fort Albany riverbank stabilization works.                                                                                                                                                                                                                                                                                                                                              |                                    |             |
| <b>Alternatives:</b>                        | The only alternative was not to perform stabilization measures and remove the structure to install lines underground for the river crossing area, which would have come at a much higher cost.                                                                                                                                                                                          |                                    |             |
| <b>Priority and Risk of Not Proceeding:</b> | This project was a high priority for FNEI, in 2018 the riverbank had undergone a significant slope failure and was threatening the existing transmission line structures positioned at the top of the slope. If we had not proceeded in a timely manner, the instability of the river bank would have affected the integrity of the structures holding the lines at the river crossing. |                                    |             |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Minimal variance due to additional time spent by contractor with installation</li> </ul>                                                                                                                                                                                                                                                         |                                    |             |



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2 Picture above on the left shows the area when the bank erosion occurred in 2018 and on the  
3 right is the area backfilled and stabilized.

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|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| <b>Project Name:</b>                        | <b>Argo Replacements</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                    |           |
| <b>Investment Driver:</b>                   | General Plant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |           |
| <b>Start Date:</b>                          | 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>In-Service Date:</b>            | 2021      |
| <b>Forecast Capital Expenditure:</b>        | \$425,495                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Actual Capital Expenditure:</b> | \$425,495 |
| <b>Project Description:</b>                 | <p>FNEI was in need of an alternative transportation method for accessing the transmission line for any emergency situations that may arise during the spring/summer/fall months. The Argos that were used were very slow and limited in their carrying capacity, which in turn limits the effective range of work that could be done.</p> <p>After investigation and analysis, FNEI purchased two Fat Truck units for transportation to access transmission lines in emergency situations.</p> |                                    |           |
| <b>Alternatives:</b>                        | The only alternative is the use of helicopters to access the line for maintenance work in case of emergency, which would be very costly and time dependant.                                                                                                                                                                                                                                                                                                                                     |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority for FNEI, as we need suitable transportation to access the line for emergencies if they arise so we can repair the issue in a timely manner to restore power.                                                                                                                                                                                                                                                                                                           |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>No variance</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |           |

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- 1 Picture above shows one of two units that were purchased, which replaced the Argo units

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| <b>Project Name:</b>                        | <b>Berm Wall Structure</b>                                                                                                                                                                                                                                                                                                          |                                    |           |
| <b>Investment Driver:</b>                   | System Renewal                                                                                                                                                                                                                                                                                                                      |                                    |           |
| <b>Start Date:</b>                          | 2020                                                                                                                                                                                                                                                                                                                                | <b>In-Service Date:</b>            | 2021      |
| <b>Forecast Capital Expenditure:</b>        | \$140,000                                                                                                                                                                                                                                                                                                                           | <b>Actual Capital Expenditure:</b> | \$142,354 |
| <b>Project Description:</b>                 | FNEI has taken on the project to rebuild one of the berm walls, which protect the powerline poles from potential damage during the annual spring freshet along the Albany River. The berm wall has deteriorated to a state where it no longer provided protection for the pole structures during the spring freshet.                |                                    |           |
| <b>Alternatives:</b>                        | The alternative was not to build a berm wall.                                                                                                                                                                                                                                                                                       |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority for FNEI as we have to take all precautions to keep the transmission lines safe and away from any vulnerabilities that may affect the system. During the spring freshet, this is time of high alert for FNEI due to the highwater levels and large ice chunks that can easily impact the transmission line. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Minimal variance due to additional contractor time spent with installation</li> </ul>                                                                                                                                                                                                        |                                    |           |

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- 1 Picture above is the berm wall that was constructed to prevent ice affecting poles during spring
- 2 river break up

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| <b>Project Name:</b>                        | <b>Station Building Insulation Upgrade</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                    |           |
| <b>Investment Driver:</b>                   | System Renewal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                    |           |
| <b>Start Date:</b>                          | 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>In-Service Date:</b>            | 2021      |
| <b>Forecast Capital Expenditure:</b>        | \$175,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Actual Capital Expenditure:</b> | \$175,329 |
| <b>Project Description:</b>                 | Application of spray foam insulation for transformer station control rooms. Proper insulation was required for the floors in both control rooms in Fort Albany, Kashechewan, and Attawapiskat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                    |           |
| <b>Alternatives:</b>                        | The alternative was not to insulate building floors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | This is a high priority for FNEI as with the colder temperature in the region, it posed a risk to the equipment in the building due to colder temperatures at the floor level, which could potentially affect the reliability of the equipment. The control building required proper insulation for the floors. The insulation installed were not up to standard and with the limited space required spray foam application. It is imperative we keep an even temperature through out the building to protect the building and the associated equipment. For instance, batteries that are affected with the colder temperature at floor level will affect their AH ratings. Also, with the proper insulation, heating costs will be reduced, which is beneficial. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Minimal variance due to additional time spent by contractor on installation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                    |           |

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| <b>Project Name:</b>                        | <b>Station Emergency Communications</b>                                                                                                                                                                                                                                                                                                                                                              |                                    |           |
| <b>Investment Driver:</b>                   | System Service                                                                                                                                                                                                                                                                                                                                                                                       |                                    |           |
| <b>Start Date:</b>                          | 2016                                                                                                                                                                                                                                                                                                                                                                                                 | <b>In-Service Date:</b>            | 2016      |
| <b>Forecast Capital Expenditure:</b>        | \$250,000                                                                                                                                                                                                                                                                                                                                                                                            | <b>Actual Capital Expenditure:</b> | \$250,743 |
| <b>Project Description:</b>                 | Installation of emergency communication systems at the transformer stations in Attawapiskat, Fort Albany and Kashechewan, which incorporates satellite, landline, and IP technology to provide reliable means of communicating with staff in each community.                                                                                                                                         |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would be not to proceed with the installation of the emergency communication systems, which was an unacceptable option for the reasons provided in the next section.                                                                                                                                                                                                            |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | The installation of the emergency communications systems was a high priority for FNEI because communication has an impact on the reliability and potential safety. Without these systems in place there would be no way to communicate with the local distribution company in the case of a power outage. Such communication blackouts had occurred previously and delayed the restoration of power. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"> <li>Minimal variance due to additional time spent by contractor on installation</li> </ul>                                                                                                                                                                                                                                                                        |                                    |           |

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| <b>Project Name:</b>                        | <b>Station Vehicles</b>                                                                                                                                                                                                                                                                                                             |                                    |           |
| <b>Investment Driver:</b>                   | General Plant                                                                                                                                                                                                                                                                                                                       |                                    |           |
| <b>Start Date:</b>                          | 2020                                                                                                                                                                                                                                                                                                                                | <b>In-Service Date:</b>            | 2020      |
| <b>Forecast Capital Expenditure:</b>        | \$175,000                                                                                                                                                                                                                                                                                                                           | <b>Actual Capital Expenditure:</b> | \$175,329 |
| <b>Project Description:</b>                 | Station Vehicles for the operations in each community.                                                                                                                                                                                                                                                                              |                                    |           |
| <b>Alternatives:</b>                        | The only alternative would be not to proceed with the purchase of new station vehicles for everyday operations.                                                                                                                                                                                                                     |                                    |           |
| <b>Priority and Risk of Not Proceeding:</b> | The purchase of the new station vehicles is a top priority because we need reliable vehicles in the communities, we serve in order to travel to designated sites. The vehicles are used during winter months for the right-of way clearing operations which requires safe and reliable vehicles to carry out the winter operations. |                                    |           |
| <b>Variance Drivers</b>                     | <ul style="list-style-type: none"><li>• No variance</li></ul>                                                                                                                                                                                                                                                                       |                                    |           |

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4 Picture Above: 2 of 3 Station trucks

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### **4.3 Accounting Treatment for Long-Term Projects**

FNEI accounts for capital assets in accordance with IFRS. Costs included in the carrying amount of property, plant and equipment includes expenditures that are directly attributable to the acquisition or construction of the asset. The cost of assets includes materials, services, direct labour and directly attributable overheads. Long-term projects are those projects that are under construction for a period of time greater than one year. Assets under construction are recorded as in progress until they are available for use, with the exception of enhancements to existing capital assets. These enhancements are recorded as capital assets as constructed and amortization commences in the month that the capital expense is incurred.

## **5 APPENDIX 1 – CUSTOMER ENGAGEMENT SURVEYS**



## Community Engagement

### Five Nations Energy Inc and Power Corporations 2025

#### Customer Engagement Summary

Five Nations Energy Inc. (FNEI) is the licensed transmitter which supplies electricity to Attawapiskat Power Corporation for distribution to the community.

#### Objective

- Provide information regarding planned upgrades to transmission lines or substations
- Provide system performance and outages
- Identify new supply needs within the community
- Identify any concerns for public safety around transmission lines and substations

#### Background

Attawapiskat Power Corporation (AttPC) is one of three distribution points Five Nations Energy Inc. delivers electricity. AttPC is a licensed Local Distribution Company (LDC) which is responsible for the distribution of electricity to Attawapiskat First Nation. Attawapiskat First Nation is located North of Moosonee on the James Bay Coast. FNEI delivers the electricity via the substation where the voltage is stepped down for distribution within Attawapiskat.

#### Positive Outcomes

- FNEI has LDC agreements with Power North for technical support
- FNEI supports LDC personnel growth, utilizing the LDC's linesmen in completing projects, offering valuable work experience
- FNEI currently has a Maintenance Service Contract for the LDC to provide Emergency and Maintenance Services when required. This allows the LDC Linesmen to gain valuable experience

#### What works well today?

FNEI has good support from Power North for technical help.

#### How has FNEI met the Power Corporations requirements/needs?

Providing reliable electricity to the Community  
Supporting local workforce development through training and projects.

What areas of change in the next 5 or 20 years?

Using new technology to monitor and manage the system smarter.

Engaging more with the community to include their ideas and needs

What can improve between FNEI and the Power Corporations?

Increased support for local workforce training  
Communication & Sharing information.



## Community Engagement

### Five Nations Energy Inc and Power Corporations 2025

#### Customer Engagement Summary

Five Nations Energy Inc. (FNEI) is the licensed transmitter which supplies electricity to Fort Albany Power Corporation for distribution to the community.

#### Objective

- Provide information regarding planned upgrades to transmission lines or substations
- Provide system performance and outages
- Identify new supply needs within the community
- Identify any concerns for public safety around transmission lines and substations

#### Background

Fort Albany Power Corporation (FAPC) is one of three distribution points Five Nations Energy Inc. delivers electricity. FAPC is a licensed Local Distribution Company (LDC) which is responsible for the distribution of electricity to Fort Albany First Nation. Fort Albany First Nation is located 260km North of Moosonee on the James Bay Coast. FNEI delivers the electricity via the substation where the voltage is stepped down for distribution within Fort Albany.

#### Positive Outcomes

- FNEI has LDC agreements with Power North for technical support
- FNEI supports LDC personnel growth, utilizing the LDC's linesmen in completing projects, offering valuable work experience
- FNEI currently has a Maintenance Service Contract for the LDC to provide Emergency and Maintenance Services when required. This allows the LDC Linesmen to gain valuable experience

#### What works well today?

How has FNEI met the Power Corporations requirements/needs?

Provides info planned upgrades w/ transmission/substations  
Provides system performance/outages  
as stated.

What areas of change in the next 5 or 20 years? Electricity Sector, towards renewable energy sources, advancements in grid technology. Energy Projects. Future generations.

What can improve between FNEI and the Power Corporations?

To meet more often to come together what LDC's have in mind in thought for future Projects. Also what Community members has in mind w Power corporations.

or to have Energy Projects going for Youth during School. ~~to~~ to find ways to work with in Energy.





## **Community Engagement**

### **Five Nations Energy Inc and Power Corporations 2025**

#### **Customer Engagement Summary**

Five Nations Energy Inc. (FNEI) is the licensed transmitter which supplies electricity to Kashechewan Power Corporation for distribution to the community.

#### **Objective**

- Provide information regarding planned upgrades to transmission lines or substations
- Provide system performance and outages
- Identify new supply needs within the community
- Identify any concerns for public safety around transmission lines and substations

#### **Background**

Kashechewan Power Corporation (KPC) is one of three distribution points Five Nations Energy Inc. delivers electricity. KPC is a licensed Local Distribution Company (LDC) which is responsible for the distribution of electricity to Kashechewan First Nation. Kashechewan First Nation is located 260km North of Moosonee on the James Bay Coast. FNEI delivers the electricity via the substation where the voltage is stepped down for distribution within Kashechewan.

#### **Positive Outcomes**

- FNEI has LDC agreements with Power North for technical support
- FNEI supports LDC personnel growth, utilizing the LDC's linesmen in completing projects, offering valuable work experience
- FNEI currently has a Maintenance Service Contract for the LDC to provide Emergency and Maintenance Services when required. This allows the LDC Linesmen to gain valuable experience

#### **What works well today?**

I have good communications with operations manager with all the KPC questions.

#### **How has FNEI met the Power Corporations requirements/needs?**

Yes, they have been meeting KPC's needs and requirements.

What areas of change in the next 5 or 20 years?

Upgrading the distribution system, will be requiring other feeders to meet community growth.

What can improve between FNEI and the Power Corporations?

I can't think of any improvements that are needed at the moment.

Kayla Wesley, General Manager

## **6 APPENDIX 2 - EQUIPMENT MAINTENANCE SCHEDULE**

## HIGH AND MEDIUM VOLTAGE EQUIPMENT MAINTENANCE SCHEDULE

| HIGH AND MEDIUM VOLTAGE EQUIPMENT MAINTENANCE SCHEDULE |       |                         |               |               |                                                  |           |
|--------------------------------------------------------|-------|-------------------------|---------------|---------------|--------------------------------------------------|-----------|
| EQUIPMENT                                              | TOTAL | Quantity per Substation |               |               | TEST, MEASUREMENTS AND INSPECTIONS               | Frequency |
|                                                        |       | Fort Albany             | Kashechewan   | Attawapiskat  |                                                  |           |
| Transformer                                            | 6     | 2                       | 2             | 2             |                                                  |           |
|                                                        |       | T1                      | T2            | T3            | Oil Testing                                      | 1 year    |
|                                                        |       | T1A                     | T2A           | T3A           | Power Factor Testing(winding and core)           | 5 year    |
|                                                        |       |                         |               |               | Power Factor Testing(bushings)                   | 5 year    |
|                                                        |       |                         |               |               | TTR tests                                        | 5 year    |
|                                                        |       |                         |               |               | Insulation resistance with polarization(PI)      | 5 year    |
|                                                        |       |                         |               |               | Functional test of auxillary devices             | 5 year    |
|                                                        |       |                         |               |               | Sound level master test                          | 3 year    |
|                                                        |       |                         |               |               | Visual Inspection, mech. Box, AC/DC, etc.        | 3 months  |
|                                                        |       |                         |               |               | Infrared                                         | 1 year    |
| Reactor                                                | 4     | 2                       | 1             | 1             |                                                  |           |
|                                                        |       | R1                      | R1            | R1            | Oil Testing                                      | 1 year    |
|                                                        |       | R2                      |               |               | Power Factor Testing(winding and core)           | 5 year    |
|                                                        |       |                         |               |               | Power Factor Testing(bushings)                   | 5 year    |
|                                                        |       |                         |               |               | Insulation resistance with polarization(PI)      | 5 year    |
|                                                        |       |                         |               |               | Functional test of auxillary devices             | 5 year    |
|                                                        |       |                         |               |               | Sound level master test                          | 3 year    |
|                                                        |       |                         |               |               | Visual Inspection, mech. Box, AC/DC, etc.        | 3 months  |
|                                                        |       |                         |               |               | Infrared                                         | 1 year    |
| HV Circuit Breaker                                     | 5     | 0                       | 4             | 1             |                                                  |           |
|                                                        |       |                         | L9R1          | L7B4          | Timing                                           | 5 year    |
|                                                        |       |                         | L9B3          |               | Minimum Trip test                                | 5 year    |
|                                                        |       |                         | L3B3          |               | Contact Resistance                               | 5 year    |
|                                                        |       |                         | L3B5          |               | Insulation test                                  | 5 year    |
|                                                        |       |                         |               |               | CT tests                                         | 5 year    |
|                                                        |       |                         |               |               | Functional test of auxillary devices             | 5 year    |
|                                                        |       |                         |               |               | Functional test - lubrication                    | 5 year    |
|                                                        |       |                         |               |               | Visual Inspection, mech. Box, AC/DC, etc.        | 3 months  |
|                                                        |       |                         |               |               | Infrared                                         | 1 year    |
| MV Circuit Breaker                                     | 18    | 6                       | 5             | 7             |                                                  |           |
|                                                        |       | T1-CB                   | T2-CB         | T3-CB         | Timing                                           | 5 year    |
|                                                        |       | T1A-CB                  | T2A-CB        | T3A-CB        | Minimum Trip test                                | 5 year    |
|                                                        |       | F1-CB                   | F1-CB         | F1-CB         | Contact Resistance                               | 5 year    |
|                                                        |       | F2-CB                   | F3-CB         | F2-CB         | Insulation test                                  | 5 year    |
|                                                        |       | TIE-CB                  | TIE-CB        | F3-CB         | CT tests                                         | 5 year    |
|                                                        |       | SPARE                   |               | F4-CB         | Functional test of auxillary devices             | 5 year    |
|                                                        |       |                         |               | TIE-CB        | Functional test - lubrication                    | 5 year    |
|                                                        |       |                         |               |               | Visual Inspection, mech. Box, AC/DC, etc.        | 3 months  |
|                                                        |       |                         |               |               | Infrared                                         | 1 year    |
| Circuit Switcher                                       | 9     | 4                       | 2             | 3             |                                                  |           |
|                                                        |       | T1-B2A                  | T2CS          | T3-B4A        | Timing                                           | 5 year    |
|                                                        |       | T1A-B2                  | T2ACS         | T3A-B4        | Contact Resistance                               | 5 year    |
|                                                        |       | R1-B2A                  |               | R1-B4A        | Insulation test                                  | 5 year    |
|                                                        |       | R2-B2                   |               |               | Functional test of auxillary devices             | 5 year    |
|                                                        |       |                         |               |               | Functional test - lubrication                    | 5 year    |
|                                                        |       |                         |               |               | Visual Inspection, mech. Box, AC/DC, etc.        | 3 months  |
|                                                        |       |                         |               |               | Infrared                                         | 1 year    |
| HV Disconnect Switch                                   | 16    | 2                       | 10            | 4             |                                                  |           |
|                                                        |       | 3364B2-M3K              | L9R1-9        | 3366-K5A      | Contact Resistance                               | 5 year    |
|                                                        |       | 3364B2A-M3K             | L9B3-9        | K5A-B4A       | Insulation Test                                  | 5 year    |
|                                                        |       |                         | L9B3-B3B      | L7B4-B4       | Functional test of auxillary contacts            | 5 year    |
|                                                        |       |                         | L3B3-3        | L7B4-7        | Functional test - lubrication                    | 5 year    |
|                                                        |       |                         | L3B3-B3A      |               | Alignment check                                  | 5 year    |
|                                                        |       |                         | L5B3-B3       |               | Visual Inspection, mech. Box, AC/DC, etc.        | 3 months  |
|                                                        |       |                         | B3-K5A        |               | Infrared                                         | 1 year    |
|                                                        |       |                         | 3365-K5A      |               |                                                  |           |
|                                                        |       |                         | T2A-B3B       |               |                                                  |           |
|                                                        |       |                         | T2-B3         |               |                                                  |           |
| Grounding Switch                                       | 6     | 1                       | 3             | 2             |                                                  |           |
|                                                        |       | 3364M3K-G               | 3365M9K-G     | 3366K5A-G     | Contact Resistance                               | 5 year    |
|                                                        |       |                         | 3365M3K-G     | 3366A7V-G     | Insulation Test                                  | 5 year    |
|                                                        |       |                         |               |               | Functional test of auxillary contacts            | 5 year    |
|                                                        |       |                         |               |               | Functional test - lubrication                    | 5 year    |
|                                                        |       |                         |               |               | Alignment check                                  | 5 year    |
|                                                        |       |                         |               |               | Visual Inspection                                | 3 months  |
| MSO disconnect switch                                  | 3     | 0                       | 3             | 0             |                                                  |           |
|                                                        |       |                         | B3A-B3B       |               | Visual Inspection                                | 3 months  |
|                                                        |       |                         | B3B-B3        |               | Infrared                                         | 1 year    |
|                                                        |       |                         | B3A-K5A       |               |                                                  |           |
| Voltage Transformers(CVT)                              | 27    | 5                       | 14            | 8             |                                                  |           |
|                                                        |       | B2ACVT                  | B3CVT(3)      | B4CVT         | TTR tests                                        | 5 year    |
|                                                        |       | B2CVT                   | B3ACVT        | B4ACVT        | Insulation test                                  | 5 year    |
|                                                        |       | 3365M3KCVT(3)           | B3BCVT        | 3366K5ACVT(3) | Dissipation Factor                               | 5 year    |
|                                                        |       |                         | 3365M9KCVT(3) | 3366A7VCVT(3) | Visual Inspection                                | 3 months  |
|                                                        |       |                         | 3365M3KCVT(3) |               | Infrared                                         | 1 year    |
| PLCC Line Traps                                        | 12    | 2                       | 6             | 4             |                                                  |           |
|                                                        |       | M3K                     | M3K           | M3K           | Visual Inspection                                | 3 months  |
|                                                        |       |                         | M9K           | A7V           | Infrared                                         | 1 year    |
|                                                        |       |                         | K5A           |               |                                                  |           |
| PLCC Line Tuners                                       | 12    | 2                       | 6             | 4             |                                                  |           |
|                                                        |       | M3K                     | M3K           | M3K           | Visual Inspection                                | 3 months  |
|                                                        |       |                         | M9K           | A7V           | Internal cleaning and labeling                   | 3 months  |
|                                                        |       |                         | K5A           |               |                                                  |           |
| MV Switchgear                                          | 6     | 2                       | 2             | 2             |                                                  |           |
|                                                        |       | Enclosure 1             | Enclosure 1   | Enclosure 1   | Cleaning of main bus and switchgear              | 5 year    |
|                                                        |       | Enclosure 2             | Enclosure 2   | Enclosure 2   | Insulation Test                                  | 5 year    |
|                                                        |       |                         |               |               | Contact Resistance test                          | 5 year    |
|                                                        |       |                         |               |               | CT tests(insulation, resistance, excitation)     | 5 year    |
|                                                        |       |                         |               |               | PT test(insulation, Resistance, TTR, excitation) | 5 year    |
|                                                        |       |                         |               |               | MV cables inspection/test                        | 5 year    |
|                                                        |       |                         |               |               | Visual Inspection(AC/DC, HVAC, etc)              | 4 months  |
| Voltage Regulators                                     | 24    | 6                       | 6             | 12            |                                                  |           |
|                                                        |       | F1VR(3)                 | F1VR(3)       | F1VR(3)       | Visual inspection, record data                   | 3 months  |
|                                                        |       | F2VR(3)                 | F3VR(3)       | F2VR(3)       | Functional tests                                 | 3 months  |
|                                                        |       |                         |               | F3VR(3)       | Oil tests                                        | 5 year    |
|                                                        |       |                         |               | F4VR(3)       | Infrared                                         | 1 year    |

**TELECOM, CONTROL & PROTECTION MAINTENANCE SCHEDULE**

| <b>TELECOM, CONTROL &amp; PROTECTION MAINTENANCE SCHEDULE</b> |       |                         |             |              |                                          |           |
|---------------------------------------------------------------|-------|-------------------------|-------------|--------------|------------------------------------------|-----------|
| EQUIPMENT                                                     | TOTAL | Quantity per Substation |             |              | TEST, MEASUREMENTS AND INSPECTIONS       | Frequency |
|                                                               |       | Fort Albany             | Kashechewan | Attawapiskat |                                          |           |
| Protection Panels                                             | 18    | 5                       | 6           | 7            |                                          |           |
|                                                               |       | R02                     | R03         | R04          | Digital Protection Relay tests           | 5 year    |
|                                                               |       | RA02                    | RA01        | RA01         | Control Schemes test(alarms and commands | 5 year    |
|                                                               |       | RA03                    | RA02        | RA02         | Wiring terminals inspection and cabling  | 1 year    |
|                                                               |       | RA04                    | RA03        | RA03         | Internal cleaning and labeling           | 1 year    |
|                                                               |       | E1C2                    | RA05        | RA04         | Visual Inspection                        | 3 months  |
|                                                               |       |                         | E1C2        |              |                                          |           |
|                                                               |       |                         |             | E1C4         |                                          |           |
| Circuit Breaker Panels<br>(Low Voltage)                       | 23    | 8                       | 7           | 7            |                                          |           |
|                                                               |       | AC1                     | AC1         | AC1          | LV Circuit Breaker Test                  | 2 year    |
|                                                               |       | AC1A                    | AC1A        | AC1A         | Wiring terminals inspection and cabling  | 1 year    |
|                                                               |       | AC1AA                   | AC2         | AC1AA        | Internal cleaning and labeling           | 1 year    |
|                                                               |       | AC1AAA                  | AC2A        | AC2          | Visual Inspection                        | 3 months  |
|                                                               |       | AC2                     | DC1         | DC1          |                                          |           |
|                                                               |       | DC1                     | DC2         | DC2          |                                          |           |
|                                                               |       | DC2                     | DC3         | DC3          |                                          |           |
|                                                               |       | DC3                     |             |              |                                          |           |
| PLCC Panel                                                    | 10    | 1                       | 5           | 4            |                                          |           |
|                                                               |       | PLCC-1                  | PLCC-1      | PLCC-1       | Functional test                          | 3 year    |
|                                                               |       |                         | PLCC-2      | PLCC-2       | Wiring terminals inspection and cabling  | 1 year    |
|                                                               |       |                         | PLCC-3      | PLCC-3       | Internal cleaning and labeling           | 3 months  |
|                                                               |       |                         | PLCC-4      | PLCC-4       | Visual Inspection                        | 3 months  |
|                                                               |       |                         | PLCC-5      |              |                                          |           |
| SCADA Panel                                                   | 6     | 2                       | 2           | 2            |                                          |           |
|                                                               |       | MSO1                    | MSO1        | MSO1         | CPU cleaning up                          | 1 Year    |
|                                                               |       |                         |             |              | Functional PC test and backup            | 1 Year    |
|                                                               |       |                         |             |              | Wiring terminals inspection and cabling  | 1 Year    |
|                                                               |       |                         |             |              | Internal cleaning and labeling           | 3 months  |
|                                                               |       |                         |             |              | Visual Inspection                        | 3 months  |
| DC Battery Bank/Chargers                                      | 6     | 2                       | 2           | 2            |                                          |           |
|                                                               |       | BB/BC1                  | BB/BC1      | BB/BC1       | Internal resistance test                 | 1 year    |
|                                                               |       | BB/BC2                  | BB/BC2      | BB/BC2       | Strap resistance test                    | 1 year    |
|                                                               |       |                         |             |              | Temperature                              | 1 year    |
|                                                               |       |                         |             |              | Capacity/load test                       | 5 year    |
|                                                               |       |                         |             |              | Electrolyte level                        | 3 months  |
|                                                               |       |                         |             |              | Battery bank/cell voltage                | 3 months  |
|                                                               |       |                         |             |              | Battery charger function and operation   | 3 months  |
| Communication Buildings                                       | 4     | 2                       | 1           | 1            |                                          |           |
|                                                               |       | Fort Albany             | Kashechewan | Attawapiskat | Visual Inspection(AC/DC, HVAC, etc)      | 3 months  |
|                                                               |       | Moosonee                |             |              | Back-up generator inspection/operation   | 3 months  |
|                                                               |       |                         |             |              | Communication operational functions      | Daily     |

**Filing Date: July 8, 2025**

**EB-2025-0129**

**Exhibit 2 – Transmission System Plan**

## **7 APPENDIX 3 – KINECTRICS ASSET CONDITION ASSESSMENT**



# FIVE NATIONS ENERGY INC 2023 ASSET CONDITION ASSESSMENT

K-814382-RA-0001 R01

Prepared for

Five Nations Energy Inc.

Issue Date

2024-Apr-30

| Prepared by                                                             | Reviewed by                                                                  | Approved by                                                                           |
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## 1. Introduction

Five Nations Energy Inc. (FNEI) is a utility that provides electricity to the remote Communities of Attawapiskat, Fort Albany, and Kashechewan. FNEI is an Ontario Energy Board licensed electricity transmitter and its activities, performance standards, and rates are regulated by the Ontario Energy Board.

In keeping with a commitment to strategic and prudent investment planning, FNEI recognized the need to perform an Asset Condition Assessment (ACA) on its key distribution assets. ACA is crucial part of asset management and provides a systematic process for determining and justifying long-term sustainment needs. Health indexing and risk assessment form the basis of ACA process. The Health Index (HI) expresses the condition of an asset as a single number, and risk assessment accounts for the consequence of asset failure. Using this process, the quantities of assets that will require attention in the next several years can be estimated.

Kinectrics used FNEI's 2023 asset information and Kinectrics' up-to-date methodologies to develop HI distributions and estimate action plans based on the asset condition. This report presents the results of Kinectrics' assessment.

### 1.1 Objective and Scope of Work

The objective of the work was to conduct ACA on a subset of FNEI's key distribution assets. The ACA was designed to quantify the extent of aging and to estimate the number of assets that likely need to be addressed in the near future.

The categories of assets included in this study are as follows:

1. Power Transformers
2. Reactors
3. Circuit Breakers
4. Circuit Switchers
5. Disconnect Switches
6. Ground Switches
7. Metal-clad Switchgear
8. Voltage Regulators
9. Pole Lines
10. Capacitive Voltage Transformers (CVTs)
11. Line Traps
12. Line Tuners
13. Power Line Carrier Communication (PLCC)
14. Relays
15. Battery Banks (including charger)
16. SCADA

For each asset category, the following are included:

- HI formula
- Age distribution

- HI distribution
- Condition-based flagged for action (FFA) Plan
- Prioritized list of assets requiring attention
- Assessment of data availability and a data gap analysis

## 2. Asset Condition Assessment Methodology

The ACA methodology involves the process of determining asset HI, as well as developing a condition based FFA Plan for each asset group. In this project, FNEI customized algorithms were developed using existing utility data and information, as well as input from the utility technical and field staff.

### 2.1 Health Index

Health Indexing quantifies equipment condition based on numerous condition parameters related to the degradation factors that lead to an asset's end of service life. The Health Index is an indicator of the asset's overall health and is typically given in terms of percentage, with 100% representing an asset in brand new condition and values close to 0 representing an asset close to the end of its physical life. Health Indexing provides a measure of long-term degradation and thus differs from defect management, whose objective is finding defects and deficiencies that need correction or remediation in order to keep an asset operating prior to reaching its end of life.

*Condition parameters* are the asset characteristics or properties that are used to derive the HI. A condition parameter may be comprised of several sub-condition parameters. For example, a parameter called 'Oil Quality' may be a composite of parameters such as 'Moisture', 'Acid', 'Interfacial Tension', 'Dielectric Strength' and 'Color'.

In formulating a HI, condition parameters are ranked, through the assignment of *weights*, based on their contribution to asset degradation. The *condition parameter score* for a parameter is a numeric evaluation of an asset with respect to that parameter.

HI, which is a function of scores and weights, is therefore given by:

$$HI = \frac{\sum_{m=1}^{\forall m} \alpha_m (CPS_m \times WCP_m)}{\sum_{m=1}^{\forall m} \alpha_m (CPS_{m.\max} \times WCP_m)} \times DR$$

**Equation 1**

where



$$CPS_m = \frac{\sum_{n=1}^{\forall n} \beta_n (SCPS_n \times WSCP_n) \times DR_n}{\sum_{n=1}^{\forall n} \beta_n (WSCP_n)} \times DR_m$$

**Equation 2**

|                      |                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------|
| CPS                  | Condition Parameter (CP) Score, 0-4                                                                                 |
| WCP                  | Weight of Condition Parameter                                                                                       |
| $\alpha_m / \beta_n$ | Data availability coefficient for condition/sub-condition parameter (1 if input data available; 0 if not available) |
| SCPS                 | Sub-Condition Parameter (SCP) Score, 0-4                                                                            |
| WSCP                 | Weight of Sub-Condition Parameter                                                                                   |
| DR                   | Derating Multiplier                                                                                                 |

The scale that is used to determine an asset's score for a parameter is called the *condition criteria*. In the Kinectrics methodology, a condition criterion scoring system of 0 through 4 is used. A score of 0 is the 'worst' possible score; a score of 4 is the 'best' score, i.e.  $CPS_{max} = SCPS_{max} = 4$ .

The  $\alpha$  and  $\beta$  values are set to 0 if the parameter data is unavailable and 1 if the data is available. It is evident from the equations that the HI formula will, in essence, be readjusted for each unit depending on the specific data available for each unit. For example, if the HI formula for a certain asset category is based originally on 5 condition parameters (i.e.  $m = 5$  in Equation 1) but a specific unit only has parameters 1 and 3 available (e.g.  $\alpha_1 = 1, \alpha_2 = 0, \alpha_3 = 1, \alpha_4 = 0, \alpha_5 = 0$ ), its HI calculation will only be based on parameters 1 and 3.

Derating (DR) Multipliers are also used to adjust a condition or sub-condition parameter score or calculated Health Index to reflect certain conditions. These may be factors that may or may not be related to asset condition but may impact asset service life. For example, certain breaker operating mechanisms may be problematic, so a DR Multiplier may be associated with operating mechanism. A certain population of wood poles may be in a region that is prone to lightning strikes. The HI of these poles may be de-rated to reflect higher likelihood of lightning.

Dominant parameters may be used as Derating multipliers. These are asset properties that are of such importance that their status has a dominant impact on the value of the Health Index. An example is oil dielectric breakdown strength of transformers. If the breakdown strength is poor, a DR Multiplier can be applied to the HI, placing the transformer in poor condition, regardless of the overall HI score.

In this methodology, the final HI assigned to an individual asset is limited by the asset's age. An *Age Limiter* (AL), which is equal to the cumulative survival probability at a given age of an asset group, is compared to the calculated HI. If the calculated HI is less than or equal to the AL, the

final HI assigned is the calculated HI. If the calculated HI is more than the AL, then the final HI assigned is equal to the AL. It is important to note in using the AL that although the calculated HI (based in condition data such as test results, inspections, loading, etc.) may be high, the final HI may be low because of asset age.

The final HI score is:

$$HI_{Final} = \begin{cases} \text{if } (AL < HI, HI_{Final} = AL) \\ \text{else } (HI_{Final} = HI) \end{cases}$$

**Equation 3**

|    |                                        |
|----|----------------------------------------|
| AL | Age Limiter                            |
| HI | Health Index calculated per Equation 1 |

As stated previously, an asset's HI is given as a percentage, with 100% representing 'as new' condition. The HI is calculated if there is age or some condition data available. The subset of the population with such data is called the *sample size*. Results are presented in terms of number of units and as a percentage of the sample size. If the sample size is sufficiently large and the units within the sample size are sufficiently random, the results may be extrapolated for the entire population.

The HI distribution given for each asset group illustrates the overall condition of the asset group. Further, although HI is calculated for each unit, for simplicity of presentation the results are aggregated into five categories and the categorized distribution for each asset group is given. The HI categories are as follows:

|           |                                      |
|-----------|--------------------------------------|
| Very Poor | Health Index < 25%                   |
| Poor      | $25 \leq \text{Health Index} < 50\%$ |
| Fair      | $50 \leq \text{Health Index} < 70\%$ |
| Good      | $70 \leq \text{Health Index} < 85\%$ |
| Very Good | Health Index $\geq 85\%$             |

## 2.2 Condition Based Flagged for Action Plan

In this methodology, the Flagged for Action (FFA) Plan for a given asset category shows the number of assets that may require attention or action each year within the planning period. Possible actions are to replace, refurbish, further test, monitor, implement operating solution, etc. The plan is condition or health based, meaning other factors, such as economics, obsolescence, system growth, etc. are not considered. A 'Levelized' FFA Plan smooths the peaks and valleys of the FFA Plan.

The two ways for determining the assets within FFA Plan in this methodology are the 'Life Curve' approach and the 'Risk Based' approach. The selected action is asset dependent.

These are further explained in subsequent sections. The asset life curve models are first established.

### **Life Curves**

In this project the term 'removals' is used to describe the removal of assets from service, regardless of the reason. Reasons for removal can include asset failure, proactive replacement because of condition, system growth, obsolescence, third party construction, etc.

A frequency of removals that grows exponentially with age generally provides a good overall model of asset service life. Based on Kinectrics' experience in failure rate studies of multiple power system asset groups, Kinectrics has selected the Weibull equation to model the removals as functions of asset age. The Weibull distribution has no specific characteristic shape and, as such, can model the exponentially increasing removal rate using appropriate parameters.

The Weibull distribution is a continuous probability distribution with the following probability density function equation:

$$f(t) = \frac{\beta t^{\beta-1}}{\alpha^\beta} e^{-\left(\frac{t}{\alpha}\right)^\beta}$$

**Equation 4**

$f(t)$  = probability density function (PDF), i.e. *likelihood that an asset will be removed from service when its age is within a particular range*  
 $t$  = time (age in years)  
 $\alpha, \beta$  = constant parameters that control the shape of the curve

The corresponding cumulative distribution function is as described in the equation below. The function models cumulative likelihood of removals over time. The likelihood of survival is the complement of the likelihood of removal:

$$Q(t) = 1 - R(t) = 1 - e^{-\left(\frac{t}{\alpha}\right)^\beta}$$

**Equation 5**

$Q(t)$  = cumulative distribution function (CDF), i.e. *cumulative likelihood of removals*  
 $R(t)$  = survival function

The removal rate (i.e. percentage of removals associated with a certain age) is:

$$\lambda(t) = \frac{f(t)}{1 - Q(t)} = \frac{\beta t^{\beta-1}}{\alpha^\beta}$$

**Equation 6**

$\lambda(t)$  = percent removals per year per age, i.e. *removal rate*

Different asset groups experience different removal rates. The parameters  $\alpha$  and  $\beta$  define the shape of the Weibull distribution for a specific asset group. Examples of the three functions described above are shown in Figure 2-1, where  $\alpha = 57.503$  and  $\beta = 4.132$ . It can be seen from the graph and from Equation 4 that  $Q(40) = 0.2$  and  $Q(75) = 0.95$ . In other words, the cumulative distribution functions (i.e. cumulative likelihood of removals) at age = 40 and 75 years are 20% and 95% respectively. The area beneath the red PDF curve between the purple hatched lines (at age = 45 and 60 years) equates to 41.6% of the entire area under the curve. This represents a 41.6% likelihood that an asset removed from service will be between the ages of 45 to 60 years.

For each asset group, the values of these constant  $\alpha$  and  $\beta$  parameters were calculated such that they reflect typical service lives of the asset groups. With assets that are run to failure, the removal curve may closely resemble the failure curve of the asset. Note however, that the removal curves will include assets that have been removed for reasons other than failure (e.g. removals because of proactive replacement based on condition, system growth, obsolescence, etc.). In this project that the life curves developed for all asset groups were based on typical industry values.

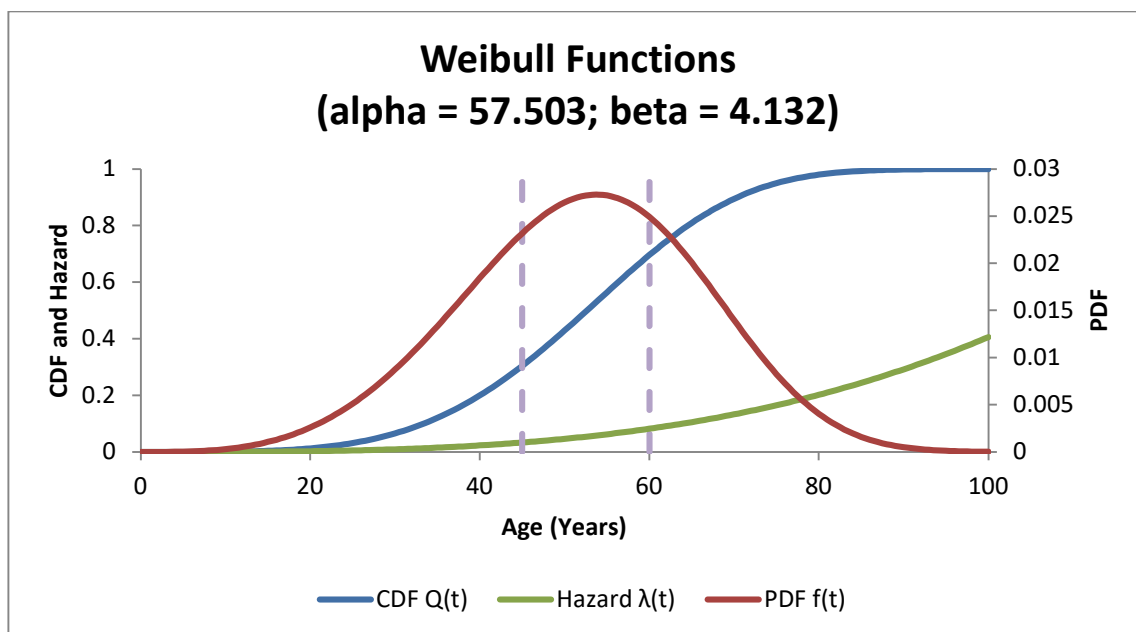


**Figure 2-1 Weibull Functions**

### 2.2.1 Flagged for Action Plan Using a Life Curve Approach

The Life Curve approach is used to estimate the number of assets to be addressed in a given year, using the asset's removal rate (Equation 6).

An example of such a Flagged for Action Plan is as follows: Consider an asset distribution of 100 5-year-old units, 20 10-year-old units, and 50 20-year-old units. Assume that the failure rates for 5, 10, and 20-year-old units for this asset class are  $f_5 = 0.02$ ,  $f_{10} = 0.05$ ,  $f_{20} = 0.1$  failures / year respectively. In the current year, the total number of replacements is  $100(.02) + 20(0.05) + 50(0.1) = 2 + 1 + 5 = 8$ .

In the following year, the expected asset distribution is, as a result, as follows: 8 1-year old units, 98 6-year-old units, 19 11-year-old units, and 45 21-year-old-units. The number of replacements in year 2 is therefore  $8(f_1) + 19(f_6) + 45(f_{11}) + 45(f_{21})$ .

Note that in this study the 'age' used is in fact 'effective age', or condition-based age as defined by the asset HI, as opposed to the chronological age of the asset.

For the asset categories below, this probabilistic approach is used to estimate the FFA Plan. It is also important to note that the FFA Plan gives only the estimated number of assets per year that need to be addressed; the year that a specific unit needs to be addressed is not calculated.

- Pole Mounted Transformers
- Pad Mounted Transformers
- Pad Mounted Switchgear
- Poles (Wood and Concrete)
- Underground Cables (Non-TRXLPE, TRXLPE)

## 2.2.2 Flagged for Action Plan Using a Risk-Based Approach

For some assets costs of replacement and/or consequences of failure are significant, and as a result planning for replacement requires more consideration than only condition. For these assets, a risk-based approach is taken when developing the FFA Plan. The FFA Year (the year that a unit is flagged for action) is calculated for each asset unit.

This risk-based methodology considers both the asset likelihood of removal (as related to HI) and its consequence of failure (criticality). The product of likelihood or removal and consequence of failure determines asset risk.

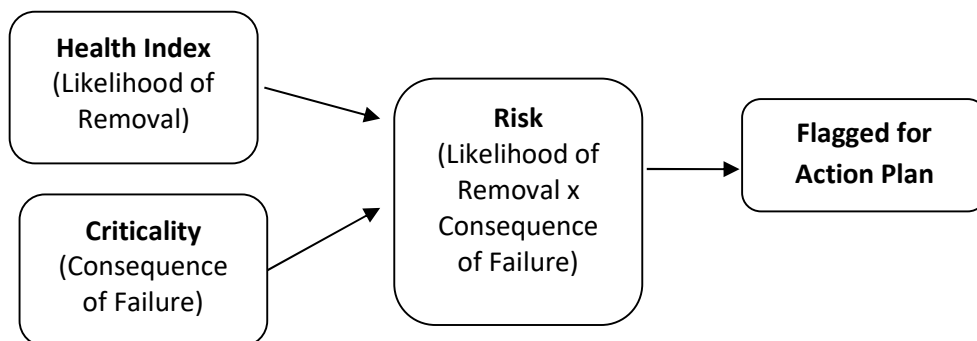


**Figure 2-2 Risk Assessment Procedure**

### *Relating Health Index to Likelihood of Removal*

The health of an asset correlates to condition based likelihood of removal. The methodology that this project uses to relate HI to likelihood of removal considers asset stress as described below.

If there are no dominant sources, it is assumed in this methodology that the stress to which an asset is exposed is not constant and will have a somewhat normal frequency distribution. This is illustrated by the probability density curve of stress below. The vertical lines in the figure represent condition or strength (HI) of an asset.

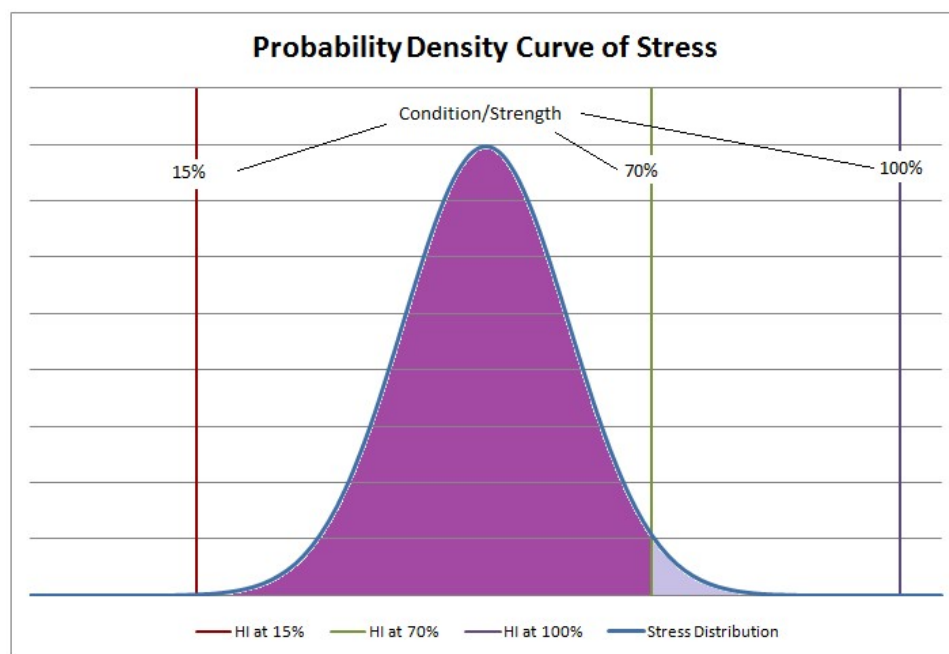


**Figure 2-3 Stress Curve**

An asset in as-new condition (100% strength) should be able to withstand most levels of stress. As the condition of the asset deteriorates, it may be less able to withstand higher levels of stress. Consider, for example, the green vertical line that represents 70% condition/strength. The asset should be able to withstand magnitudes of stress to the left of the green line. If, however, the stress is of a magnitude to the right of the green line, the asset can fail and consequently be removed from service.

To create a relationship between the HI and likelihood of removal, assume two "points" on the stress curve that correspond to two different HI values. In this example, assume that an asset that has a condition/strength (HI) of 100% can withstand all magnitudes of stress to the left of the purple line. It then follows that probability that an asset in 100% condition will fail is the probability that the magnitude of stress is at levels to the right of the purple line. This corresponds to the area under the stress density curve to the right of the purple line. Similarly, if

it assumed that an asset with a condition of 15% will fail if subjected to stress at magnitudes to the right of the red line, the probability of failure at 15% condition is the area under the stress density curve to the right of the red line.

The likelihood of removal at a particular HI is found from plotting the HI on the X-axis and the area under the probability density curve to the right of the HI line on the Y-axis, as shown on the graph of the figure below.

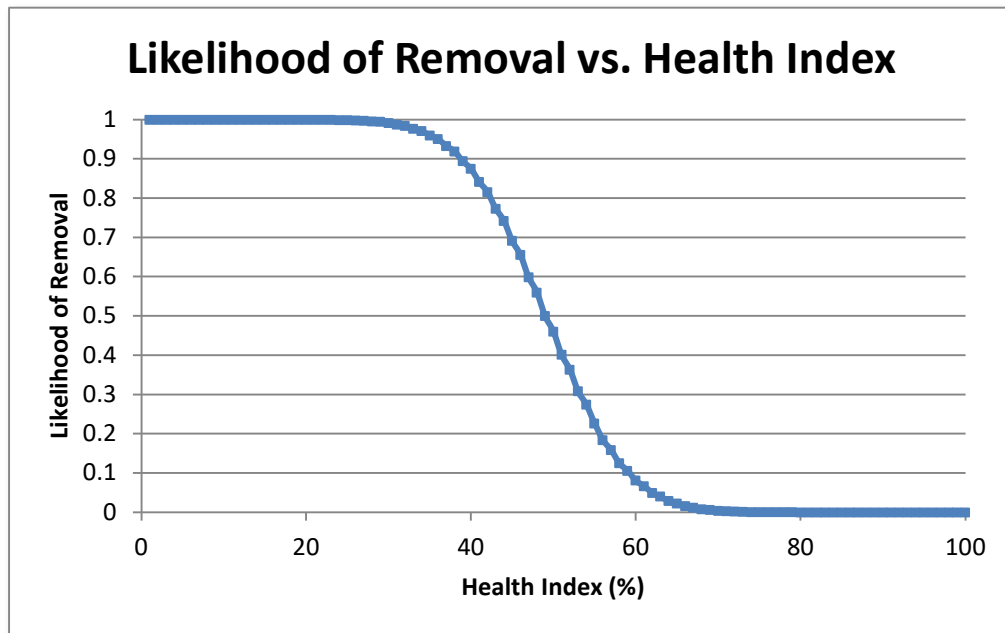


**Figure 2-4 Likelihood of Removal vs. Health Index**

### *Criticality*

In this study, the metric used to measure consequence of failure is referred to as *Criticality*. Criticality may be determined in numerous ways, with monetary consequence or degree of risk to corporate business values being examples. The higher the criticality value assigned to a unit, the higher it's consequence of failure.

The asset's criticality is defined as follows:

$$\text{Criticality} = (\text{Criticality}_{\max} - \text{Criticality}_{\min}) * \text{Criticality\_Index} + \text{Criticality}_{\min}$$

**Equation 7**

Where the maximum and minimum criticality values are as follows:

$$\text{Criticality}_{\max} = 1/(80\%) = 1.25$$

$$\text{Criticality}_{\min} = 1/(95\%) = 1.05$$

This study flags an asset as a candidate for action when the risk (product of its likelihood of removal and criticality) is greater than or equal to one. The above maximum and minimum Criticality values were selected to ensure that units with highest relative importance are flagged as soon as the likelihood of removal is 80% (i.e. Consider an asset whose HI corresponds to an 80% likelihood of removal and whose Criticality = 1.25. Its risk = likelihood of removal x Criticality = 80% X 1.25 = 1. Since the risk = 1, the asset is flagged for action). Action for units that are least critical can be deferred until likelihood of removal is 95%.

As seen in Equation 6 above, a *Criticality Index* (CI) will be calculated for each asset to quantify Criticality. Similar to the HI, the CI is a sum-product of scores and weights of parameters that represent a unit's consequence of failure. CI ranges from 0% to 100%, with 100% representing the unit with the highest possible consequence of failure.

$$Criticality\_Index = \frac{\sum_{i=1}^{\forall i} (SCR P_i \times WCR P_i)}{\sum_{i=1}^{\forall i} (WCR P_i)}$$

**Equation 8**

SCR P Score of criticality risk parameter  
WCR P Weight of criticality risk parameter

### *Risk*

As previously mentioned, asset risk is the product of likelihood of removal and Criticality:

$$Risk = Likelihood\ of\ Removals \times Criticality$$

**Equation 9**

Since the likelihood of removal ranges from 0 to 1 and Criticality ranges from 1.05 to 1.25 in this methodology (i.e. Criticality<sub>min.</sub> = 1.05 and Criticality<sub>max.</sub> = 1.25), asset Risk will range from 0 to 1.25. However, to better visualize the relative risk of each asset within an asset category, a normalized *Risk Index* for each asset is also given. The Risk Index is simply the asset's calculated Risk divided by the maximum Criticality (i.e. Risk Index = (Likelihood of Failure x Criticality) / Criticality<sub>max.</sub>). As a result the Risk Index ranges from 0% to 100%.

The risk-based approach was used to estimate the FFA Plan for Substation Transformers and Circuit Breakers. With this approach, in addition to the estimated number of assets per year that need to be addressed, the FFA Year (i.e. the years that a particular unit is flagged for action) is calculated for each asset unit.



## 2.3 Data Assessment

The condition data used in this study was provided by FNEI and included the following:

- Asset Properties (e.g. age, size, voltage, location information)
- Test Results (e.g. Oil Quality, DGA, power factor, contact resistance, etc.)
- Loading information
- Inspection records

There are two dimensions for assessing the availability and completeness of data used in this study: Data Availability Indicator (DAI) and data gap.

### 2.3.1 Data Availability Indicator (DAI)

The Data Availability Indicator (DAI) is a measure of the amount of condition parameter data that an asset has, as measured against the condition parameters included in the HI formula. It is determined by the ratio of the weighted condition parameters score and the subset of condition parameters data available for the asset over the “best” overall weighted, total condition parameters score. The formula is given by:

$$DAI = \frac{\sum_{m=1}^{\forall m} (DAI_{CPS\ m} \times WCP_m)}{\sum_{m=1}^{\forall m} (WCP_m)}$$

Equation 10

where

$$DAI_{CPSm} = \frac{\sum_{n=1}^{\forall n} \beta_n \times WSCP_n}{\sum_{n=1}^{\forall n} (WSCP_n)}$$

Equation 11

|              |                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------|
| $DAI_{CPSm}$ | Data Availability Indicator for Condition Parameter m with n Sub-Condition Parameter (SCP)                   |
| $\beta_n$    | Data availability coefficient for sub-condition parameter (=1 when data available, =0 when data unavailable) |
| $WSCP_n$     | Weight of Sub-Condition Parameter n Parameters                                                               |
| $WCP_m$      | Weight of Condition Parameter m                                                                              |

For example, consider an asset with the following condition parameters and sub-condition parameters:

| Condition Parameter |      | Condition Parameter Weight (WCP) | Sub-Condition Parameter |      | Sub-Condition Parameter Weight (WSCP) | Data Available? ( $\beta = 1$ if available; 0 if not) |
|---------------------|------|----------------------------------|-------------------------|------|---------------------------------------|-------------------------------------------------------|
| m                   | Name |                                  | n                       | Name |                                       |                                                       |
| 1                   | A    | 1                                | 1                       | A_1  | 1                                     | 1                                                     |
| 2                   | B    | 2                                | 1                       | B_1  | 2                                     | 1                                                     |
|                     |      |                                  | 2                       | B_2  | 4                                     | 1                                                     |
|                     |      |                                  | 3                       | B_3  | 5                                     | 0                                                     |
| 3                   | C    | 3                                | 1                       | C_1  | 1                                     | 0                                                     |

The DAI is calculated as follows:

$$DAI_{CP1} = (1 \times 1) / (1) = 1$$

$$DAI_{CP2} = (1 \times 2 + 1 \times 4 + 0 \times 5) / (2 + 4 + 5) = 0.545$$

$$DAI_{CP3} = (0 \times 1) / (1) = 0$$

$$DAI = (DAI_{CP1} \times WCP_1 + DAI_{CP2} \times WCP_2 + DAI_{CP3} \times WCP_3) / (WCP_1 + WCP_2 + WCP_3)$$

$$= (1 \times 1 + 0.545 \times 2 + 0 \times 3) / (1 + 2 + 3)$$

$$= 35\%$$

An asset with all condition parameter data represented will, by definition, have a DAI value of 100%. In this case, an asset will have a DAI of 100% regardless of its HI score. Provided that the condition parameters used in the HI formula are of good quality and there are few data gaps, there will be a high degree of confidence that the HI score accurately reflects the asset's condition.

Note that where no condition data is available (i.e. no condition parameters are available) for an asset but the age is known, an HI can be calculated based on age (i.e. HI will be equal to the likelihood of survival at the asset's age). For these cases, the DAI is 0%. If there is no data whatsoever the HI will not be calculated. The DAI will still be shown as 0% because 0% means no condition data is available, and the HI will be reflected as a blank.

### 2.3.2 Data Gaps

The HI formulas developed and used in this study are based only on FNEI's available data. There are additional data or tests that FNEI may not collect or perform at the present time, but such data/tests are important indicators of the deterioration and degradation of assets. While these will not be included in the HI formula, the set of unavailable data are referred to as data gaps. I.e. a data gap is the case where **none** of the units in an asset group has data. This could be because the data is not collected, certain tests are not conducted, no inspection

procedures are in place to obtain condition data, etc. The situation where data is provided for only a sub-set of the population is not considered as a data gap. Consider a utility that has just implemented a wood pole testing program. The “pole strength” parameter will be added to the wood pole HI formula. Say that because the program is new, only 5% of the wood pole population presently have test data. In this case, wood pole is **not** a data gap. However, 95% of the wood pole population will have reduced DAI because they lack data pole strength data.

As part of this study, the data gaps of each asset category are identified. In addition, the data items are ranked in terms of importance. There are three priority levels, the highest being most indicative of asset degradation.

| Priority | Description                                                                              | Symbol |
|----------|------------------------------------------------------------------------------------------|--------|
| High     | Most useful as an indicator of asset degradation                                         | 1      |
| Medium   | Important data; can indicate the need for corrective maintenance or increased monitoring | 2      |
| Low      | Helpful data; least indicative of asset deterioration                                    | 3      |

It is generally recommended that data collection be initiated for the most critical items because such information will result in higher quality HI formulas.

The more critical and important data included in the HI formula of a certain asset group, and the higher the DAI of a particular unit in that group, the higher the confidence in the HI calculated for the particular unit.

If an asset group has significant data gaps and the data used to derive the HI is not good condition data (e.g. age only), there is less confidence that the HI score of a particular unit accurately reflects its condition, regardless of the value of its DAI.

To facilitate the incorporation of data gap items into improved HI formulas for future assessments, the data gap items are presented in this report as condition parameters. Given are a description of the data, priority, and possible data sources.

The following is an example for “Tank Corrosion” on a Pad-Mounted Transformer:

| Data Gap       | Priority | Description                                                     | Source                                 |
|----------------|----------|-----------------------------------------------------------------|----------------------------------------|
| Tank Corrosion | 2        | Tank surface rust or deterioration due to environmental factors | Inspections or corrective work orders. |



### 3. Results

This section summarizes the findings of this study.

#### 3.1 Health Index Results

A summary of the HI results is shown in Table 3-1. For each asset category the population, sample size (number of assets with sufficient data for Health Indexing), and average age are given. The average HI and HI distribution are also shown. A summary of the HI distributions for all asset categories are also graphically shown in Figure 3-1.

Line Traps, Line Tuners and Power Line Carriers had all the asset units classified in poor or very poor category. This was not due to defects found during inspections, but due to age limiting as per industry statistics.

One battery bank was classified as poor. This was due to noticeable increase in measured intercell resistance and cell impedance in the past year.

The remaining asset categories had no percentage of units in poor or very poor condition.



Table 3-1 Health Index Summary

| Asset Category        | Population | Sample Size | Average Health Index | Health Index Distribution |                  |                  |                  |                    |
|-----------------------|------------|-------------|----------------------|---------------------------|------------------|------------------|------------------|--------------------|
|                       |            |             |                      | Very Poor (< 25%)         | Poor (25 - <50%) | Fair (50 - <70%) | Good (70 - <85%) | Very Good (>= 85%) |
| Power Transformers    | 6          | 6           | 90%                  | 0                         | 0                | 0                | 1                |                    |
| Reactors              | 4          | 4           | 95%                  | 0                         | 0                | 0                | 1                |                    |
| Circuit Breakers      | 75         | 22          | 85%                  | 0                         | 0                | 0                | 9                |                    |
| Circuit Switchers     | 9          | 9           | 91%                  | 0                         | 0                | 0                | 1                |                    |
| Disconnect Switches   | 12         | 12          | 98%                  | 0                         | 0                | 0                | 0                |                    |
| Ground Swicthes       | 7          | 7           | 98%                  | 0                         | 0                | 0                | 0                |                    |
| Metal-clad Switchgear | 6          | 6           | 88%                  | 0                         | 0                | 0                | 1                |                    |
| Voltage Regulators    | 21         | 21          | 86%                  | 0                         | 0                | 0                | 12               |                    |
| Pole Lines            | 3          | 3           | 98%                  | 0                         | 0                | 0                | 0                |                    |
| CVTs                  | 26         | 26          | 99%                  | 0                         | 0                | 0                | 1                |                    |
| Line Traps            | 12         | 12          | 30%                  | 4                         | 8                | 0                | 0                |                    |
| Line Tuners           | 12         | 12          | 28%                  | 6                         | 6                | 0                | 0                |                    |
| Power Line Carriers   | 10         | 10          | 29%                  | 0                         | 10               | 0                | 0                |                    |
| Relays                | 45         | 45          | 93%                  | 0                         | 0                | 0                | 7                |                    |
| Battery Banks         | 6          | 6           | 66%                  | 0                         | 1                | 3                | 1                |                    |
| SCADA                 | 6          | 6           | 81%                  | 0                         | 0                | 1                | 3                |                    |



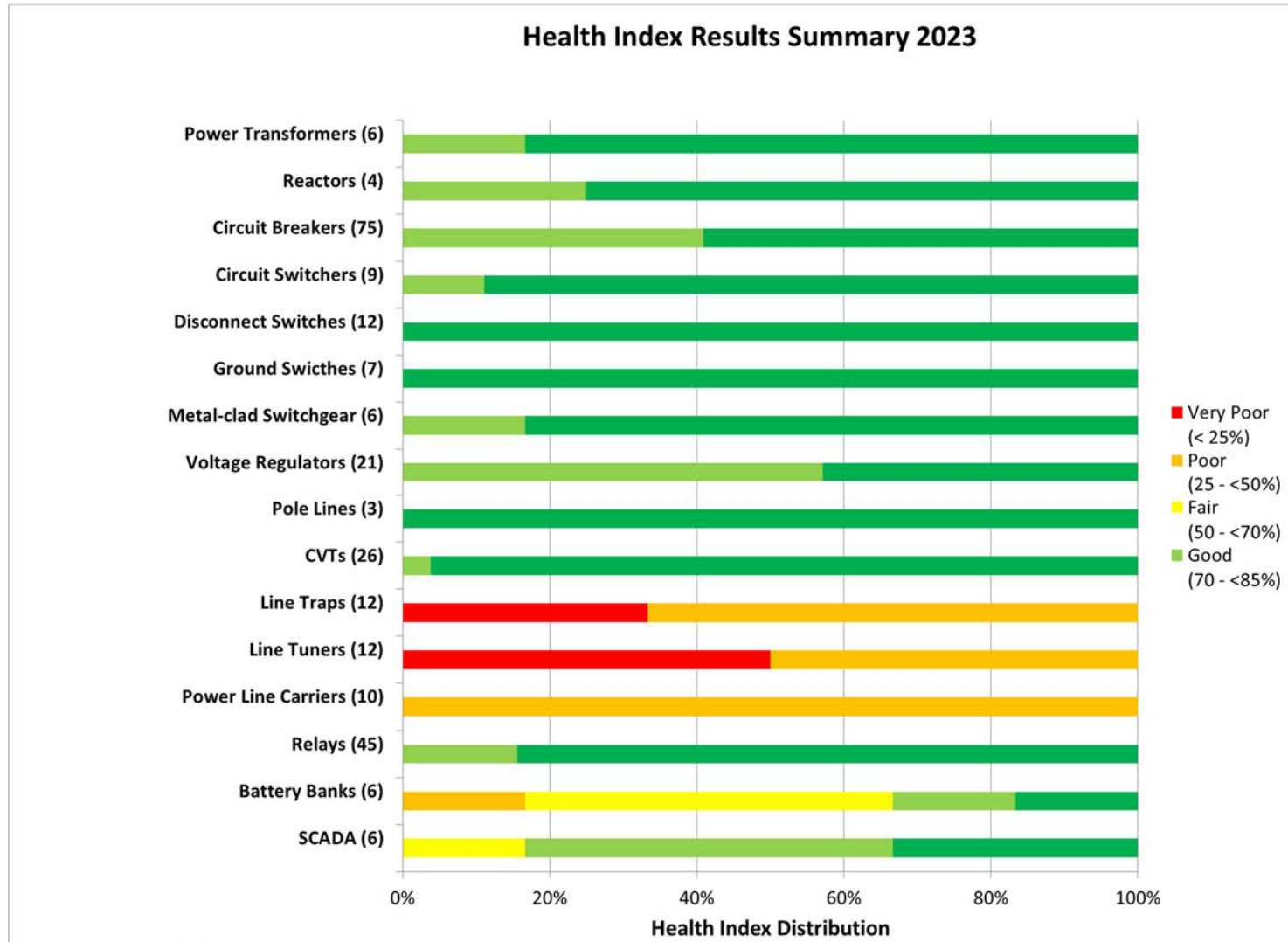


Figure 3-1 Health Index Summary (Graphical)



### 3.2 Condition-Based Flagged for Action (FFA) Plan

Table 3-2 show the 10-year FFA Plan. The FFA Plan estimates the number of units expected to require attention in a given year. All but one asset group had their FFA plans calculated as per the methodology in 2.2.1. For Power Line Carriers, a 'Levelized' FFA Plan that smoothed out peaks and valleys to more constant rates was adopted. The yearly average for Years 0 through 5 (i.e. sum of assets flagged for action between years 0 through 5 divided by 6) is also shown.

It is evident that there may be significantly larger quantities of assets flagged for action in the first year than in subsequent years. This represents a backlog of assets that require attention. This is generally the case when there is a large quantity of assets that are at or near the end of their expected service lives. Because such assets would have higher likelihood of failure, large quantities will be flagged for intervention in the first year. Since the assessment methodology assumes that all units flagged for action are addressed, the quantities flagged for action in year 2 or later may be significantly smaller than that of the first year. In reality, only some of the units flagged for action in the first year will be dealt with while the remaining units will be addressed in subsequent years. This will eventually change the flagged for action list in the coming years as the backlog is gradually reduced.

FNEI's most significant numbers flagged for action, in terms of number of units, in the current year were found to be for Line Traps and Line Tuners. In the current year, 2 units are flagged for attention in both cases. As the results were due to age limiting, FNEI is recommended to review the actual life expectancy of these asset groups based on FNEI practice.

Relays have 1 unit flagged for action annually in the next 10 years.

The 1 battery bank classified as very poor was flagged for action in current year.

Those that were flagged based on age should be monitored closely (test results, inspections, loading, etc.) for any change in condition.



Table 3-2 Flagged for Action Plan

| Asset Category        | Flagged for Action Plan by Year |   |   |   |   |   |   |   |   |   |    | Now (Year 0)    |                          | Years 0-5 Inclusive   |                |
|-----------------------|---------------------------------|---|---|---|---|---|---|---|---|---|----|-----------------|--------------------------|-----------------------|----------------|
|                       | 0                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Number of Units | Percentage of Population | Total Number of Units | Yearly Average |
| Power Transformers    | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Reactors              | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Circuit Breakers      | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Circuit Switchers     | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Disconnect Switches   | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Ground Swicthes       | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Metal-clad Switchgear | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Voltage Regulators    | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Pole Lines            | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| CVTs                  | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0               | 0.0%                     | 0                     | 0              |
| Line Traps            | 3                               | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 3               | 25.0%                    | 10                    | <2             |
| Line Tuners           | 3                               | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 3               | 25.0%                    | 10                    | <2             |
| Power Line Carriers   | 2                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0  | 2               | 20.0%                    | 7                     | <2             |
| Relays                | 1                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1               | 2.2%                     | 6                     | 1              |
| Battery Banks         | 1                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1               | 16.7%                    | 1                     | <1             |
| SCADA                 | 0                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 0               | 0.0%                     | 0                     | 0              |



### 3.3 Data Assessment

This section summarizes the data that was used for the assessment and observations and recommendations pertaining to the data used in the assessment. Note that details for each asset category are given in Appendix A.

Table 3-3 shows the data feeding the health index, average DAIs, and data gaps and observations. An overall data assessment, representing to the degree with which the data reflects asset condition, is also given. Recall from Section 2.3.1 that the DAI is a measurement that is relative to the condition information that FNEI currently collects (and is included as an HI parameter), whereas data gaps are HI parameter information that FNEI does not collect for any of the units within an asset group. As such, even if an asset group has a high DAI, this does not mean that ideal information for this asset group is complete. If numerous high priority data gaps exist, the degree of confidence that the HI reflects true conditions may still be low. The overall assessment is shown as either 1, 2 or 3, where a score of '1' indicates the highest relative degree of confidence in the data quality and quantity.

Power Transformers, Circuit Breakers, Circuit Switchers, Disconnect Switches, Reactors, Power Lines were given a '2' because of relatively high DAI but with some data gaps.

Battery Banks were given a "2" because of relatively lower DAI, though there were no major data gap.

Metal-clad switchgear and Pole Lines were given a '3' because of relatively more data gaps, though the DAI were high.

Voltage Regulators were categorized as '3'. This asset groups had some outstanding test data gaps while the DAI was less than 50%.

All the other asset groups were given a score of "1" because of their high DAI and no data gaps.

There are also general observations and recommendations applicable to all asset categories:

1. For future assessments, it is suggested that work order information be collected and incorporated into the health index formulas. Total work orders and severity of each work order give an overall indication of whether a particular unit is historically problematic.
2. FNEI should also consider collecting removal data. When building FNEI specific asset life curves, historic removal records are essential. For each removal (permanent out of service), details such as age, nameplate information, reason for removal, HI score at the time of removal, etc. should be recorded.

3. The data used in this assessment was manually extracted from different locations (e.g. numerous spreadsheets or PDF files). For more efficient record keeping and ease of future assessments, FNEI may wish to consider implementing platform that consolidates asset information and condition data (e.g. nameplate information, test results, operational information, inspection records, etc.) and that can perform live asset analytics.

**Table 3-3 Data Assessment Summary**

| Asset Category             | Basis of Health Index Formula                                                                                    | Average DAI | Data Gaps and Observations<br>(H, M, L = high, medium, low priority respectively)                                                                              | Overall Data Assessment |
|----------------------------|------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Power Transformers</b>  | Nameplate<br>GOQ<br>DGA<br>TTR<br>Winding Resistance<br>Power Factor<br>Excitation Current<br>Inspection Records | 100%        | <i>Loading</i> (H)<br><br><i>Testing</i><br>Oil dissipation factor (M)<br><br><i>Visual Inspection</i><br>Core, Cooler/radiator<br>Conservators (L)            | 2                       |
| <b>Reactors</b>            | Nameplate<br>GOQ<br>DGA<br>TTR<br>Winding Resistance<br>Power Factor<br>Excitation Current<br>Inspection Records | 100%        | <i>Testing</i><br>Oil dissipation factor (M)                                                                                                                   | 2                       |
| <b>Circuit Breakers</b>    | Nameplate<br>Maintenance Test<br>(timing tests, contact resistance)<br>Inspection Records<br>Operation Counts    | 94%         | <i>Testing</i><br>Insulation power factor (M)<br><br><i>Visual Inspection</i><br>Arc contact, Interrupter and<br>Lubrication. (L-M)<br>Racking mechanism (L-M) | 2                       |
| <b>Circuit Switchers</b>   | Nameplate<br>Maintenance Test<br>(contact resistance)<br>Inspection Records                                      | 100%        | <i>Testing</i><br>Insulation power factor (M)<br><br><i>Visual Inspection</i><br>Lubrication. (L)                                                              | 2                       |
| <b>Disconnect Switches</b> | Nameplate<br>Inspection Records                                                                                  | 100%        | <i>Testing</i><br>Contact Resistance (H)                                                                                                                       | 2                       |



| Asset Category        | Basis of Health Index Formula                 | Average DAI | Data Gaps and Observations<br>(H, M, L = high, medium, low priority respectively)                                   | Overall Data Assessment |
|-----------------------|-----------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------|-------------------------|
| Ground Switches       | Nameplate Inspection Records                  | 100%        | No major data gap                                                                                                   | 1                       |
| Metal-Clad Switchgear | Nameplate Inspection Records                  | 100%        | Testing<br>Contact Resistance (H)<br>Operating mechanism (H)<br><br>Visual Inspection<br>Lubrication. (L)           | 3                       |
| Voltage Regulators    | Nameplate<br>GOQ<br>DGA<br>Inspection Records | 42%         | Testing<br>Oil dissipation factor (M)<br>Winding resistance (M)<br>Excitation current (M)                           | 3                       |
| Pole Lines            | Nameplate Inspection Records                  | 100%        | Visual Inspection<br>Conductor (H)<br>Shield Wire (M)<br><br>Fault Rate<br>Historical failure rates per segment (M) | 2                       |
| CVTs                  | Nameplate Inspection Records                  | 100%        | No major data gap                                                                                                   | 1                       |
| Line Traps            | Nameplate Inspection Records                  | 100%        | No major data gap                                                                                                   | 1                       |
| Line Tuners           | Nameplate Inspection Records                  | 100%        | No major data gap                                                                                                   | 1                       |
| Power Line Carriers   | Nameplate Inspection Records                  | 100%        | No major data gap                                                                                                   | 1                       |
| Relays                | Nameplate Inspection Records                  | 100%        | No major data gap                                                                                                   | 1                       |



| Asset Category | Basis of Health Index Formula                                                        | Average DAI | Data Gaps and Observations<br>(H, M, L = high, medium, low priority respectively) | Overall Data Assessment |
|----------------|--------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------|-------------------------|
| Battery Banks  | Nameplate Maintenance Test<br>(resistance, impedance, voltage)<br>Inspection Records | 78%         | No major data gap                                                                 | 2                       |
| SCADAs         | Nameplate Inspection Records                                                         | 100%        | No major data gap                                                                 | 1                       |

## 4. Conclusions and Recommendations

This section summarizes the findings of this study.

1. An ACA was conducted for a FNEI's key distribution assets. For each asset category, the health indices were calculated, and a condition based FFA Plan was developed. Asset lists, prioritized by risk or health, were developed. An assessment of the data available and data gaps was also conducted.
2. One battery bank was placed in the poor or very poor category and flagged for action within the next 10 years.
3. All the asset units in Line Traps, Line Tuners and Power Line Carriers were in poor or very poor condition. This was not due to their inspection defect findings, but due to age limiting as a consequence of their approaching design life expectancy as per industry statistics.
4. For all the other asset groups, there were no unit in poor or very poor condition.
5. Observations pertaining to the data used in this study were made. Where they exist, data gaps were also identified for each asset category.

Relative to the other asset categories, Power Transformers, Reactors Circuit Breakers, Circuit Switchers and Disconnect Switches had the most complete data set, in terms of quality and quantity (i.e. data gap or concern and DAI).

Battery Banks had no major data gap, but needs to improve its DAI.

Metal-Clad Switchgear and Pole Lines had good DAI, but need to fill the outstanding data gaps.

Voltage Regulators had relatively low DAI and multiple test data gaps. This needs to be followed up.

All other asset groups had good DAI and no data gap.

It is recommended that data be collected in a prioritized manner so that such data can be used in future assessments. It is also recommended that the DAI be improved for each asset category by ensuring that ultimately the complete health index data set is made available for each asset.

6. One asset group that was not addressed in this study was communication buildings, due to the fact that the asset information was not available in extractable format at the time of study. In case of a need for asset condition assessment, the asset condition of such group can be approximately estimated by its age. Based on industrial practice, it is reasonable to assume that such an asset group has a service life within the range of 50 – 80 years, after which reconstruction or major renovation is needed. It is recommended

that FNEI take into account its routine inspection and maintenance feedback to determine a service life that reflects the practice at FNEI.

7. For future assessments, FNEI should consider collecting and incorporating work order information. Total work orders and severity of each work order give an overall indication of whether a unit is historically problematic.
8. FNEI should also consider collecting removal data to enable the development of FNEI specific asset life curves. The curves used in the current assessment are currently based on a combination of FNEI's asset demographics and typical industry experience. Using actual removal curves will result in more accurate life curves.
9. The data used in this assessment was manually extracted from different locations (e.g. numerous spreadsheets or PDF files). For more efficient record keeping and ease of future assessments, FNEI may wish to consider implementing platform that consolidates asset information and condition data (e.g. nameplate information, test results, operational information, inspection records, etc.) and that can perform live asset analytics.
10. It is important to note that the Flagged for Action plan presented in this study is based primarily on asset condition. It is worth noting that there are numerous other considerations that may influence FNEI's asset management plan. Among these are obsolescence, system growth, corporate priorities, technological advancements, etc.

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## **Appendix A Results for Each Asset Category**

The results for each individual asset category are detailed in this section.



## 1. Power Transformers

This asset class includes FNEI's Power Transformers. There are 6 Power Transformers at FNEI. All had sufficient data for assessment. The average age of the population is 20 years; age distribution is as follows:

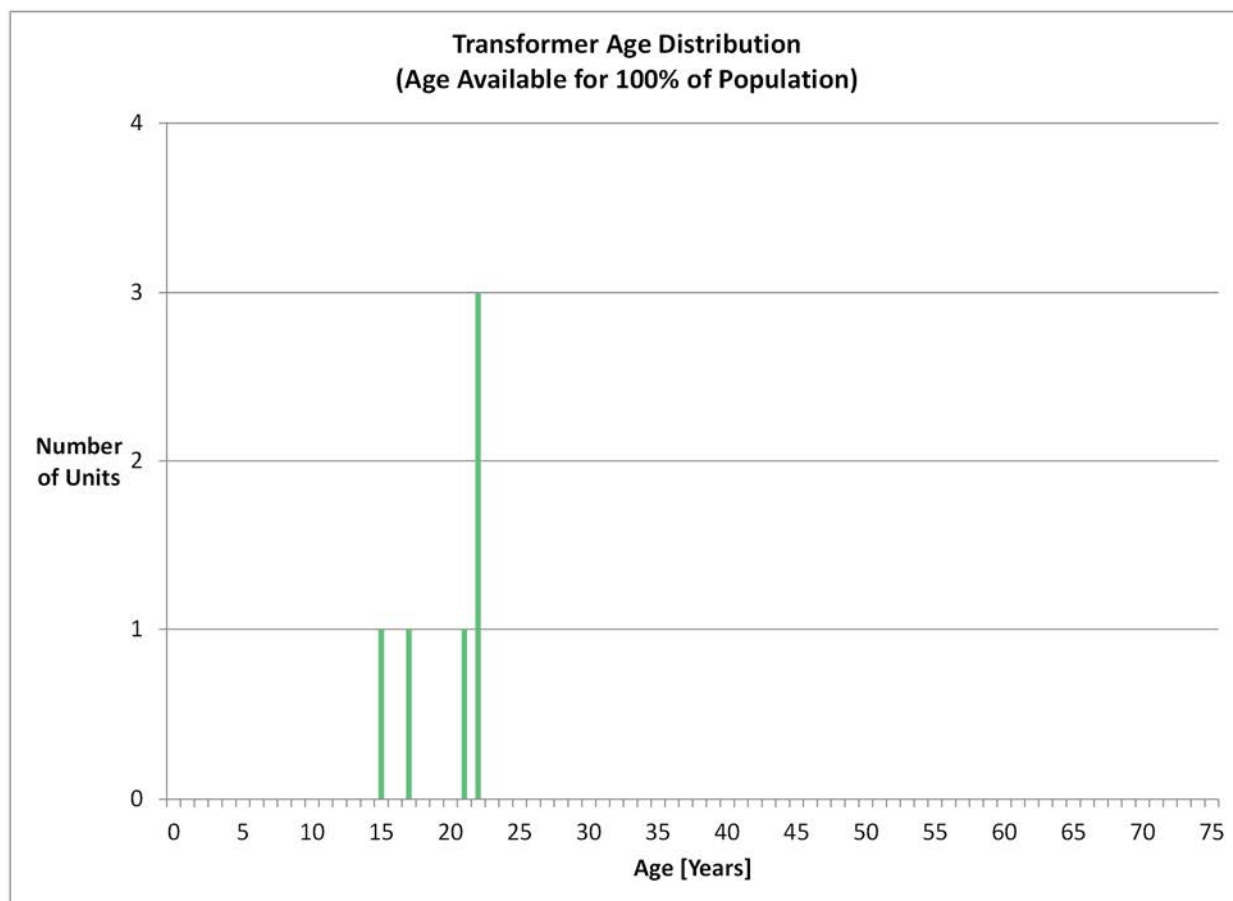


Figure A 1-1 Power Transformers Age Distribution

### 1.1 Health Index

#### 1.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria for substation transformers.

Table A 1-1 Power Transformers Health Index Formula

| Condition Parameter (CP) |              | Sub-Condition Parameter (SCP) |             |               |          |
|--------------------------|--------------|-------------------------------|-------------|---------------|----------|
| Description              | Weight (WCP) | Description                   | Data Source | Weight (WSCP) | Criteria |

| Condition Parameter (CP)                                                                  |              | Sub-Condition Parameter (SCP) |             |                |              |
|-------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------|----------------|--------------|
| Description                                                                               | Weight (WCP) | Description                   | Data Source | Weight (WSCP)  | Criteria     |
| Internals                                                                                 | 10           | H2                            | DGA         | 5              | Table A 1-2  |
|                                                                                           |              | CH4 (Methane)                 | DGA         | 3              | Table A 1-2  |
|                                                                                           |              | C2H6 (Ethane)                 | DGA         | 3              | Table A 1-2  |
|                                                                                           |              | C2H4 (Ethylene)               | DGA         | 3              | Table A 1-2  |
|                                                                                           |              | C2H2 (Acetylene)              | DGA         | 5              | Table A 1-2  |
| Insulation Oil                                                                            | 8            | Moisture                      | GOQ         | 4              | Table A 1-3  |
|                                                                                           |              | Dielectric Strength           | GOQ         | 5              | Table A 1-3  |
|                                                                                           |              | Interfacial Tension           | GOQ         | 3              | Table A 1-3  |
|                                                                                           |              | Acid Number                   | GOQ         | 2              | Table A 1-3  |
|                                                                                           |              | Colour                        | GOQ         | 1              | Table A 1-3  |
| Windings                                                                                  | 6            | Turns Ratio                   | Test        | 1              | Table A 1-4  |
|                                                                                           |              | Winding Resistance            | Test        | 1              | Table A 1-6  |
|                                                                                           |              | Exciting Current              | Test        | 1              | Table A 1-5  |
| Paper/<br>Pressboard                                                                      | 8            | Furanic Compound              | Oil Test    | 3              | Table A 1-7  |
|                                                                                           |              | Power Factor                  | Test        | 5              | Table A 1-8  |
|                                                                                           |              | DGA CO                        | DGA         | 2              | Table A 1-2  |
|                                                                                           |              | DG CO2                        | DGA         | 1              | Table A 1-2  |
| Bushings                                                                                  | 5            | Power Factor                  | Test        | 5              | Table A 1-8  |
|                                                                                           |              | Damage                        | Visual      | 3              | Table A 1-10 |
| Tap Changer                                                                               | 1            | Visual Appearance             | Visual      | 1              | Table A 1-10 |
| Fans & Pump                                                                               | 1            | Visual Appearance             | Visual      | 1              | Table A 1-10 |
| Tank                                                                                      | 2            | Oil Level                     | Visual      | 1              | Table A 1-10 |
| Auxiliary<br>Components                                                                   | 1            | Pad                           | Visual      | 1              | Table A 1-10 |
|                                                                                           |              | Oil Temp Gauge                | Visual      | 1              | Table A 1-10 |
| HI De-Rating Multiplier (DR)                                                              |              | GOQ, DGA                      |             | Equation A 1-1 |              |
| Age Limiter (AL)                                                                          |              | Based on CIGRE typical life   |             | Figure A 1-2   |              |
| *where there is no available data for any assets, the weight of the parameter is set to 0 |              |                               |             |                |              |

## Oil DGA – Transformer Oil

**Table A 1-2 DGA Criteria**

|                                                  | Dissolved Gas *      | Scores        |                    |                    |                       |                    |             |
|--------------------------------------------------|----------------------|---------------|--------------------|--------------------|-----------------------|--------------------|-------------|
|                                                  |                      | 4             | 3.2                | 2.4                | 1.2                   | 0.8                | 0           |
| 10 - 100 MVA or<br>10,000 – 50,000 liters of oil | H2 (Hydrogen)        | $X \leq 52$   | $52 < X \leq 104$  | $104 < X \leq 156$ | $156 < X \leq 4208$   | $208 < X \leq 260$ | $X > 260$   |
|                                                  | CH4 (Methane)        | $X \leq 14$   | $14 < X \leq 28$   | $28 < X \leq 42$   | $42 < X \leq 56$      | $56 < X \leq 70$   | $X > 70$    |
|                                                  | C2H6 (Ethane)        | $X \leq 9$    | $9 < X \leq 18$    | $18 < X \leq 27$   | $27 < X \leq 36$      | $36 < X \leq 45$   | $X > 45$    |
|                                                  | C2H4 (Ethylene)      | $X \leq 33$   | $33 < X \leq 66$   | $66 < X \leq 99$   | $99 < X \leq 132$     | $132 < X \leq 165$ | $X > 165$   |
|                                                  | C2H2 (Acetylene)     | $X \leq 1$    | $1 < X \leq 2$     | $2 < X \leq 3$     | $3 < X \leq 4$        | $4 < X \leq 5$     | $X > 5$     |
| > 100 MVA or<br>> 50,000 liters of oil           | H2 (Hydrogen)        | $X \leq 75$   | $75 < X \leq 150$  | $150 < X \leq 225$ | $225 < X \leq 300$    | $300 < X \leq 375$ | $X > 375$   |
|                                                  | CH4 (Methane)        | $X \leq 49$   | $49 < X \leq 98$   | $98 < X \leq 147$  | $147 < X \leq 196$    | $196 < X \leq 245$ | $X > 245$   |
|                                                  | C2H6 (Ethane)        | $X \leq 38$   | $38 < X \leq 76$   | $76 < X \leq 114$  | $114 < X \leq 152$    | $152 < X \leq 190$ | $X > 190$   |
|                                                  | C2H4 (Ethylene)      | $X \leq 146$  | $146 < X \leq 292$ | $292 < X \leq 438$ | $438 < X \leq 584$    | $584 < X \leq 730$ | $X > 730$   |
|                                                  | C2H2 (Acetylene)     | $X \leq 2$    | $2 < X \leq 3$     | $3 < X \leq 5$     | $5 < X \leq 6$        | $6 < X \leq 8$     | $X > 8$     |
| < 10 MVA or<br>< 10,000 liters of oil            | H2 (Hydrogen)        | $X \leq 6$    | $6 < X \leq 12$    | $12 < X \leq 18$   | $18 < X \leq 24$      | $24 < X \leq 30$   | $X > 30$    |
|                                                  | CH4 (Methane)        | $X \leq 2$    | $2 < X \leq 3$     | $3 < X \leq 5$     | $5 < X \leq 6$        | $6 < X \leq 8$     | $X > 8$     |
|                                                  | C2H6 (Ethane)        | $X \leq 1$    | $1 < X \leq 2$     | $2 < X \leq 3$     | $3 < X \leq 4$        | $4 < X \leq 5$     | $X > 5$     |
|                                                  | C2H4 (Ethylene)      | $X \leq 3$    | $3 < X \leq 6$     | $6 < X \leq 8$     | $8 < X \leq 11$       | $11 < X \leq 14$   | $X > 14$    |
|                                                  | C2H2 (Acetylene)     | $X \leq 1$    | $1 < X \leq 2$     | $2 < X \leq 3$     | $3 < X \leq 4$        | $4 < X \leq 5$     | $X > 5$     |
| CO and CO2                                       | Dissolved Gas        | Scores        |                    |                    |                       |                    |             |
|                                                  |                      | 4             | 2.67               |                    | 1.33                  |                    | 0           |
|                                                  | CO (Carbon Monoxide) | $X \leq 350$  | $350 < X \leq 570$ |                    | $570 < X \leq 1400$   |                    | $X > 1400$  |
|                                                  | CO2 (Carbon Dioxide) | $X \leq 2500$ | $2500 < X < 4000$  |                    | $4000 < X \leq 10000$ |                    | $X > 10000$ |

\* Per yearly average generation rate

## General Oil Quality

**Table A 1-3 General Oil Quality (GOQ) Test Criteria**

| Oil Quality Test                           |                   | Voltage Class [kV] | Score  |            |             |            |        |
|--------------------------------------------|-------------------|--------------------|--------|------------|-------------|------------|--------|
|                                            |                   |                    | 4      | 3          | 2           | 1          | 0      |
| Water Content (D1533) [ppm]                | Main Tank         | $V \leq 69$        | < 30   | 30-33.3    | 33.3-36.6   | 36.6-40    | > 40   |
|                                            |                   | $69 < V < 230$     | < 20   | 20-25      | 25-30       | 30-35      | > 35   |
|                                            |                   | $V \geq 230$       | < 15   | 15-18.3    | 18.3-21.6   | 20-25      | > 25   |
|                                            | Tap               | $V \leq 69$        | < 30   | 30-33.3    | 33.3-36.6   | 36.6-40    | > 40   |
|                                            |                   | $V > 69$           | < 20   | 20-25      | 25-30       | 30-35      | > 35   |
| Dielectric Strength (D1816 – 2mm gap) [kV] | Main Tank         | $V \leq 69$        | > 40   | 36.6 - 40  | 33.3-36.6   | 30-33.3    | < 30   |
|                                            |                   | $69 < V < 230$     | > 47   | 43 - 47    | 39 - 43     | 35 - 39    | < 35   |
|                                            |                   | $V \geq 230$       | > 50   | 46 - 50    | 43 - 46     | 40 - 43    | < 40   |
|                                            | Tap               | $V \leq 69$        | > 25   | 21.6-25    | 18.3-21.6   | 15-18.3    | < 15   |
|                                            |                   | $V > 69$           | > 30   | 26-30      | 22-26       | 18-22      | < 18   |
| Dielectric Strength (D877) [kV]            | Main Tank         | All                | > 40   | 33.3-40    | 22.6-33.3   | 20-22.6    | < 20   |
|                                            | Tap               | All                | > 25   | 21.6-25    | 18.3-21.6   | 15-18.3    | < 15   |
| IFT (D971) [dynes/cm]                      | Main Tank         | $V \leq 69$        | > 25   | 21.6-25    | 18.3-21.6   | 15-18.3    | < 15   |
|                                            |                   | $69 < V < 230$     | > 30   | 26-30      | 22-26       | 18-22      | < 18   |
|                                            |                   | $V \geq 230$       | > 32   | 28-32      | 24-28       | 20-24      | < 20   |
|                                            | Tap               | All                | > 25   | 21.6-25    | 18.3-21.6   | 15-18.3    | < 15   |
| Color                                      | Main Tank         | All                | < 1.5  | 1.5-1.8    | 1.8-2.1     | 2.1-2.5    | > 2.5  |
|                                            | Tap               | All                | < 2.0  | 2.0-2.3    | 2.3-2.6     | 2.6-3.0    | > 3.0  |
| Acid Number (D974) [mg KOH/g]              | Main Tank         | $V \leq 69$        | < 0.05 | 0.05-0.1   | 0.1-0.15    | 0.15-0.2   | > 0.2  |
|                                            |                   | $69 < V < 230$     | < 0.04 | 0.04-0.077 | 0.077-0.113 | 0.113-0.15 | > 0.15 |
|                                            |                   | $V \geq 230$       | < 0.03 | 0.03-0.053 | 0.053-0.076 | 0.076-0.1  | > 0.1  |
|                                            | Tap               | All                | < 0.05 | 0.05-0.1   | 0.1-0.15    | 0.15-0.2   | > 0.2  |
| Dissipation Factor (D924 - 25C)            | Main Tank and Tap | All                | < 0.5% | 0.5%-1%    | 1-1.5%      | 1.5-2%     | > 2%   |
| Dissipation Factor (D924 - 100C)           |                   | All                | < 5%   | 5%-10%     | 10%-15%     | 15%-20%    | > 20%  |

### **Transformer Turns Ratio (TTR)**

The 'turns ratio' parameter compares the TTR variation to the calculated value in all tap positions.

**Table A 1-4 TTR Criteria**

|             |                                                                                 |
|-------------|---------------------------------------------------------------------------------|
| <i>If</i>   | Maximum TTR variation across any tap position at any phase is greater than 0.5% |
| <i>Then</i> | <b>Score = 0</b>                                                                |
| <i>Else</i> | <b>Score = 4</b>                                                                |

### **Excitation Current**

There will be two high readings (Reading<sub>High1</sub> and Reading<sub>High2</sub>) and one low reading (Reading<sub>Low</sub>). Evaluation is done by comparing the two similar high readings.

**Table A 1-5 Excitation Current Criteria**

|                                                                                  |                                                                                         |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Score = Max(Score<sub>i</sub>, Score<sub>2</sub>, ..., Score<sub>t</sub>)</b> |                                                                                         |
| Where                                                                            |                                                                                         |
| Score <sub>i</sub> are scores for different tap positions and                    |                                                                                         |
| And                                                                              |                                                                                         |
| <i>If</i>                                                                        | Reading <sub>High1</sub> or Reading <sub>High2</sub> > 50 mA                            |
|                                                                                  | <i>If</i> Variation between Reading <sub>High1</sub> and Reading <sub>High2</sub> > 10% |
|                                                                                  | <b>Score<sub>tap</sub> = 0</b>                                                          |
|                                                                                  | <i>Else</i> <b>Score<sub>tap</sub> = 4</b>                                              |
| <i>Else</i>                                                                      | <i>If</i> Variation between Reading <sub>High1</sub> and Reading <sub>High2</sub> > 5%  |
|                                                                                  | <b>Score<sub>tap</sub> = 0</b>                                                          |
|                                                                                  | <i>Else</i> <b>Score<sub>tap</sub> = 4</b>                                              |
| <i>End if</i>                                                                    |                                                                                         |

### Winding Resistance

The 'winding resistance' parameter compares the winding resistance variation between phases in all tap positions.

**Table A 1-6 Winding Resistance Criteria**

|             |                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------|
| <i>If</i>   | Maximum winding resistance variation between three phases across any tap position (LV or HV) is greater than 5% |
| <i>Then</i> | <b>Score = 0</b>                                                                                                |
| <i>Else</i> | <b>Score = 4</b>                                                                                                |

### Degree of Polymerization

**Table A 1-7 Degree of Polymerization Criteria**

| Score                                                     | Degree of Polymerization |
|-----------------------------------------------------------|--------------------------|
| 0                                                         | 0                        |
| 1                                                         | $250 < DP < 400$         |
| 2                                                         | $400 \leq DP < 500$      |
| 2.6                                                       | $500 \leq DP < 600$      |
| 3.2                                                       | $600 \leq DP < 650$      |
| 3.4                                                       | $650 \leq DP < 700$      |
| 3.6                                                       | $700 \leq DP < 750$      |
| 3.8                                                       | $750 \leq DP < 800$      |
| 4                                                         | $DP \geq 800$            |
| Where $DP = (\text{LOG}(2FAL * 0.88) - 4.51) / (-0.0035)$ |                          |

### Power Factor Test

**Table A 1-8 Power Factor Test Criteria**

| Score                                                                                                                                                      | Power Factor Reading (PF) |                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------|
|                                                                                                                                                            | Fluid                     | Dry Type                |
| 4                                                                                                                                                          | $PF \leq 0.5\%$           | $PF \leq 1.0\%$         |
| 3                                                                                                                                                          | $0.5\% < PF \leq 1.0\%$   | $1.0\% < PF \leq 2.0\%$ |
| 2                                                                                                                                                          | $1.0\% < PF \leq 1.5\%$   | $2.0\% < PF \leq 4.0\%$ |
| 1                                                                                                                                                          | $1.5\% < PF \leq 2.0\%$   | $4.0\% < PF \leq 6.0\%$ |
| 0                                                                                                                                                          | $PF > 2.0\%$              | $PF > 6.0\%$            |
| Where PF is the worst-case power factor measurement.<br><b>Example:</b> If $C_H$ , $C_L$ , and $C_{HL}$ are available, $PF = \text{Max}(C_H, C_L, C_{HL})$ |                           |                         |

## Insulation Resistance

**Table A 1-9 Insulation Resistance**

|       |                                           |
|-------|-------------------------------------------|
| If    | (IR > kV) then <b>Score</b> = 4           |
| Else  | <b>Score</b> = 0                          |
| Where |                                           |
|       | IR = measured insulation resistance in MΩ |
|       | kV = rated voltage in kV                  |

## Inspections Records

**Table A 1-10 Inspection Criteria**

| Score (SCPS) | Number of Not OK Findings in Past 5 Years |
|--------------|-------------------------------------------|
| 4            | Not OK Count <1                           |
| 3            | $1 \leq \text{Not OK Count} < 2$          |
| 2            | $2 \leq \text{Not OK Count} < 3$          |
| 1            | $3 \leq \text{Not OK Count} < 4$          |
| 0            | Not OK Count $\geq 4$                     |

## Loading History

**Table A 1-11 Loading History**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data: S <sub>1</sub> , S <sub>2</sub> , S <sub>3</sub> , ..., S <sub>N</sub> recorded data (monthly peaks)                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>S<sub>B</sub>= rated MVA</p> <p>N<sub>A</sub>=Number of S<sub>i</sub>/S<sub>B</sub> which is lower than 0.6</p> <p>N<sub>B</sub>= Number of S<sub>i</sub>/S<sub>B</sub> which is between 0.6 and 0.8</p> <p>N<sub>C</sub>= Number of S<sub>i</sub>/S<sub>B</sub> which is between 0.8 and 1.0</p> <p>N<sub>D</sub>= Number of S<sub>i</sub>/S<sub>B</sub> which is between 1 and 1.2</p> <p>N<sub>E</sub>= Number of S<sub>i</sub>/S<sub>B</sub> which is greater than 1.2</p> $\text{Score} = \frac{4 * N_A + 3 * N_B + 2 * N_C + 1 * N_D}{N}$ |
| Note: If there are 2 numbers in N <sub>A</sub> to N <sub>E</sub> greater than 1.5, then the Score should be multiplied by 0.6 to show the effect of overheating.                                                                                                                                                                                                                                                                                                                                                                                   |

### De-Rating Multiplier

The de-rating is based on the following equation and DR is described in the subsequent table.

$$DR = \min (DR_1, DR_2, DR_3)$$

### Equation A 1-1

Where  $DR_1$ ,  $DR_2$ , and  $DR_3$  are as follows:

**Table A 1-12 De-Rating Multiplier Based on Oil Quality and DGA Score**

| $DR_1 = \min (DR_{Score_{Moisture}}, DR_{Score_{Dielectric\ Strength}}, DR_{Score_{Any\ Gas}})$ |                                                                                                                                       |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| DR_Score                                                                                        | Score <sub>Oil Quality Test</sub><br>Score <sub>Oil Quality</sub> and Score <sub>DGA</sub> are defined in Table A 1-3 and Table A 1-3 |
| 0.25                                                                                            | $0 \leq \text{Score}_{\text{Oil Quality Test}} < 1$                                                                                   |
| 0.5                                                                                             | $1 \leq \text{Score}_{\text{Oil Quality Test}} < 2$                                                                                   |
| 1                                                                                               | $\text{Score}_{\text{Oil Quality Test}} \geq 2$                                                                                       |

### DR<sub>2</sub>: Dissolved Gas Trend

DR<sub>2</sub> is based on total dissolved combustible gas (TDCG) concentration daily rate increase.

**Table A 1-13 De-Rating Multiplier Based on TDCG Trend**

| Daily Increase<br>(ppm/day) | IEEE C57.104 Condition Codes for TDCG |                               |                                |                      |
|-----------------------------|---------------------------------------|-------------------------------|--------------------------------|----------------------|
|                             | Condition 1                           | Condition 2                   | Condition 3                    | Condition 4          |
|                             | $0 \leq \text{TDCG} \leq 720$         | $720 \leq \text{TDCG} < 1920$ | $1920 \leq \text{TDCG} < 4630$ | $\text{TDCG} > 4630$ |
|                             | DR_Score                              |                               |                                |                      |
| $0 \leq X < 0.33$           | 1                                     | 1                             | 1                              | 1                    |
| $0.33 \leq X < 1$           | 0.9                                   | 0.9                           | 0.85                           | 0.75                 |
| $1 \leq X < 1.43$           | 0.9                                   | 0.9                           | 0.75                           | 0.75                 |
| $1.43 \leq X < 4.29$        | 0.9                                   | 0.9                           | 0.75                           | 0.5                  |
| $X \geq 4.29$               | 0.9                                   | 0.9                           | 0.5                            | 0.25                 |

### DR<sub>3</sub>: CO<sub>2</sub>/CO

DR<sub>3</sub> is based analysis of CO and CO<sub>2</sub> ratio using IEC 60599. The derating values are:

**Table A 1-14 De-Rating Multiplier CO<sub>2</sub>:CO Ratio**

| DR <sub>3</sub> | IEC 60599 CO <sub>2</sub> :CO Assessment    |
|-----------------|---------------------------------------------|
| 0.75            | Paper Fault                                 |
| 0.85            | Mild paper overheating <160 C or oil decomp |
| 1               | Not Significant                             |



### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group. As described in Section 2.2, asset removal rate is assumed to increase exponentially with age. In this project the removal rate is modeled by the Weibull curve. The cumulative distribution function, introduced in Equation 5, is:

$$Q(t) = 1 - R(t) = e^{-\left(\frac{t}{\alpha}\right)^\beta}$$

where

$Q(t)$  = likelihood of removal

$R(t)$  = survival function

$\alpha$  = constant that controls shape of function

$\beta$  = constant that controls scale of function

As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities, in which  $\alpha = 45.228$ ,  $\beta = 6.1127$ , are applied in this study. The resultant survival curve ( $1 -$  likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.



**Figure A 1-2 Power Transformers Age Limiter**

### 1.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. The average HI for the asset group was 90%.

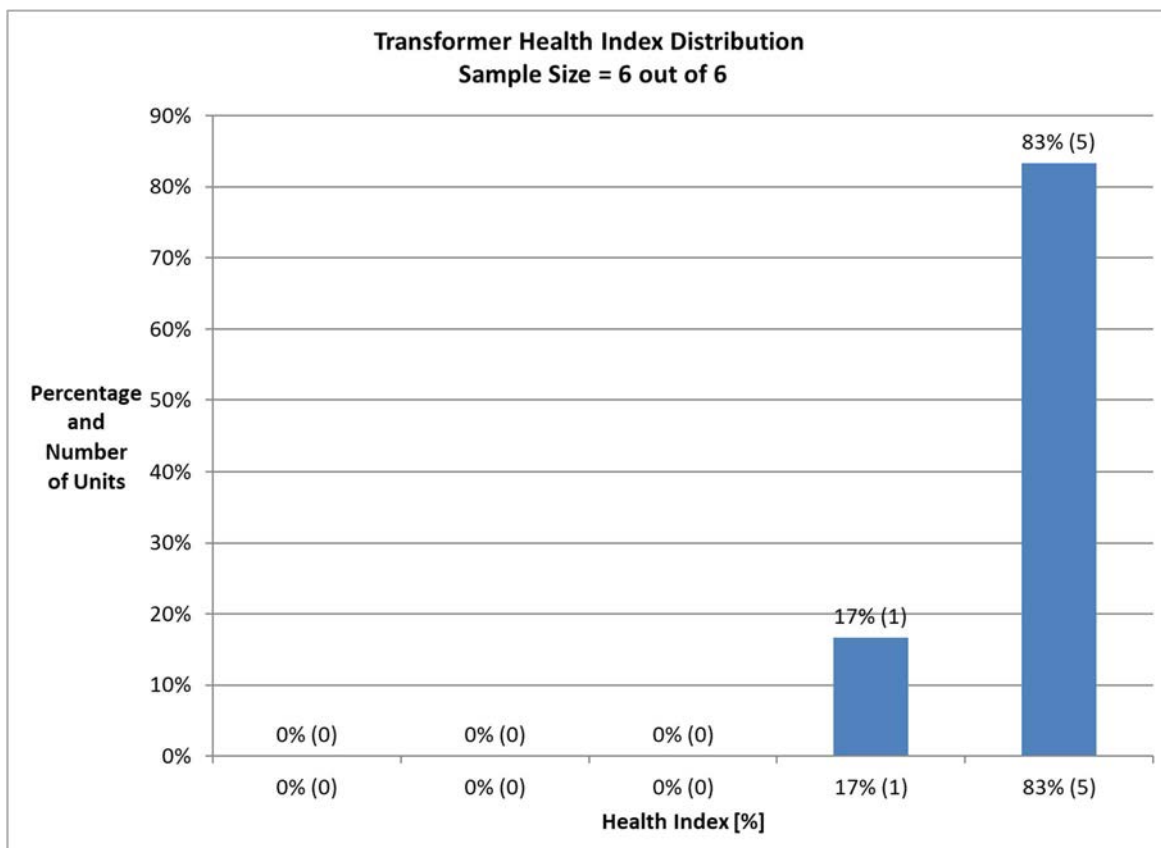


**Figure A 1-3 Power Transformers Health Index Distribution**

## 1.2 Flagged for Action Plan

The 10-year FFA Plan was based on HI results and the associated criticality information as described in Section 2.2.1. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each unit was set to 0% (i.e. least critical). In this study, there were no unit flagged for action in the next 10 years. Risk assessment shows that no unit would be flagged for action in the next 10 years.



1.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 1-15 Power Transformers Risk Based Prioritized List

| Asset Information |          |             |      |     | DAI  | De-Rating Multipliers |                                 |                                       |                 |                      | HI calculated                  |           |             | Final HI (Age Limiter Applied) |             | Risk Index<br>100% = Most Risk<br>0% = Least Risk | FFA Year | HI Parameter Scores |                |          |                  |          |      |      |            |
|-------------------|----------|-------------|------|-----|------|-----------------------|---------------------------------|---------------------------------------|-----------------|----------------------|--------------------------------|-----------|-------------|--------------------------------|-------------|---------------------------------------------------|----------|---------------------|----------------|----------|------------------|----------|------|------|------------|
| #                 | ID       | Location    | Year | Age |      | Min DGA score Derate  | DGA Trend (H2 and Hydrocarbons) | Oil Quality (moisture and dielectric) | Paper De-Rating | De-Rating Multiplier | Calculated HI (with De-rating) | Age Limit | Age Limited | HI                             | HI Category |                                                   |          | Internals           | Insulation Oil | Windings | Paper/Pressboard | Bushings | Fans | Tank | Auxilliary |
| 1                 | 3364-T1  | Albany      | 2001 | 22  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 74.6%                          | 98.8%     | N           | 74.6%                          | Good        | 0%                                                | >10      | 100%                | 92%            | 50%      | 55%              | 38%      | 100% | 100% | 100%       |
| 3                 | 3365-T2  | Kashechewan | 2001 | 22  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 88.0%                          | 98.8%     | N           | 88.0%                          | Very Good   | 0%                                                | >10      | 100%                | 100%           | 75%      | 100%             | 72%      | 100% | 0%   | 100%       |
| 2                 | 3364-T1A | Albany      | 2001 | 22  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 93.4%                          | 98.8%     | N           | 93.4%                          | Very Good   | 0%                                                | >10      | 100%                | 100%           | 75%      | 100%             | 91%      | 75%  | 75%  | 100%       |
| 6                 | 3366-T3A | Attawa      | 2006 | 17  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 93.1%                          | 99.7%     | N           | 93.1%                          | Very Good   | 0%                                                | >10      | 100%                | 93%            | 75%      | 100%             | 84%      | 100% | 100% | 100%       |
| 4                 | 3365-T2A | Kashechewan | 2008 | 15  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 96.3%                          | 99.9%     | N           | 96.3%                          | Very Good   | 0%                                                | >10      | 100%                | 100%           | 75%      | 100%             | 100%     | 100% | 100% | 100%       |
| 5                 | 3366-T3  | Attawa      | 2002 | 21  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 96.3%                          | 99.1%     | N           | 96.3%                          | Very Good   | 0%                                                | >10      | 100%                | 100%           | 75%      | 100%             | 100%     | 100% | 100% | 100%       |

In the above table, it is worth mentioning that:

For unit 3364-T1, the scores for windings and paper/pressboard and bushing were low. This was due to poor test results in turn ratio, excitation current and power factor for both paper and bushing.

Unit 3365-T2 had low scores for bushing and tank. This was due to visual inspection findings in damage and low oil level.

It is worth mentioning that units 3364-T1, 3364-T1A, 3365-T2A and 3366-T3A all showed greater than 5% discrepancy in the 2 high readings of excitation current test. A follow-up investigation is recommended.



## 1.4 Data Assessment

The data for transformers included age, nameplate information, inspection records, oil quality, dissolved gas analysis, tests for power factors, furan compound, excitation current, turn ratios and winding resistances.

| Asset Category          | Population | Average DAI |
|-------------------------|------------|-------------|
| Substation Transformers | 6          | 100%        |

The data gaps in this study are the loading information, visual inspection on core, cooler/radiator/conservators.

## 2. Reactors

There are 4 Reactors at FNEI. Of these, all had sufficient data for assessment. The average age of the population is 20 years; age distribution is as follows:

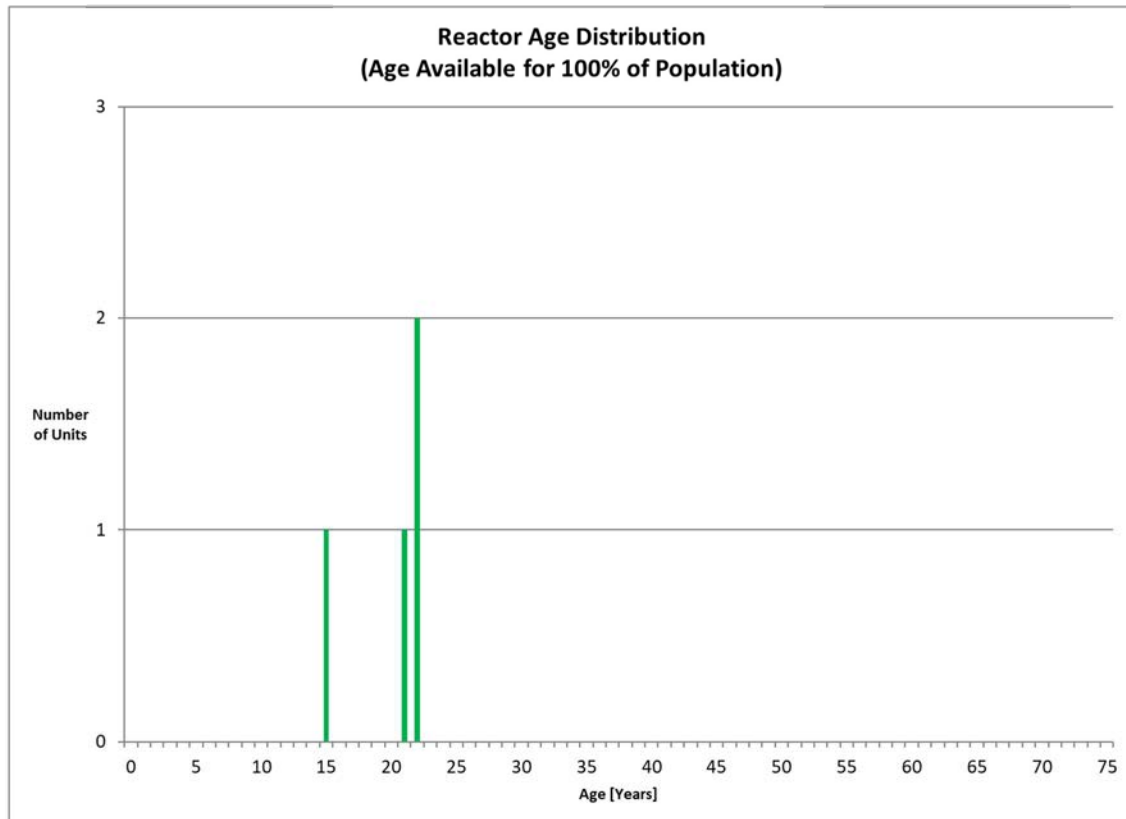


**Figure A 2-1 Reactors Age Distribution**

## 2.1 Health Index

### 2.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 2-1 Reactors Health Index Formula**

| Condition Parameter (CP)                                                                  |              | Sub-Condition Parameter (SCP)    |             |                |              |
|-------------------------------------------------------------------------------------------|--------------|----------------------------------|-------------|----------------|--------------|
| Description                                                                               | Weight (WCP) | Description                      | Data Source | Weight (WSCP)  | Criteria     |
| Internals                                                                                 | 10           | H2                               | DGA         | 5              | Table A 1-2  |
|                                                                                           |              | CH4 (Methane)                    | DGA         | 3              | Table A 1-2  |
|                                                                                           |              | C2H6 (Ethane)                    | DGA         | 3              | Table A 1-2  |
|                                                                                           |              | C2H4 (Ethylene)                  | DGA         | 3              | Table A 1-2  |
|                                                                                           |              | C2H2 (Acetylene)                 | DGA         | 5              | Table A 1-2  |
| Insulation Oil                                                                            | 8            | Moisture                         | GOQ         | 4              | Table A 1-3  |
|                                                                                           |              | Dielectric Strength              | GOQ         | 5              | Table A 1-3  |
|                                                                                           |              | Interfacial Tension              | GOQ         | 3              | Table A 1-3  |
|                                                                                           |              | Acid Number                      | GOQ         | 2              | Table A 1-3  |
|                                                                                           |              | Colour                           | GOQ         | 1              | Table A 1-3  |
| Windings                                                                                  | 6            | Winding Resistance               | Test        | 1              | Table A 1-6  |
|                                                                                           |              | Exciting Current                 | Test        | 1              | Table A 1-5  |
| Paper/<br>Pressboard                                                                      | 8            | Furanic Compound                 | Oil Test    | 3              | Table A 1-7  |
|                                                                                           |              | Power Factor                     | Test        | 5              | Table A 1-8  |
|                                                                                           |              | DGA CO                           | DGA         | 2              | Table A 1-2  |
|                                                                                           |              | DG CO2                           | DGA         | 1              | Table A 1-2  |
| Bushings                                                                                  | 5            | Power Factor                     | Test        | 5              | Table A 1-8  |
|                                                                                           |              | Damage                           | Visual      | 3              | Table A 1-10 |
| Tank                                                                                      | 2            | Oil Leak                         | Visual      | 1              | Table A 1-10 |
|                                                                                           |              | Oil Level                        | Visual      | 1              | Table A 1-10 |
| Auxiliary<br>Components                                                                   | 1            | Oil Temp Gauge                   | Visual      | 1              | Table A 1-10 |
| HI De-Rating Multiplier (DR)                                                              |              | GOQ, DGA                         |             | Equation A 1-1 |              |
| Age Limiter (AL)                                                                          |              | Based on industrial typical life |             | Figure A 2-2   |              |
| *where there is no available data for any assets, the weight of the parameter is set to 0 |              |                                  |             |                |              |

## Age Criteria

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 40.95$ ,  $\beta = 7.341$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter.

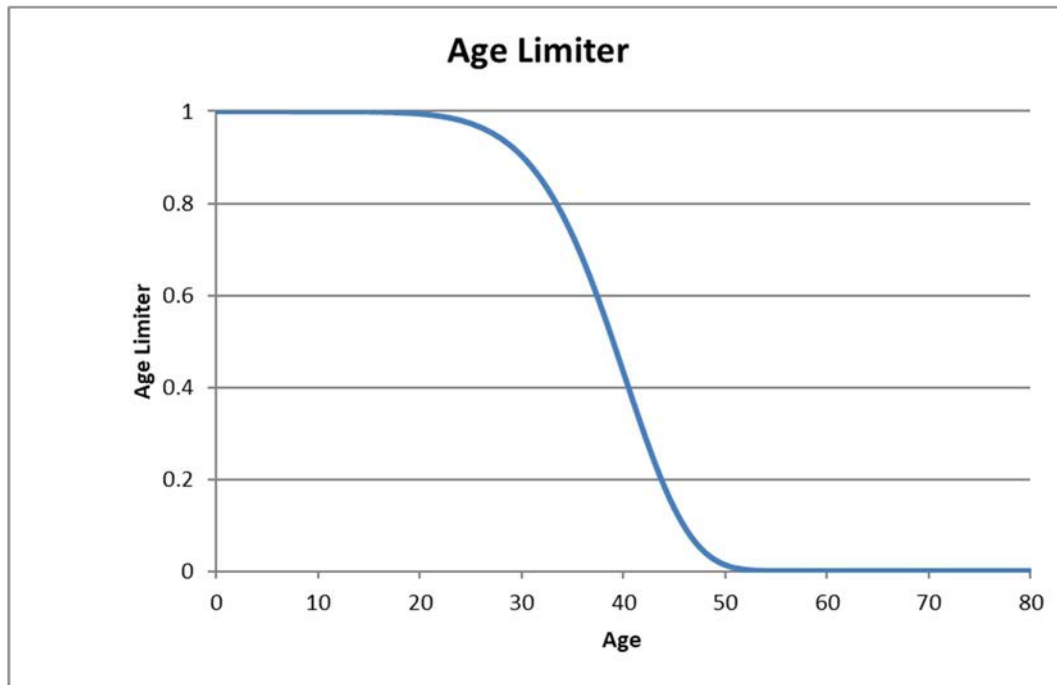


Figure A 2-2 Reactors Age Limiter

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### 2.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. The average HI for the asset group was 95%.

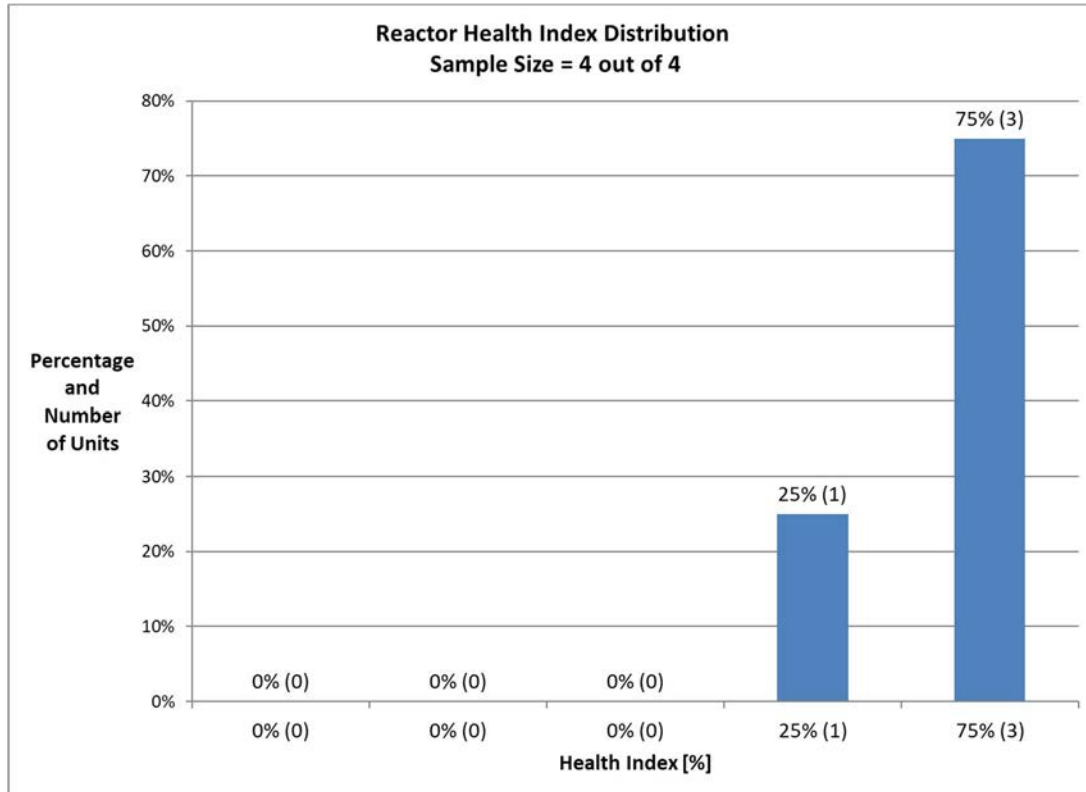


**Figure A 2-3 Reactors Health Index Distribution**

## 2.2 Flagged for Action Plan

The 10-year FFA Plan was based on HI results and the associated criticality information as described in Section 2.2.1. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each reactor was set to 0% (i.e. least critical).

No Reactors were flagged for action in the next 10 years.



2.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

| Table A 2-2 Reactors Risk Based Priortized List |         |             |      |     |  |      |                       |                                 |                                       |                 |                      |                                |           |              |                                |             |                                                   |          |          |                     |          |                    |         |      |            |      |  |
|-------------------------------------------------|---------|-------------|------|-----|--|------|-----------------------|---------------------------------|---------------------------------------|-----------------|----------------------|--------------------------------|-----------|--------------|--------------------------------|-------------|---------------------------------------------------|----------|----------|---------------------|----------|--------------------|---------|------|------------|------|--|
| Asset Information                               |         |             |      |     |  | DAI  | De-Rating Multipliers |                                 |                                       |                 |                      | HI calculated                  |           |              | Final HI (Age Limiter Applied) |             | Risk Index<br>100% = Most Risk<br>0% = Least Risk | FFA Year |          | HI Parameter Scores |          |                    |         |      |            |      |  |
| #                                               | ID      | Location    | Year | Age |  |      | Min DGA score Derate  | DGA Trend (H2 and Hydrocarbons) | Oil Qaulity (moisture and dielectric) | Paper De-Rating | De-Rating Multiplier | Calculated HI (with De-rating) | Age Limit | Age Limit ed | HI                             | HI Category |                                                   |          | Internal | Insulation Oil      | Windings | Insulation (Paper) | Bushing | Tank | Auxilliary |      |  |
| 1                                               | 3365-R1 | Kashechewan | 2008 | 15  |  | 100% | 1                     | 0.9                             | 1                                     | 1               | 0.9                  | 82.7%                          | 99.9%     | N            | 82.7%                          | Good        | 0%                                                | >10      |          | 87%                 | 100%     | 100%               | 88%     | 100% | 50%        | 100% |  |
| 2                                               | 3364-R2 | Albany      | 2001 | 22  |  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 98.3%                          | 99.0%     | N            | 98.3%                          | Very Good   | 0%                                                | >10      |          | 100%                | 92%      | 100%               | 100%    | 100% | 100%       | 100% |  |
| 3                                               | 3364-R1 | Albany      | 2001 | 22  |  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 100.0%                         | 99.0%     | Y            | 99.0%                          | Very Good   | 0%                                                | >10      |          | 100%                | 100%     | 100%               | 100%    | 100% | 100%       | 100% |  |
| 4                                               | 3366-R1 | Attawa      | 2002 | 21  |  | 100% | 1                     | 1                               | 1                                     | 1               | 1                    | 100.0%                         | 99.3%     | Y            | 99.3%                          | Very Good   | 0%                                                | >10      |          | 100%                | 100%     | 100%               | 100%    | 100% | 100%       | 100% |  |

In the above table, it is worth mentioning that, although all the units are in good or very good categories, FNEI is recommended to review the following findings:

Unit 3365-R1 shows noticeable TDCG increase from 2020 to 2021, thus triggering DGA trend de-rating. FNEI is recommended to follow up with such trend.

Unit 3365-R1 had oil leak issue found during 6 inspections from 2018 to 2022. FNEI is recommended to investigate the root cause.



## 2.4 Data Assessment

The data for Reactors included age, nameplate information, inspection records, oil quality, dissolved gas analysis, tests for power factors, furan compound, excitation current, turn ratios and winding resistances. The average DAI is only 53% because DGA and oil inspection data are available for only 1 unit (3365-R1)

| Asset Category | Population | Average DAI |
|----------------|------------|-------------|
| Reactors       | 4          | 100%        |

The only data gap in this study is the measurement of oil dissipation factor.

### 3. Circuit Breakers

There are 22 Circuit Breakers at FNEI. All of them had sufficient data for assessment. The average age of the population is 16 years; age distribution is as follows:

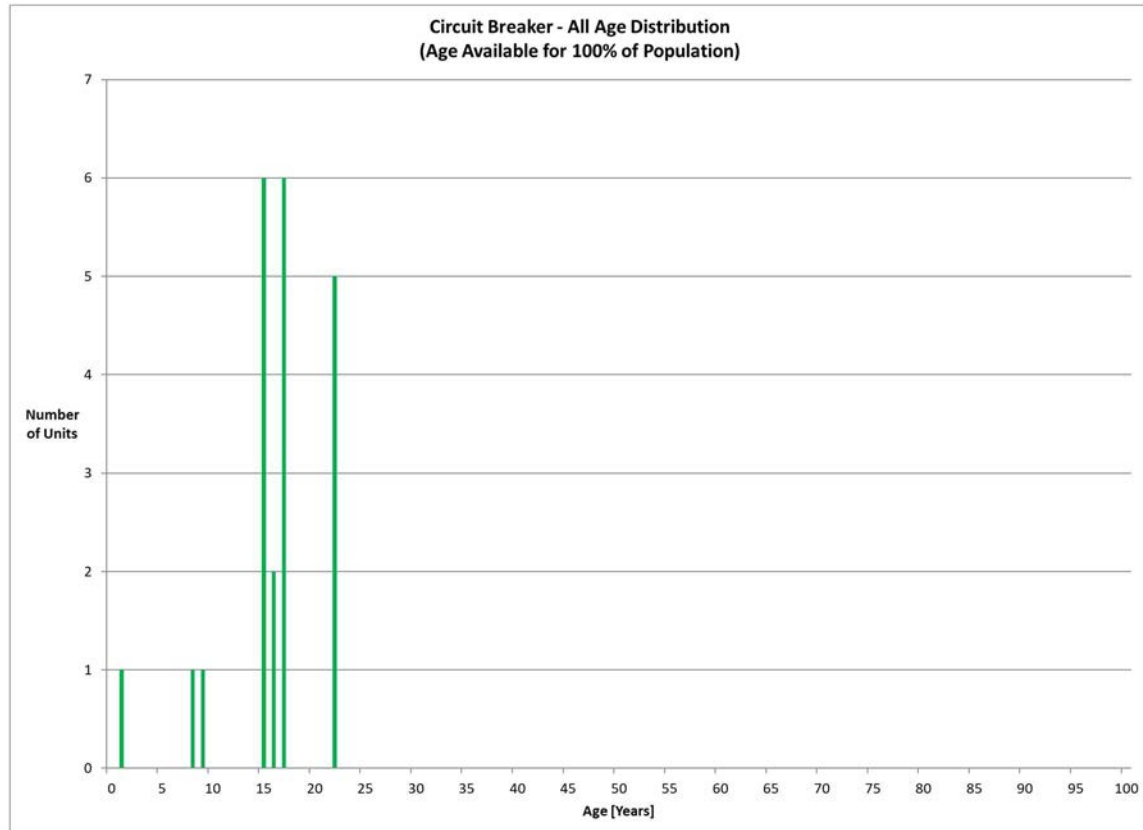


**Figure A 3-1 Circuit Breakers Age Distribution**

### 3.1 Health Index

#### 3.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 3-1 Circuit Breakers Health Index Formula**

| Condition Parameter (CP)                                                                                   |                                    | Sub-Condition Parameter (SCP)          |             |               |              |
|------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------|-------------|---------------|--------------|
| Description                                                                                                | Weight (WCP)                       | Description                            | Data Source | Weight (WSCP) | Criteria     |
| Operating Mechanism and Control                                                                            | 14 <sup>1</sup><br>11 <sup>2</sup> | Linkage                                | Inspections | 3             | Table A 1-10 |
|                                                                                                            |                                    | Damage                                 | Inspections | 2             | Table A 1-10 |
| Contacts                                                                                                   | 3                                  | Closing timing                         | Test        | 1             | Table A 3-3  |
|                                                                                                            |                                    | Trip timing                            | Test        | 2             | Table A 3-3  |
|                                                                                                            |                                    | Contact Resistance                     | Test        | 1             | Table A 3-2  |
| Interrupters                                                                                               | 9 <sup>1</sup><br>5 <sup>2</sup>   | Heater                                 | Inspections | 1             | Table A 1-10 |
| Insulation and Connections                                                                                 | 2                                  | Connections                            | Inspections | 1             | Table A 1-10 |
| Derating Multiplier (DR)                                                                                   |                                    | Based on relative number of operations |             |               | Table A 3-5  |
| Age Limiter (AL)                                                                                           |                                    | Based on typical life curve            |             |               | Figure A 3-2 |
| 1 Oil; 2 Vacuum; *where there is no available data for any assets, the weight of the parameter is set to 0 |                                    |                                        |             |               |              |

### Multiple years of test records

Whenever there are multiple years of test records for a parameter, the score of the parameter is calculated as the weighted average scores of multiple years, with more recent years being assigned of higher year weights as follows:

$$\text{Test Score} = \frac{\sum_i (S_i W_i)}{\sum_i W_i}$$

**Equation 3-1**

Where  $i$  refers to the year the inspection was conducted  
 $W$  refers to the assigned year weight as follows

| Year | Weight |
|------|--------|
| 2023 | 1      |
| 2022 | 0.9    |
| 2021 | 0.8    |
| 2020 | 0.7    |
| 2019 | 0.6    |
| 2018 | 0.5    |
| 2017 | 0.4    |
| 2016 | 0.3    |
| 2015 | 0.2    |
| 2014 | 0.1    |
| 2013 | 0      |

$S$  refers to the score in a specific year, as per criteria as follows

- Contact Resistance

The contact resistance criteria compare the measured contact resistance to assumed limits. The worst-case contact resistance of the three phases is used as the score.



**Table A 3-2 Contact Resistance Criteria**

| <b>Score (SCPS)</b> | <b>“Percent Limit” Description</b> |
|---------------------|------------------------------------|
| 4                   | Percent Limit $\leq$ 80%           |
| 3                   | 80% < Percent Limit $\leq$ 100%    |
| 1                   | 100% < Percent Limit $\leq$ 120%   |
| 0                   | Percent Limit > 120%               |

Where Percent Limit = (Contact Resistance) / (Allowable Limit)

Allowable Limit assume as:

| <b>CB Type</b> | <b>Contact Resistance Limit [<math>\mu\Omega</math>]</b> |
|----------------|----------------------------------------------------------|
| Oil            | 500                                                      |
| Vacuum         | 35                                                       |

- Timing Test

The timing test criteria compare the measured time to assumed limits.

**Table A 3-3 Timing Test Criteria**

| Score (SCPS) | "Percent Limit" Description      |
|--------------|----------------------------------|
| 4            | Percent Limit $\leq$ 80%         |
| 3            | 80% < Percent Limit $\leq$ 100%  |
| 1            | 100% < Percent Limit $\leq$ 120% |
| 0            | Percent Limit > 120%             |

Where Percent Limit = (Trip or Close time) / (Allowable Limit)

Allowable Limit assume as:

| CB Type   | Trip Limit [ms] |
|-----------|-----------------|
| All Types | 83              |

| CB Type   | Close Limit [ms] |
|-----------|------------------|
| All Types | 55               |

**Inspections Records**

**Table A 3-4 Inspection Criteria**

| Score (SCPS) | Number of Not OK Findings in Past 5 Years |
|--------------|-------------------------------------------|
| 4            | Not OK Count < 1                          |
| 3            | 1 $\leq$ Not OK Count < 2                 |
| 2            | 2 $\leq$ Not OK Count < 3                 |
| 1            | 3 $\leq$ Not OK Count < 4                 |
| 0            | Not OK Count $\geq$ 4                     |

### Derating Multiplier

The HI of breakers that have relatively higher operation counts are de-rated to reflect greater wear. The Derating multiplier is calculated as follows:

The operating counter criteria compare the measured time to assumed limits.

**Table A 3-5 Operating Derating Criteria**

| DR   | Operation Count Description |                        |                        |
|------|-----------------------------|------------------------|------------------------|
|      | Oil                         | Vacuum                 | SF6                    |
| 1    | $C < 1600$                  | $C < 16000$            | $C < 8000$             |
| 0.95 | $1600 \leq C < 2000$        | $16000 \leq C < 20000$ | $8000 \leq C < 10000$  |
| 0.9  | $2000 \leq C < 2400$        | $20000 \leq C < 24000$ | $10000 \leq C < 12000$ |
| 0.85 | $C > 2400$                  | $C > 24000$            | $C > 12000$            |

### Age Criteria

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. In this study different curves were applied for oil and vacuum type breakers, with their parameters listed in the following table. As the client does not have available historical removal data, the age limiter curves were based on statistical information from North American utilities:

**Table A 3-6 Degradation curve parameters – Circuit Breakers**

|                        | Scale parameter $\alpha$ | Shape parameter $\beta$ |
|------------------------|--------------------------|-------------------------|
| Oil Circuit Breaker    | 54.5227                  | 3.6759                  |
| Vacuum Circuit Breaker | 37.1098                  | 2.2246                  |

The resultant survival curve (1 – likelihood of removals) is shown in below. These survival curves were used as the Age Limiters.



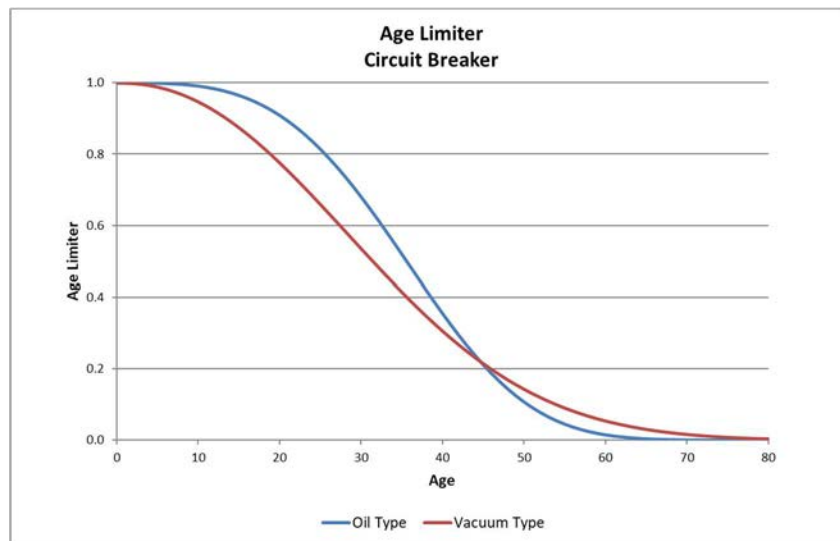


**Figure A 3-2 Circuit Breakers Age Limiter**

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### 3.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All were found to be in good or very good condition. The average HI for the asset group was 85%.

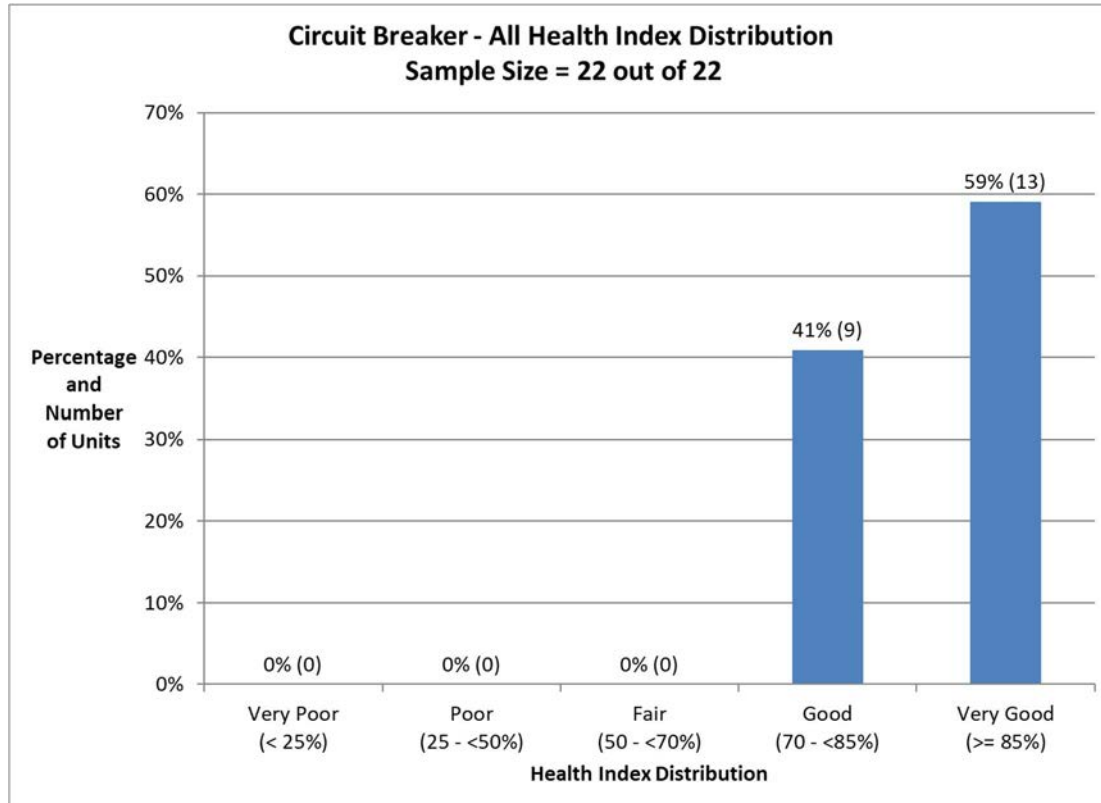


**Figure A 3-3 Circuit Breakers Health Index Distribution**

### 3.2 Flagged for Action Plan

The 10-year FFA Plan was based on HI results and the associated criticality information as described in Section 2.2.1. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each breaker was set to 0% (i.e. least critical).

No breakers were flagged for action in the next 10 years.



3.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 3-7 Circuit Breakers Risk Based Priortized List

| Asset Information |            |        |                   |     | DAI  | HI Calculated                         |           |             | Final HI |             | Risk Index<br>100% =<br>Most Risk<br>0% = Least<br>Risk | FFA Year | De-Rating<br>Multiplier<br>(Number of<br>Operations) | HI Parameter Scores    |                        |                |                               |
|-------------------|------------|--------|-------------------|-----|------|---------------------------------------|-----------|-------------|----------|-------------|---------------------------------------------------------|----------|------------------------------------------------------|------------------------|------------------------|----------------|-------------------------------|
| #                 | Object ID  | Type   | Year<br>Installed | Age |      | Calculated<br>HI (with De-<br>rating) | Age Limit | Age Limited | HI       | HI Category |                                                         |          |                                                      | Operating<br>Mechanism | Contact<br>Performance | Arc extinction | Insulation and<br>Connections |
| 1                 | 3366-F1    | Vacuum | 2001              | 22  | 79%  | 100.00%                               | 0.73      | Y           | 73%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 100%                   | 100%           | 100%                          |
| 2                 | 3364-F1    | Vacuum | 2001              | 22  | 100% | 98.25%                                | 0.73      | Y           | 73%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 94%                    | 100%           | 100%                          |
| 3                 | 3364-T1    | Vacuum | 2001              | 22  | 100% | 98.25%                                | 0.73      | Y           | 73%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 94%                    | 100%           | 100%                          |
| 4                 | 3365-F1    | Vacuum | 2001              | 22  | 100% | 98.25%                                | 0.73      | Y           | 73%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 94%                    | 100%           | 100%                          |
| 5                 | 3365-L9R1  | SF6    | 2008              | 15  | 100% | 86.00%                                | 0.97      | N           | 86%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 50%                    | 100%           | 100%                          |
| 6                 | 3365-L3B3  | SF6    | 2008              | 15  | 100% | 86.00%                                | 0.97      | N           | 86%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 50%                    | 100%           | 100%                          |
| 7                 | 3365-L5B3  | SF6    | 2001              | 22  | 100% | 98.25%                                | 0.88      | Y           | 88%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 94%                    | 100%           | 100%                          |
| 8                 | 3366-TIE-B | Vacuum | 2006              | 17  | 72%  | 100.00%                               | 0.84      | Y           | 84%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   |                        | 100%           | 100%                          |
| 9                 | 3366-T3    | Vacuum | 2006              | 17  | 100% | 100.00%                               | 0.84      | Y           | 84%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 100%                   | 100%           | 100%                          |
| 10                | 3366-F3    | Vacuum | 2006              | 17  | 100% | 91.25%                                | 0.84      | Y           | 84%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 69%                    | 100%           | 100%                          |
| 11                | 3366-F2    | Vacuum | 2006              | 17  | 100% | 93.00%                                | 0.84      | Y           | 84%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 75%                    | 100%           | 100%                          |
| 12                | 3366-TIE-A | Vacuum | 2006              | 17  | 100% | 91.25%                                | 0.84      | Y           | 84%      | Good        | 0%                                                      | >20      | 1                                                    | 100%                   | 69%                    | 100%           | 100%                          |
| 13                | 3364-TIE-A | Vacuum | 2007              | 16  | 72%  | 100.00%                               | 0.86      | Y           | 86%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   |                        | 100%           | 100%                          |
| 14                | 3364-T1A   | Vacuum | 2007              | 16  | 100% | 93.00%                                | 0.86      | Y           | 86%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 75%                    | 100%           | 100%                          |
| 15                | 3365-TIE   | Vacuum | 2008              | 15  | 100% | 94.75%                                | 0.88      | Y           | 88%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 81%                    | 100%           | 100%                          |
| 16                | 3365-T2A   | Vacuum | 2008              | 15  | 100% | 93.00%                                | 0.88      | Y           | 88%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 75%                    | 100%           | 100%                          |
| 17                | 3365-F3    | Vacuum | 2008              | 15  | 100% | 93.00%                                | 0.88      | Y           | 88%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 75%                    | 100%           | 100%                          |
| 18                | 3366-L7B4  | SF6    | 2006              | 17  | 72%  | 93.06%                                | 0.95      | N           | 93%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   |                        | 75%            | 100%                          |
| 19                | 3364-TIE-B | Vacuum | 2014              | 9   | 100% | 93.00%                                | 0.96      | N           | 93%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 75%                    | 100%           | 100%                          |
| 20                | 3365-L9B3  | SF6    | 2008              | 15  | 72%  | 97.69%                                | 0.97      | Y           | 97%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   |                        | 92%            | 100%                          |
| 21                | 3366-F4    | Vacuum | 2022              | 1   | 100% | 94.75%                                | 1.00      | N           | 95%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 81%                    | 100%           | 100%                          |
| 22                | 3365-T2    | Vacuum | 2015              | 8   | 100% | 96.50%                                | 0.97      | N           | 97%      | Very Good   | 0%                                                      | >20      | 1                                                    | 100%                   | 88%                    | 100%           | 100%                          |

In the above table, it is worth mentioning that, although all the units are in good or very good categories, FNEI is recommended to review the following findings:

Multiple vacuum breakers show relatively longer close time (over 55 ms as per Siemens 3AH instruction manual) than the others. A consultation with manufacturer design data is suggested.

Breaker 3366-L7B4 shows heater issue for 3 times during 2021-2022. A root cause investigation is suggested.



### 3.4 Data Assessment

The data for breakers included inspection records and test results.

| Asset Category   | Population | Average DAI |
|------------------|------------|-------------|
| Circuit Breakers | 22         | 94%         |

The major condition parameter data gaps include insulation power factor test and visual inspection on arc contact, interrupter, racking mechanism and lubrication.

## 4. Circuit Switchers

There are 9 Circuit Switchers at FNEI. All of them had sufficient data for assessment. The average age of the population is 20 years; age distribution is as follows:

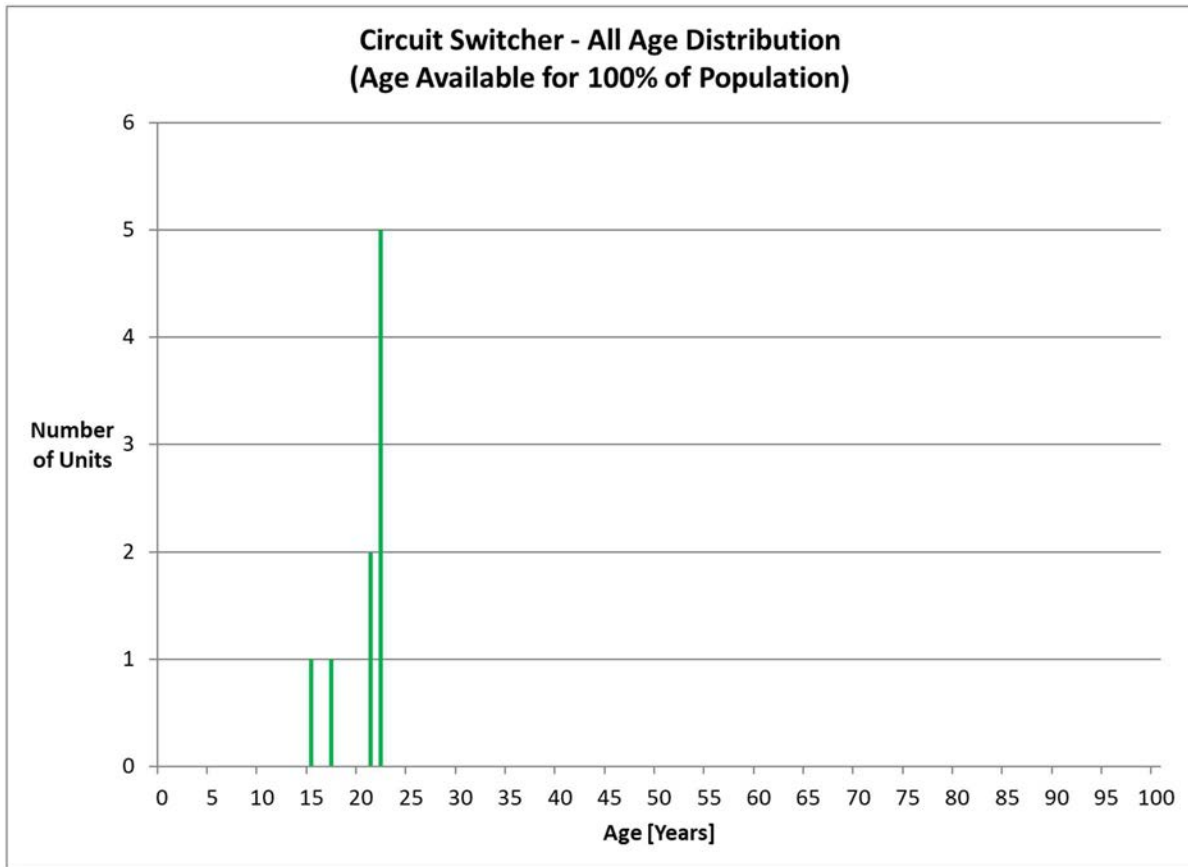


**Figure A 4-1 Circuit Switchers Age Distribution**

## 4.1 Health Index

### 4.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 4-1 Circuit Switchers Health Index Formula**

| Condition Parameter (CP)        |              | Sub-Condition Parameter (SCP)          |             |               |              |
|---------------------------------|--------------|----------------------------------------|-------------|---------------|--------------|
| Description                     | Weight (WCP) | Description                            | Data Source | Weight (WSCP) | Criteria     |
| Operating Mechanism and Control | 11           | Linkage                                | Inspections | 3             | Table A 1-10 |
|                                 |              | Damage                                 | Inspections | 2             | Table A 1-10 |
| Contacts                        | 7            | Contact Resistance                     | Test        | 1             | Table A 3-2  |
| Interrupters                    | 9            | Heater                                 | Inspections | 1             | Table A 1-10 |
|                                 |              | SF6 Density                            | Inspections | 2             | Table A 1-10 |
| Insulation and Connections      | 2            | Connections                            | Inspections | 1             | Table A 1-10 |
| Derating Multiplier (DR)        |              | Based on relative number of operations |             |               | Table A 3-5  |
| Age Limiter (AL)                |              | Based on typical life curve            |             |               | Figure A 4-2 |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 56.336$ ,  $\beta = 3.330$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter.

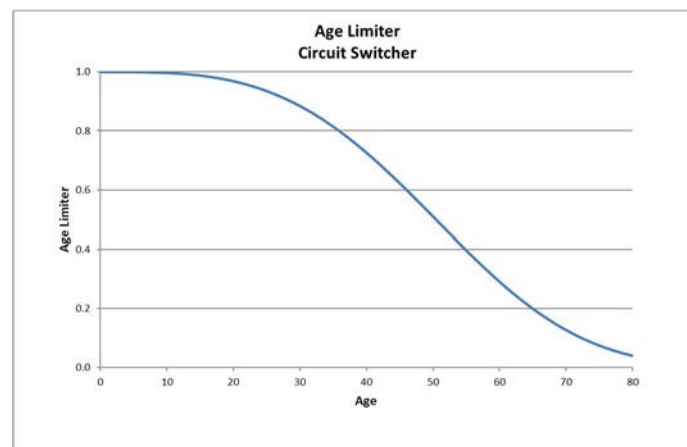


**Figure A 4-2 Circuit Switchers Age Limiter**

#### 4.1.2 Health Index Results

The HI Distribution for Circuit Switchers, in terms of number of units and percentage of units, is shown below. All of them were found to be in good/very good condition. The average HI for the asset group was 91%.

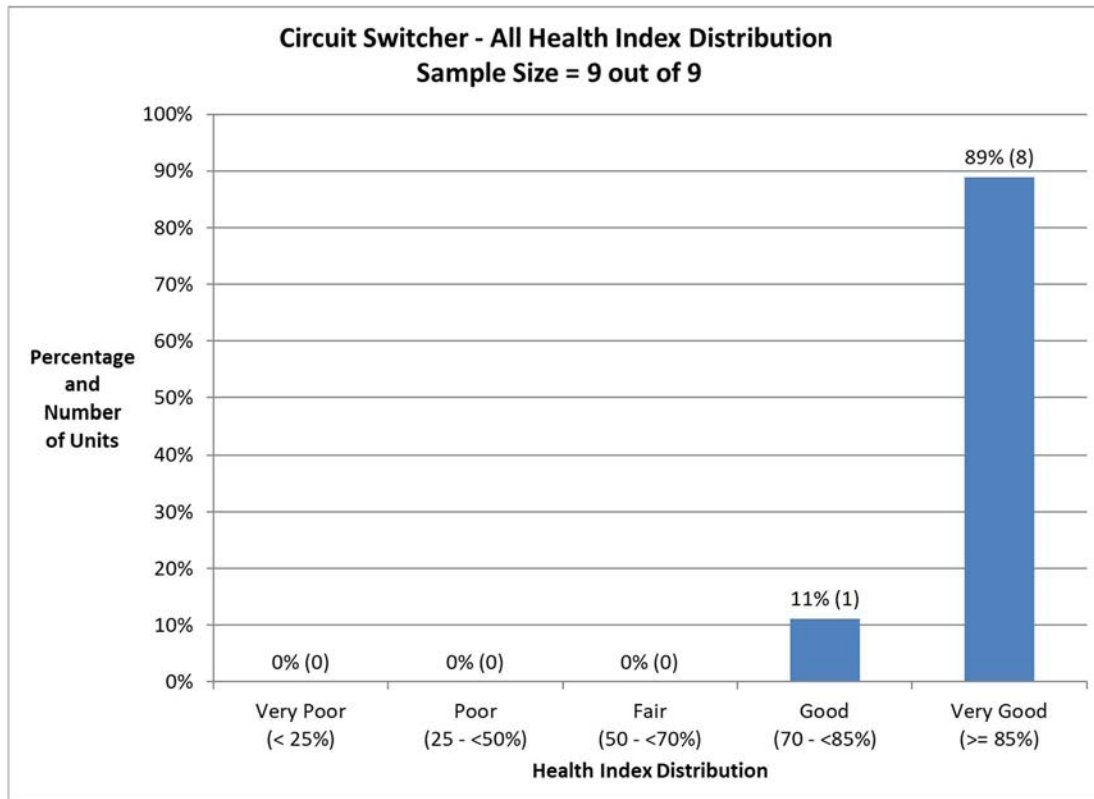


**Figure A 4-3 Circuit Switchers Health Index Distribution**

#### 4.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each unit was set to 100% (i.e. most critical).

No Circuit Switchers were flagged for action in the next 10 years.



4.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 4-2 Circuit Switchers Risk Based Prioritized List

| Asset Information |             |      |                |     | DAI  | HI Calculated                  |           |             | Final HI |             | Risk Index<br>100% = Most Risk<br>0% = Least Risk | FFA Year | De-Rating<br>Multiplier<br>(Number of Operations) | HI Parameter Scores |                     |                |                            |
|-------------------|-------------|------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|---------------------------------------------------|----------|---------------------------------------------------|---------------------|---------------------|----------------|----------------------------|
| #                 | Object ID   | Type | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |                                                   |          |                                                   | Operating Mechanism | Contact Performance | Arc extinction | Insulation and Connections |
| 1                 | 3366-T3A-B4 | SF6  | 2006           | 17  | 100% | 79.00%                         | 0.98      | N           | 79%      | Good        | 0%                                                | >20      | 1                                                 | 100%                | 25%                 | 100%           | 100%                       |
| 2                 | 3364-R2-B2  | SF6  | 2001           | 22  | 100% | 87.80%                         | 0.96      | N           | 88%      | Very Good   | 0%                                                | >20      | 1                                                 | 95%                 | 100%                | 50%            | 100%                       |
| 3                 | 3365-T2-B3A | SF6  | 2001           | 22  | 100% | 87.80%                         | 0.96      | N           | 88%      | Very Good   | 0%                                                | >20      | 1                                                 | 95%                 | 100%                | 50%            | 100%                       |
| 4                 | 3365-T2A-B3 | SF6  | 2008           | 15  | 100% | 91.33%                         | 0.99      | N           | 91%      | Very Good   | 0%                                                | >20      | 1                                                 | 100%                | 100%                | 67%            | 75%                        |
| 5                 | 3364-T1A-B2 | SF6  | 2001           | 22  | 100% | 93.33%                         | 0.96      | N           | 93%      | Very Good   | 0%                                                | >20      | 1                                                 | 100%                | 100%                | 67%            | 100%                       |
| 6                 | 3364-T1-B2A | SF6  | 2001           | 22  | 100% | 93.33%                         | 0.96      | N           | 93%      | Very Good   | 0%                                                | >20      | 1                                                 | 100%                | 100%                | 67%            | 100%                       |
| 7                 | 3364-R1-B2A | SF6  | 2001           | 22  | 100% | 96.67%                         | 0.96      | Y           | 96%      | Very Good   | 0%                                                | >20      | 1                                                 | 100%                | 100%                | 83%            | 100%                       |
| 8                 | 3366-T3-B4A | SF6  | 2002           | 21  | 100% | 100.00%                        | 0.96      | Y           | 96%      | Very Good   | 0%                                                | >20      | 1                                                 | 100%                | 100%                | 100%           | 100%                       |
| 9                 | 3366-R1-B4A | SF6  | 2002           | 21  | 100% | 100.00%                        | 0.96      | Y           | 96%      | Very Good   | 0%                                                | >20      | 1                                                 | 100%                | 100%                | 100%           | 100%                       |

In the above table, it is worth mentioning that, although all the units are in good or very good categories, FNEI is recommended to review the following findings:

Unit 3366-T3A-B4 had high contact resistance reading in 2021. FNEI is recommended to conduct further investigation.

Units 3364-R2-B2 and 3365-T2-B3A had defect findings on SF6 density transmitters 3 times each, during the period of 2019-2021. FNEI is recommended to conduct further investigation. Issue with SF6 will compromise the arc extinction feature.





#### 4.4 Data Assessment

The available data for Circuit Switchers were age, inspections, test results and operation counts.

| Asset Category    | Population | Average DAI |
|-------------------|------------|-------------|
| Circuit Switchers | 9          | 100%        |

The major condition parameter data gaps include insulation power factor test and visual inspection on lubrication.

## 5. Disconnect Switches

There are 12 Disconnect Switches at FNEI. All of them had sufficient data for assessment. The average age of the population is 18 years; age distribution is as follows:

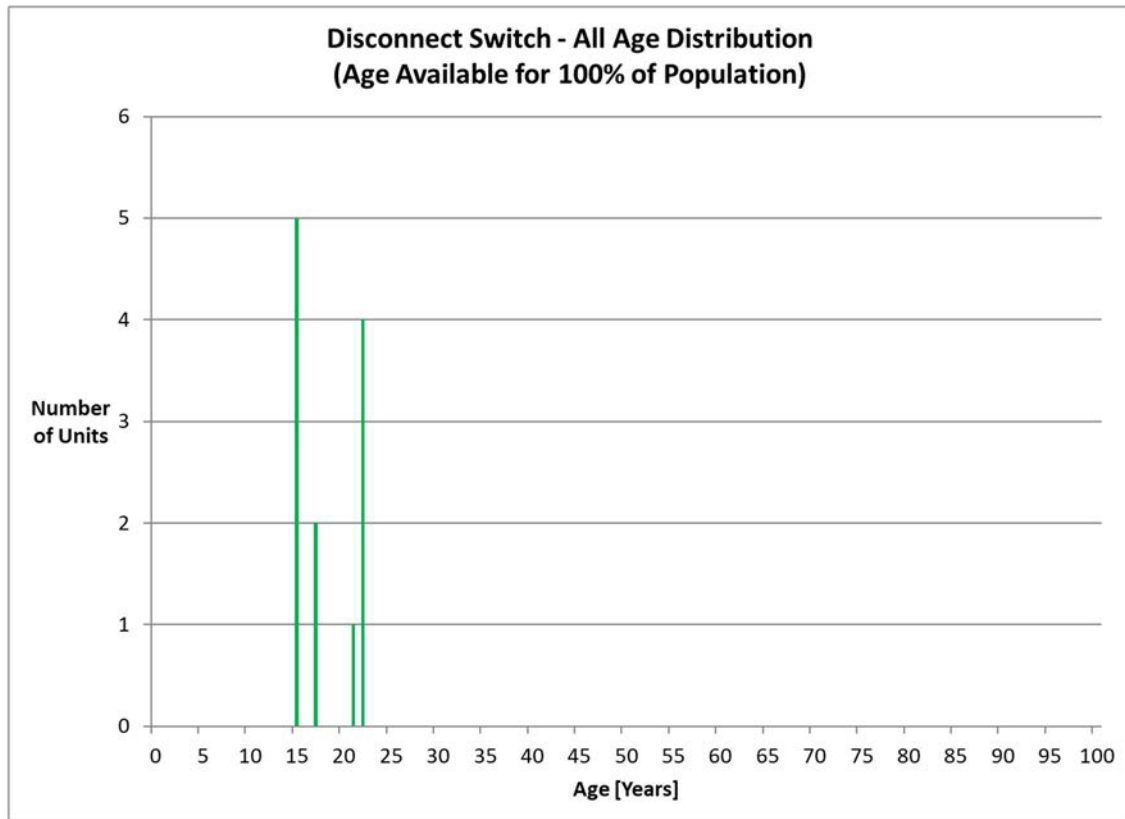


**Figure A 5-1 Disconnect Switches Age Distribution**

## 5.1 Health Index

### 5.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 5-1 Disconnect Switches Health Index Formula**

| Condition Parameter (CP)        |              | Sub-Condition Parameter (SCP) |             |               |              |
|---------------------------------|--------------|-------------------------------|-------------|---------------|--------------|
| Description                     | Weight (WCP) | Description                   | Data Source | Weight (WSCP) | Criteria     |
| Operating Mechanism and Control | 14           | Power Train                   | Inspections | 2             | Table A 1-10 |
|                                 |              | Foundation                    | Inspections | 1             | Table A 1-10 |
| Arc Extinction                  | 9            | Blade                         | Inspections | 1             | Table A 1-10 |
| Insulation                      | 2            | Insulator                     | Inspections | 1             | Table A 1-10 |
| Derating Multiplier (DR)        |              |                               |             |               | NA           |
| Age Limiter (AL)                |              | Based on typical life curve   |             |               | Figure A 5-2 |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 50.873$ ,  $\beta = 4.105$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

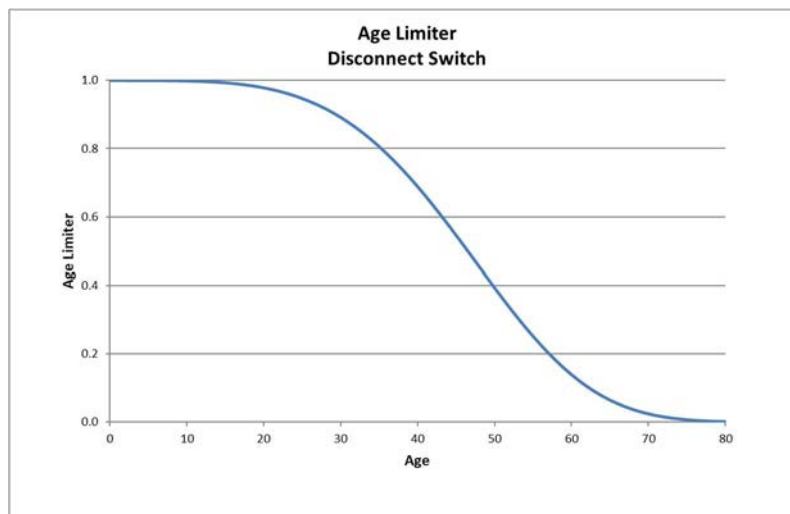


**Figure A 5-2 Disconnect Switches Age Limiter**

### 5.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All of them were found to be in very good condition. The average HI for the asset group was 98%.

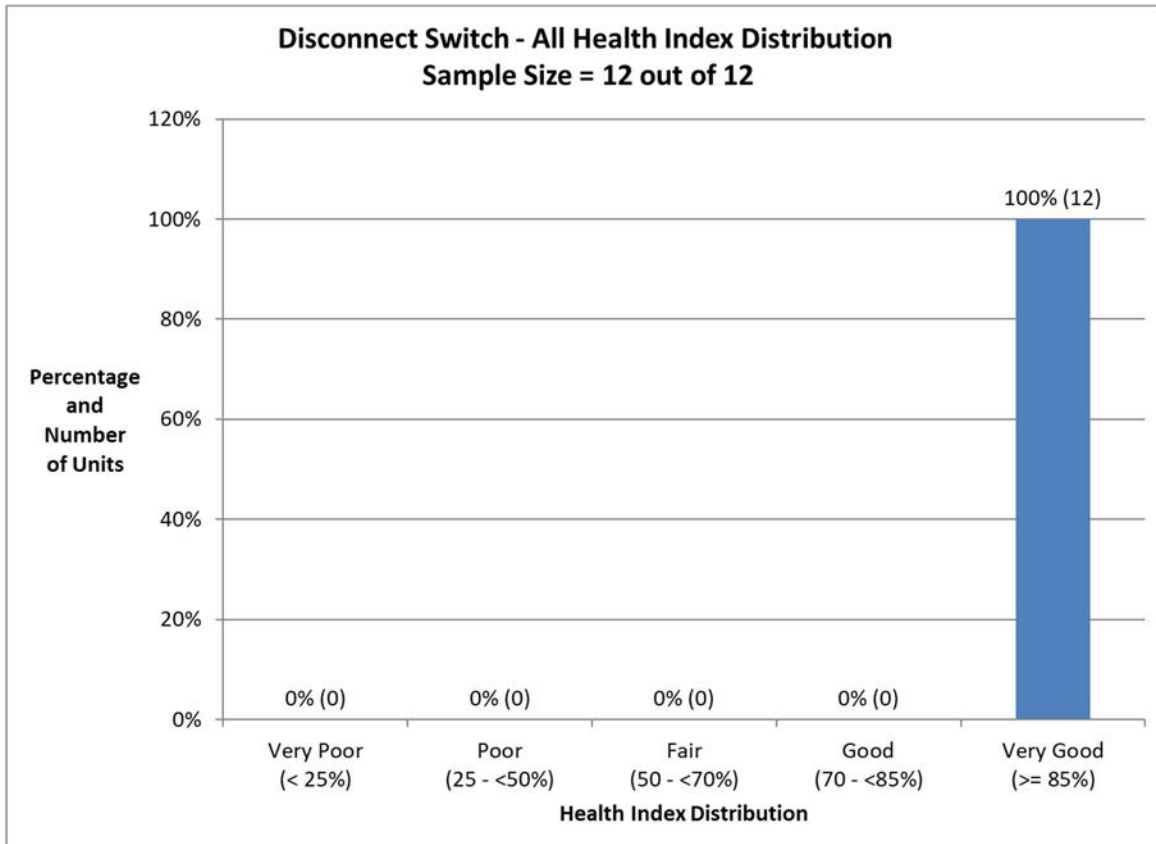


**Figure A 5-3 Disconnect Switches Health Index Distribution**

## 5.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each unit was set to 100% (i.e. most critical).

No Disconnect Switches were flagged for action in the next 10 years.



5.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 5-2 Disconnect Switches Risk Based Priortized List

| Asset Information |              |                |     | DAI  | HI Calculated                  |           |             | Final HI |             | Risk Index<br>100% =<br>Most Risk<br>0% = Least<br>Risk | FFA Year | HI Parameter Scores |                     |                |                            |
|-------------------|--------------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|---------------------------------------------------------|----------|---------------------|---------------------|----------------|----------------------------|
| #                 | Object ID    | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |                                                         |          | Operating Mechanism | Contact Performance | Arc extinction | Insulation and Connections |
| 1                 | 3364-B2-M3K  | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 2                 | 3365-B3A-B3  | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 3                 | 3365-L5B3-B3 | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 4                 | 3365-K5A     | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 5                 | 3366-K5ADS   | 2002           | 21  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 6                 | 3366-L7B4-B4 | 2006           | 17  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 7                 | 3366-A7V     | 2006           | 17  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 8                 | 3365-L9B3-9  | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 9                 | 3365-L9B3-B3 | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 10                | 3365-L3B3-3  | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 11                | 3365-L3B3-B3 | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |
| 12                | 3365-L9R1-9  | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   | 0%                                                      | >20      | 100%                |                     | 100%           | 100%                       |



## 5.4 Data Assessment

Age and inspection records were available for Disconnect Switches.

| Asset Category      | Population | Average DAI |
|---------------------|------------|-------------|
| Disconnect Switches | 12         | 100%        |

The important data gap is contact resistance test results.

## 6. Ground Switches

There are 7 Ground Switches at FNEI. All of them had sufficient data for assessment. The average age of the population is 19 years; age distribution is as follows:

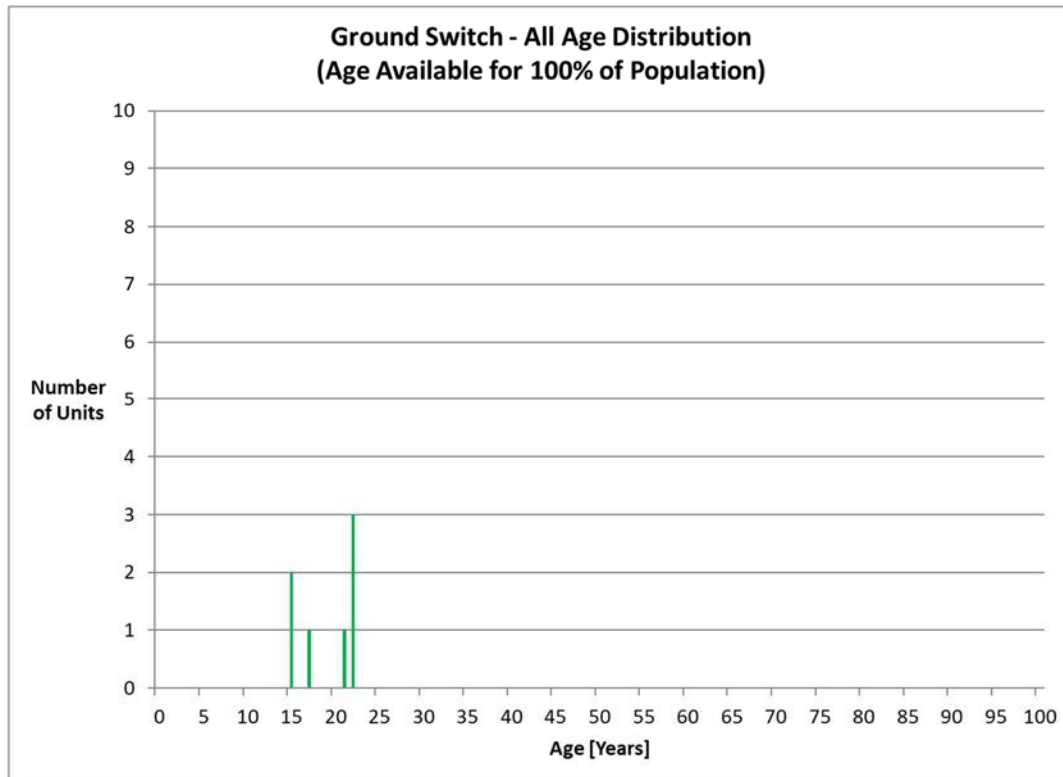


**Figure A 6-1 Ground Switches Age Distribution**

## 6.1 Health Index

### 6.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 6-1 Ground Switches Health Index Formula**

| Condition Parameter (CP) |              | Sub-Condition Parameter (SCP) |             |               |              |
|--------------------------|--------------|-------------------------------|-------------|---------------|--------------|
| Description              | Weight (WCP) | Description                   | Data Source | Weight (WSCP) | Criteria     |
| Physical Condition       | 14           | Damage                        | Inspections | 1             | Table A 1-10 |
| Interior                 | 7            | Heater                        | Inspections | 1             | Table A 1-10 |
| Housing                  | 9            | Corrosion                     | Inspections | 1             | Table A 1-10 |
| Derating Multiplier (DR) |              |                               |             |               | NA           |
| Age Limiter (AL)         |              | Based on typical life curve   |             |               | Figure A 6-2 |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 50.873$ ,  $\beta = 4.105$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

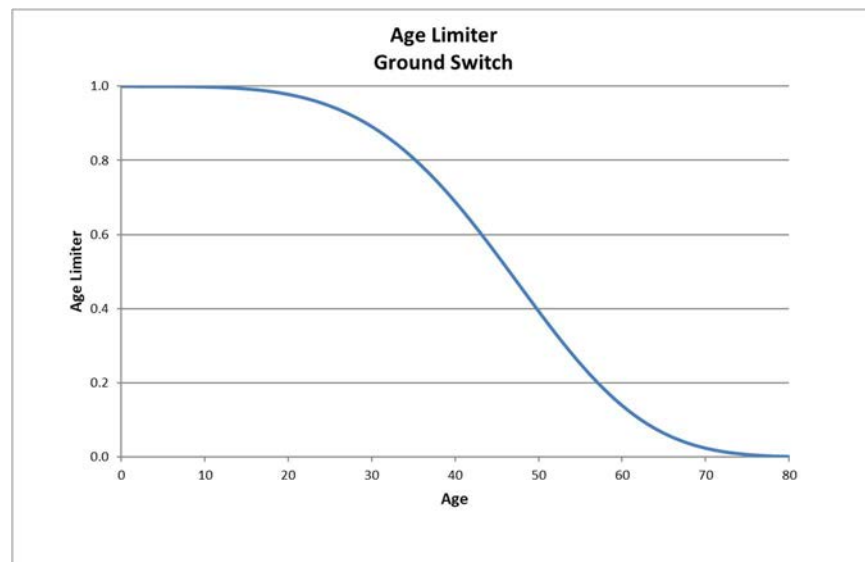


**Figure A 6-2 Ground Switches Age Limiter**



### 6.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. The average HI for the asset group was 98%.

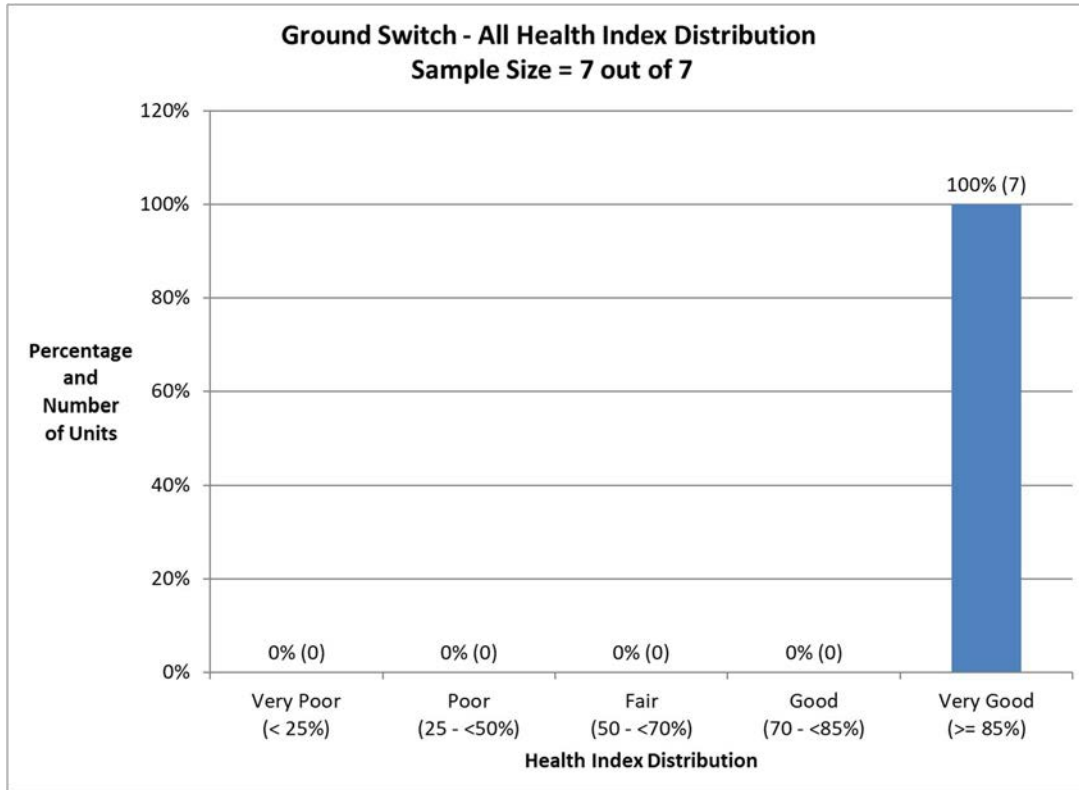


**Figure A 6-3 Ground Switches Health Index Distribution**

## 6.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e. the results from 'sample size' (assets with HI) were extrapolated to the population. As it may not always be feasible to address assets per this plan, a 'levelized' plan for better pacing of investments is also provided.

No Ground Switches were flagged for action in the next 10 years.

6.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 6-2 Ground Switches HI Based Prioritized List

| Asset Information |            |                |     | DAI  | HI Calculated                  |           |             | Final HI |             |  | HI Parameter Scores |          |         |
|-------------------|------------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|--|---------------------|----------|---------|
| #                 | Object ID  | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |  | Physical Condition  | Interior | Housing |
| 1                 | 3364-M3K-G | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%     | 100%    |
| 2                 | 3365-K5A-G | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%     | 100%    |
| 3                 | 3365-B3A-G | 2001           | 22  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%     | 100%    |
| 4                 | 3366-K5A-G | 2002           | 21  | 100% | 100.00%                        | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%     | 100%    |
| 5                 | 3366-A7V-G | 2006           | 17  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   |  | 100%                | 100%     | 100%    |
| 6                 | 3365-M9K-G | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   |  | 100%                | 100%     | 100%    |
| 7                 | 3365-M3K-G | 2008           | 15  | 100% | 100.00%                        | 0.99      | Y           | 99%      | Very Good   |  | 100%                | 100%     | 100%    |



## 6.4 Data Assessment

Age and basic inspection records were available for Ground Switches.

| Asset Category  | Population | Average DAI |
|-----------------|------------|-------------|
| Ground Switches | 7          | 100%        |

No major condition parameter data gaps were identified.

## 7. Metal-clad Switchgear

There are 6 Metal-clad Switchgear at FNEI. All of them had sufficient data for assessment. The average age of the population is 19 years; age distribution is as follows:

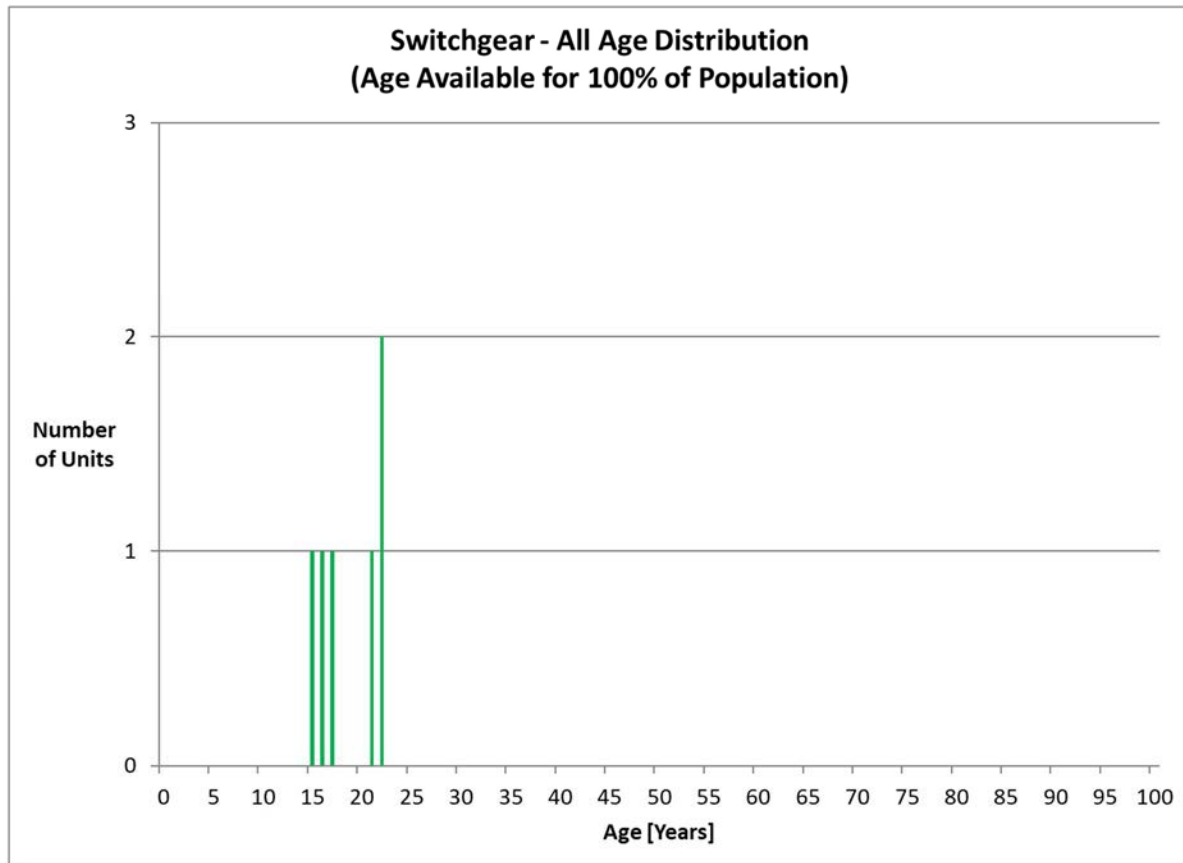


**Figure A 7-1 Metal-clad Switchgear Age Distribution**

## 7.1 Health Index

### 7.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 7-1 Metal-clad Switchgear Health Index Formula**

| Condition Parameter (CP) |              | Sub-Condition Parameter (SCP) |             |               |              |
|--------------------------|--------------|-------------------------------|-------------|---------------|--------------|
| Description              | Weight (WCP) | Description                   | Data Source | Weight (WSCP) | Criteria     |
| Physical Condition       | 1            | Enclosure                     | Inspections | 1             | Table A 1-10 |
| Interior                 | 1            | Heater                        | Inspections | 1             | Table A 1-10 |
| Housing                  | 1            | Housing                       | Inspections | 1             | Table A 1-10 |
| Control                  | 1            | Control                       | Inspections | 1             | Table A 1-10 |
| Derating Multiplier (DR) |              |                               |             |               | NA           |
| Age Limiter (AL)         |              | Based on typical life curve   |             |               | Figure A 7-2 |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 53.486$ ,  $\beta = 2.900$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter.

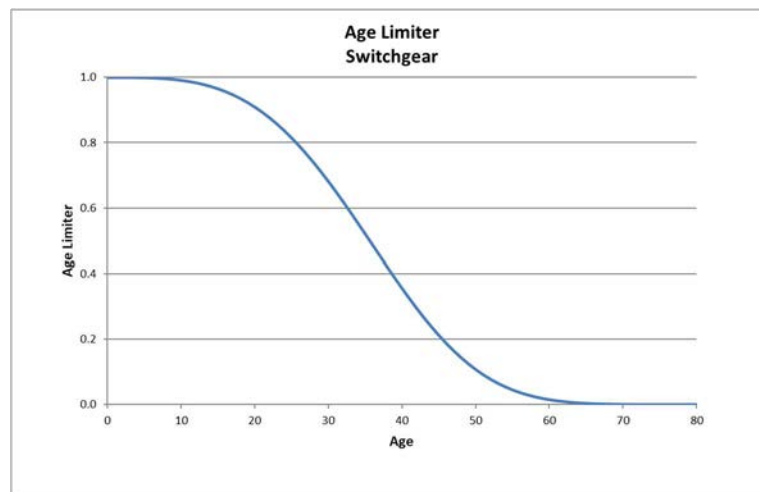


**Figure A 7-2 Metal-clad Switchgear Age Limiter**

### 7.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in good/very good condition. The average HI for the asset group was 88%.

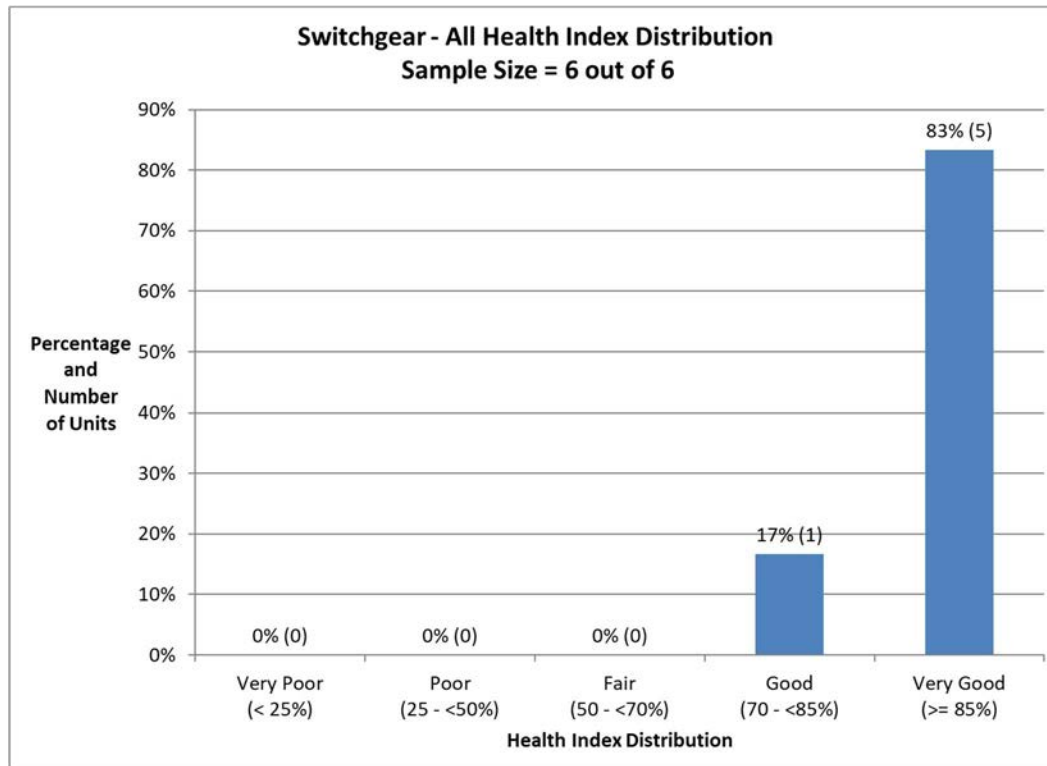


**Figure A 7-3 Wood Metal-clad Switchgear Health Index Distribution**

## 7.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each unit was set to 0% (i.e. least critical).

No Metal-clad Switchgear were flagged for action in the next 10 years.



7.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 7-2 Metal-clad Switchgear Risk Based Prioritized List

| Asset Information |           |                |     | DAI  | HI Calculated                         |           |             | Final HI |             | Risk Index<br>100% =<br>Most Risk<br>0% = Least<br>Risk | FFA Year | HI Parameter Scores   |          |         |         |
|-------------------|-----------|----------------|-----|------|---------------------------------------|-----------|-------------|----------|-------------|---------------------------------------------------------|----------|-----------------------|----------|---------|---------|
| #                 | Object ID | Year Installed | Age |      | Calculated<br>HI (with De-<br>rating) | Age Limit | Age Limited | HI       | HI Category |                                                         |          | Physical<br>Condition | Interior | Housing | Control |
| 1                 | 3364-EN1  | 2001           | 22  | 100% | 81.25%                                | 0.93      | N           | 81%      | Good        | 0%                                                      | >20      | 100%                  | 50%      | 75%     | 100%    |
| 2                 | 3365-EN1  | 2001           | 22  | 100% | 87.50%                                | 0.93      | N           | 88%      | Very Good   | 0%                                                      | >20      | 75%                   | 100%     | 75%     | 100%    |
| 3                 | 3366-EN1  | 2002           | 21  | 100% | 87.50%                                | 0.94      | N           | 88%      | Very Good   | 0%                                                      | >20      | 75%                   | 75%      | 100%    | 100%    |
| 4                 | 3366-EN2  | 2006           | 17  | 100% | 87.50%                                | 0.96      | N           | 88%      | Very Good   | 0%                                                      | >20      | 100%                  | 75%      | 75%     | 100%    |
| 5                 | 3365-EN2  | 2008           | 15  | 100% | 87.50%                                | 0.98      | N           | 88%      | Very Good   | 0%                                                      | >20      | 75%                   | 100%     | 100%    | 75%     |
| 6                 | 3364-EN2  | 2007           | 16  | 100% | 93.75%                                | 0.97      | N           | 94%      | Very Good   | 0%                                                      | >20      | 100%                  | 100%     | 75%     | 100%    |



## 7.4 Data Assessment

Age and basic inspection records were available for Metal-clad Switchgear.

| Asset Category        | Population | Average DAI |
|-----------------------|------------|-------------|
| Metal-clad Switchgear | 6          | 100%        |

There is no major gap in this asset group.



## 8. Voltage Regulators

This section summarizes the ACA results for FNEI's Voltage Regulators. There were a total of 21 Voltage Regulators. All of them had age and were therefore included in the assessment. The average age is 18 years; the age distribution is as follows.

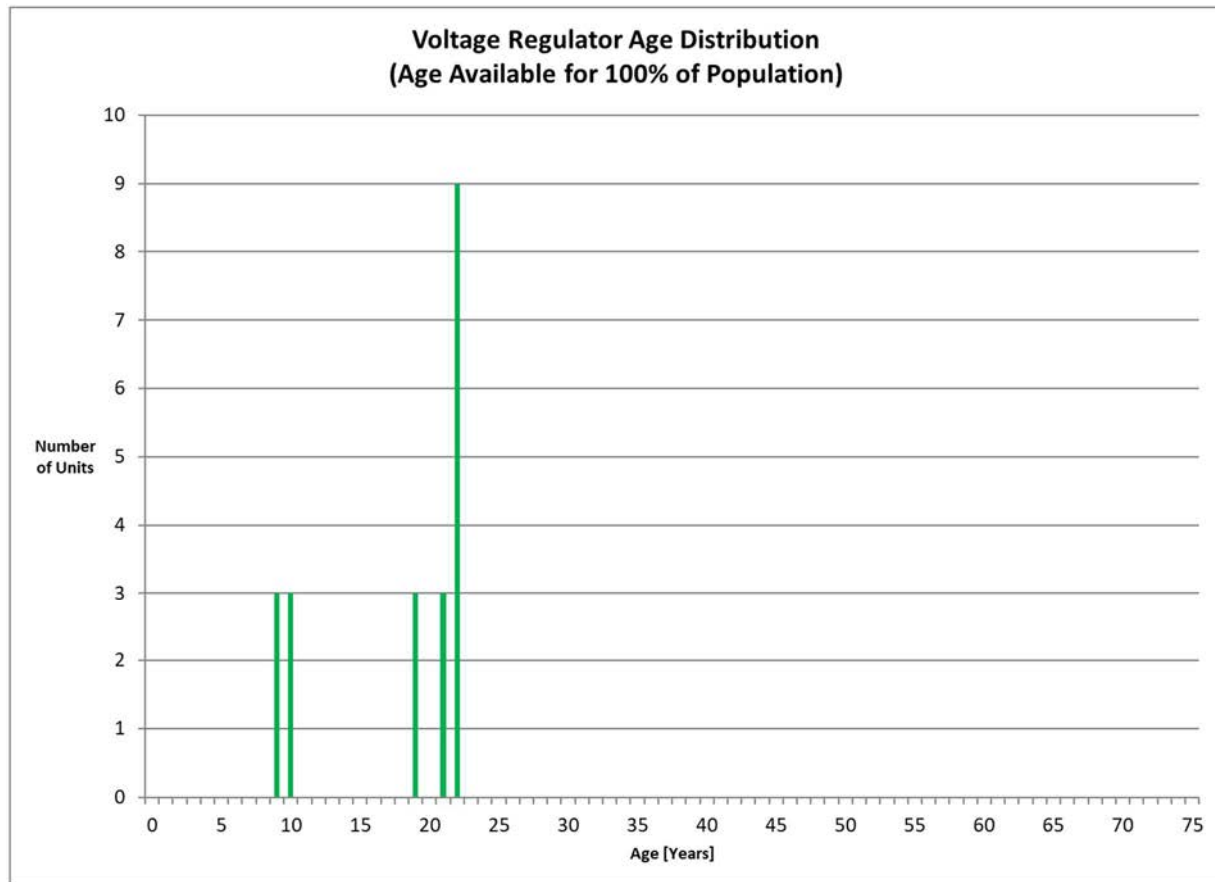


**Figure A 8-1 Voltage Regulators Age Distribution**

## 8.1 Health Index

### 8.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 8-1 Voltage Regulators Health Index Formula**

| Condition Parameter (CP)                                                                  |              | Sub-Condition Parameter (SCP)    |             |               |              |
|-------------------------------------------------------------------------------------------|--------------|----------------------------------|-------------|---------------|--------------|
| Description                                                                               | Weight (WCP) | Description                      | Data Source | Weight (WSCP) | Criteria     |
| Insulation Oil                                                                            | 8            | Moisture                         | GOQ         | 4             | Table A 1-3  |
|                                                                                           |              | Dielectric Strength              | GOQ         | 5             | Table A 1-3  |
|                                                                                           |              | Interfacial Tension              | GOQ         | 3             | Table A 1-3  |
|                                                                                           |              | Acid Number                      | GOQ         | 2             | Table A 1-3  |
|                                                                                           |              | Colour                           | GOQ         | 1             | Table A 1-3  |
| Pressure Relief                                                                           | 1            | Pressure Relief                  | Visual      | 1             | Table A 1-3  |
| Tank                                                                                      | 2            | Oil Leak                         | Visual      | 1             | Table A 1-10 |
|                                                                                           |              | Corrosion                        | Visual      | 1             | Table A 1-10 |
|                                                                                           |              | Oil Level                        | Visual      | 1             | Table A 1-10 |
| HI De-Rating Multiplier (DR)                                                              |              |                                  |             | NA            |              |
| Age Limiter (AL)                                                                          |              | Based on industrial typical life |             | Figure A 8-2  |              |
| *where there is no available data for any assets, the weight of the parameter is set to 0 |              |                                  |             |               |              |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 33.302$ ,  $\beta = 3.580$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

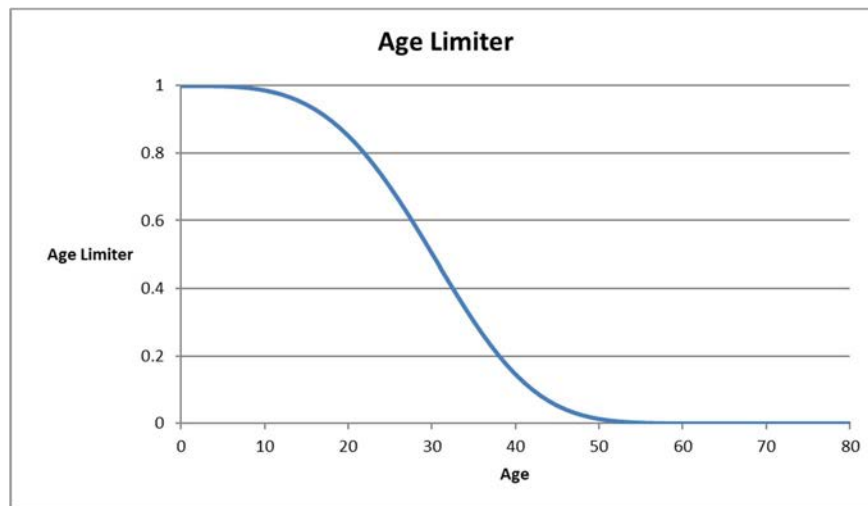


**Figure A 8-2 Voltage Regulators Age Limiter**

### 8.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in good/very good condition. The average HI for the asset group was 86%.

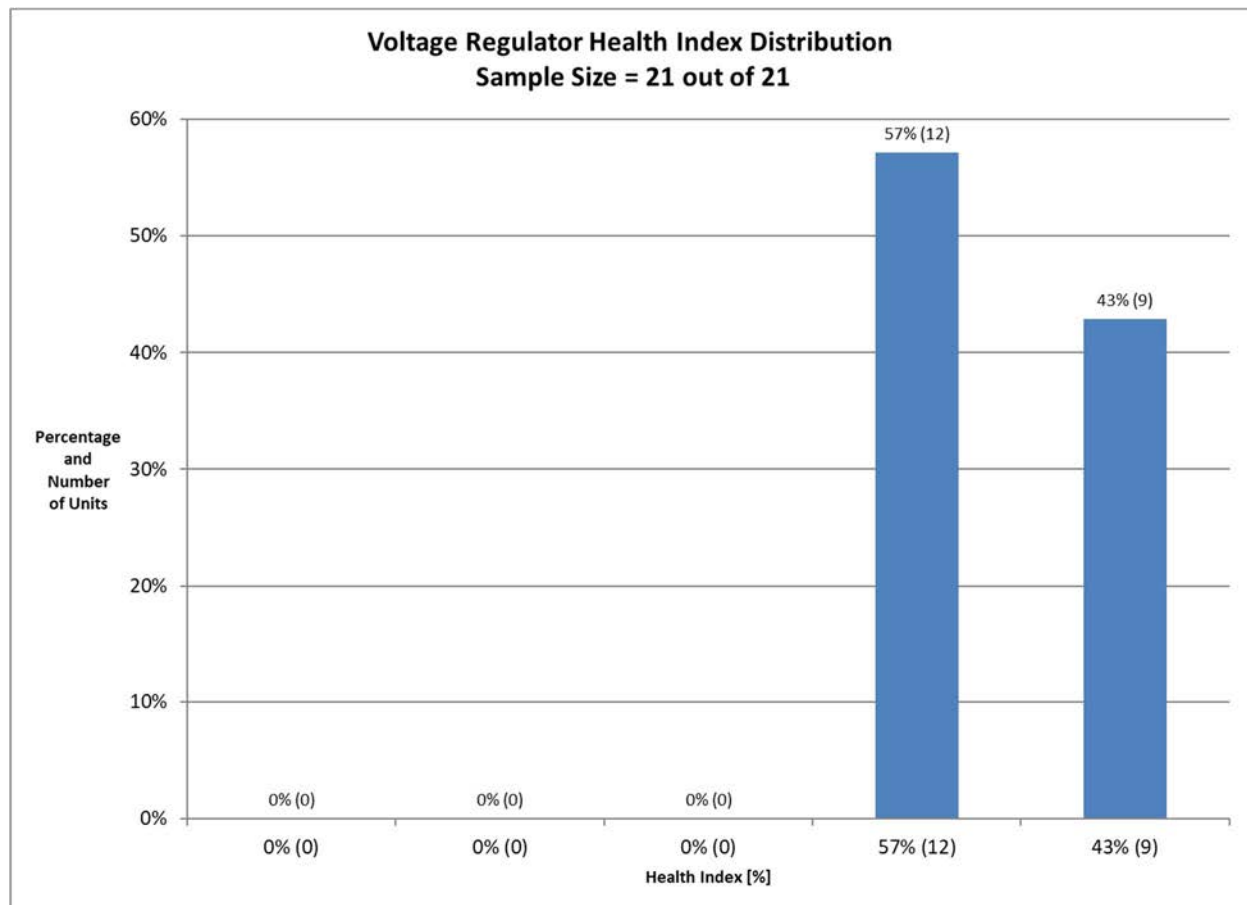


**Figure A 8-3 Voltage Regulators Health Index Distribution**

## 8.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each unit was set to 0% (i.e. least critical).

No Voltage Regulators were flagged for action in the next 10 years.



8.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 8-2 Voltage Regulators Risk Based Prioritized List

| Asset Information |             |             |      |     |  | DAI | De-Rating<br>Multiplier | HI calculated                         |              |                    | Final HI (Age Limiter Applied) |             | Risk Index<br>100% = Most<br>Risk<br>0% = Least<br>Risk | FFA<br>Year |  | HI Parameter Scores |          |             |      |
|-------------------|-------------|-------------|------|-----|--|-----|-------------------------|---------------------------------------|--------------|--------------------|--------------------------------|-------------|---------------------------------------------------------|-------------|--|---------------------|----------|-------------|------|
| #                 | ID          | Location    | Year | Age |  |     |                         | Calculated<br>HI (with De-<br>rating) | Age<br>Limit | Age<br>Limit<br>ed | HI                             | HI Category |                                                         |             |  | Insulation Oil      | Windings | Conservator | Tank |
| 1                 | 3365-VR-F1B | Kashechewan | 2001 | 22  |  | 25% | 1                       | 77.8%                                 | 79.7%        | N                  | 77.8%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 67%  |
| 2                 | 3365-VR-F1C | Kashechewan | 2001 | 22  |  | 25% | 1                       | 77.8%                                 | 79.7%        | N                  | 77.8%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 67%  |
| 3                 | 3366-VR-F1C | Attawa      | 2002 | 21  |  | 25% | 1                       | 77.8%                                 | 82.5%        | N                  | 77.8%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 67%  |
| 4                 | 3364-VR-F1A | Albany      | 2001 | 22  |  | 84% | 1                       | 93.9%                                 | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  | 100%                |          | 100%        | 67%  |
| 5                 | 3364-VR-F1B | Albany      | 2001 | 22  |  | 84% | 1                       | 93.9%                                 | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  | 100%                |          | 100%        | 67%  |
| 6                 | 3364-VR-F1C | Albany      | 2001 | 22  |  | 84% | 1                       | 95.5%                                 | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  | 100%                |          | 100%        | 75%  |
| 7                 | 3364-VR-F2A | Albany      | 2001 | 22  |  | 25% | 1                       | 88.9%                                 | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 83%  |
| 8                 | 3364-VR-F2B | Albany      | 2001 | 22  |  | 25% | 1                       | 100.0%                                | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 100% |
| 9                 | 3364-VR-F2C | Albany      | 2001 | 22  |  | 25% | 1                       | 88.9%                                 | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 83%  |
| 10                | 3365-VR-F1A | Kashechewan | 2001 | 22  |  | 25% | 1                       | 94.4%                                 | 79.7%        | Y                  | 79.7%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 92%  |
| 11                | 3366-VR-F1A | Attawa      | 2002 | 21  |  | 25% | 1                       | 100.0%                                | 82.5%        | Y                  | 82.5%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 100% |
| 12                | 3366-VR-F1B | Attawa      | 2002 | 21  |  | 25% | 1                       | 100.0%                                | 82.5%        | Y                  | 82.5%                          | Good        | 0%                                                      | >10         |  |                     |          | 100%        | 100% |
| 13                | 3366-VR-F2A | Attawa      | 2004 | 19  |  | 25% | 1                       | 94.4%                                 | 87.4%        | Y                  | 87.4%                          | Very Good   | 0%                                                      | >10         |  |                     |          | 100%        | 92%  |
| 14                | 3366-VR-F2B | Attawa      | 2004 | 19  |  | 25% | 1                       | 94.4%                                 | 87.4%        | Y                  | 87.4%                          | Very Good   | 0%                                                      | >10         |  |                     |          | 100%        | 92%  |
| 15                | 3366-VR-F2C | Attawa      | 2004 | 19  |  | 25% | 1                       | 100.0%                                | 87.4%        | Y                  | 87.4%                          | Very Good   | 0%                                                      | >10         |  |                     |          | 100%        | 100% |
| 16                | 3366-VR-F3A | Attawa      | 2014 | 9   |  | 84% | 1                       | 93.9%                                 | 99.1%        | N                  | 93.9%                          | Very Good   | 0%                                                      | >10         |  | 100%                |          | 100%        | 67%  |
| 17                | 3366-VR-F3B | Attawa      | 2014 | 9   |  | 84% | 1                       | 93.9%                                 | 99.1%        | N                  | 93.9%                          | Very Good   | 0%                                                      | >10         |  | 100%                |          | 100%        | 67%  |
| 18                | 3366-VR-F3C | Attawa      | 2014 | 9   |  | 84% | 1                       | 93.9%                                 | 99.1%        | N                  | 93.9%                          | Very Good   | 0%                                                      | >10         |  | 100%                |          | 100%        | 67%  |
| 19                | 3365-VR-F3A | Kashechewan | 2013 | 10  |  | 25% | 1                       | 100.0%                                | 98.7%        | Y                  | 98.7%                          | Very Good   | 0%                                                      | >10         |  |                     |          | 100%        | 100% |
| 20                | 3365-VR-F3B | Kashechewan | 2013 | 10  |  | 25% | 1                       | 100.0%                                | 98.7%        | Y                  | 98.7%                          | Very Good   | 0%                                                      | >10         |  |                     |          | 100%        | 100% |
| 21                | 3365-VR-F3C | Kashechewan | 2013 | 10  |  | 25% | 1                       | 100.0%                                | 98.7%        | Y                  | 98.7%                          | Very Good   | 0%                                                      | >10         |  |                     |          | 100%        | 100% |

Although all the units were in good or very good condition, it was observed that multiple units had low oil level issue for more than 3 times during inspections in 2018-2023. FNEI is suggested to follow up with the issue.



## 8.4 Data Assessment

The available data for Voltage Regulators were age, inspections, test results. Oil quality test results were available only for fewer than half the population.

| Asset Category     | Population | Average DAI |
|--------------------|------------|-------------|
| Voltage Regulators | 21         | 42%         |

The data gaps for this asset category include oil dissipation factor test and contact wear check,.

## 9. Pole Lines

This section summarizes the ACA results for FNEI's Pole Lines. There were a total of 3 lines, with 1491, 1060 and 1488 poles respectively.

All of them had age and were therefore included in the assessment. The average age of the lines is 20 years; the age distribution is as follows.

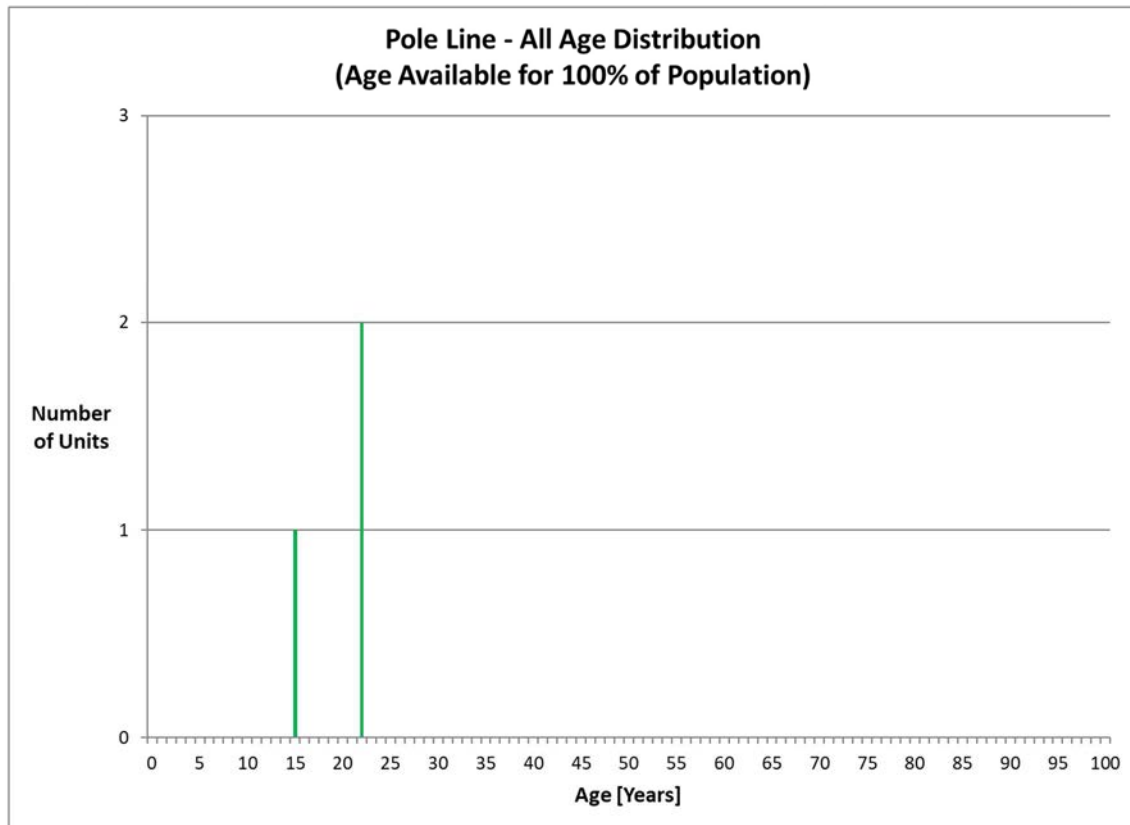


**Figure A 9-1 Pole Lines Age Distribution**

## 9.1 Health Index

### 9.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

Due to lack of data for line conductors, in this study the HI is based on overall pole condition throughout the entire lines, i.e. the total number of issues over the total number of poles in the lines.

**Table A 9-1 Pole Lines Health Index Formula**

| Condition Parameter (CP)                                                                                                                                                                           |              | Sub-Condition Parameter (SCP) |                   |               |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------|---------------|--------------|
| Description                                                                                                                                                                                        | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table        |
| Pole                                                                                                                                                                                               | 5            | Woodpecker                    | Visual Inspection | 1             | Table A 9-2  |
|                                                                                                                                                                                                    |              | Lean/Bow                      | Visual Inspection | 1             | Table A 9-2  |
| Accessory                                                                                                                                                                                          | 3            | Guy Guard                     | Visual Inspection | 1             | Table A 9-2  |
|                                                                                                                                                                                                    |              | Guy                           | Visual Inspection | 1             | Table A 9-2  |
| Age Limiter (AL)                                                                                                                                                                                   |              | Based on typical life curve   |                   |               | Figure A 9-2 |
| *where there is no available data for any assets, the weight of the parameter is set to 0<br>Since no parameters were available, the assessment was age-based (i.e. equivalent to the Age Limiter) |              |                               |                   |               |              |

### Inspections Records (line based)

**Table A 9-2 Defect Criteria**

|                                                                                                         |
|---------------------------------------------------------------------------------------------------------|
| $Score = 4 \times \left( 1 - \frac{\text{Number of units with defect}}{\text{Number of units}} \right)$ |
|---------------------------------------------------------------------------------------------------------|

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 65.593$ ,  $\beta = 5.529$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter. The curve is based on wood poles.



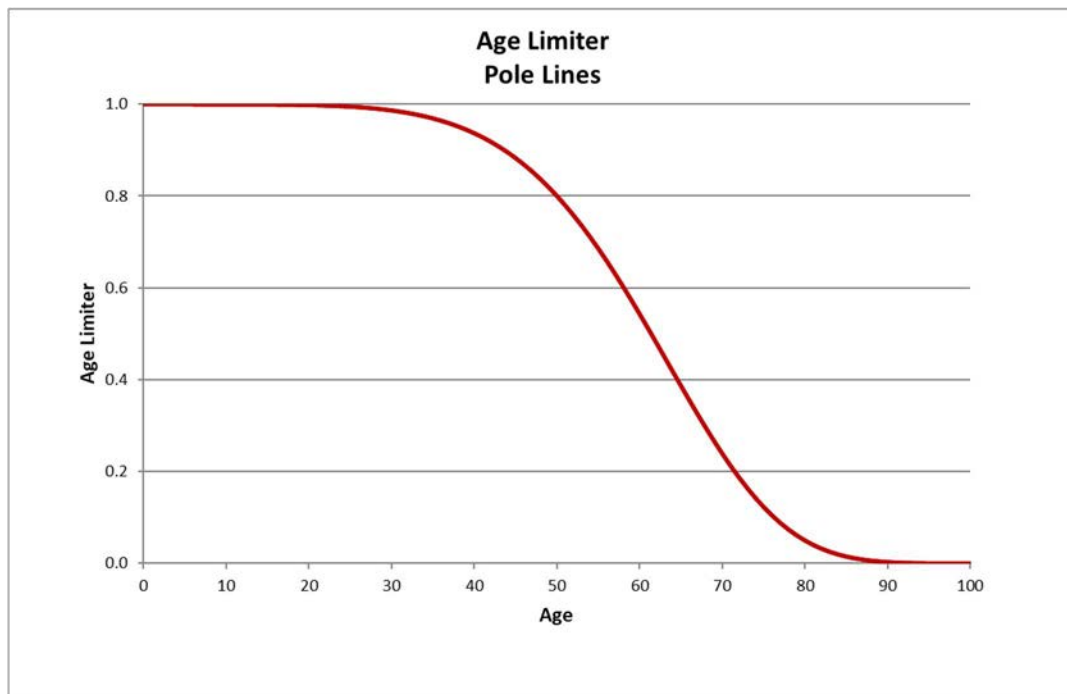


**Figure A 9-2 Pole Lines Age Limiter**

### 9.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in very good condition. The average HI for the asset group was 98%.

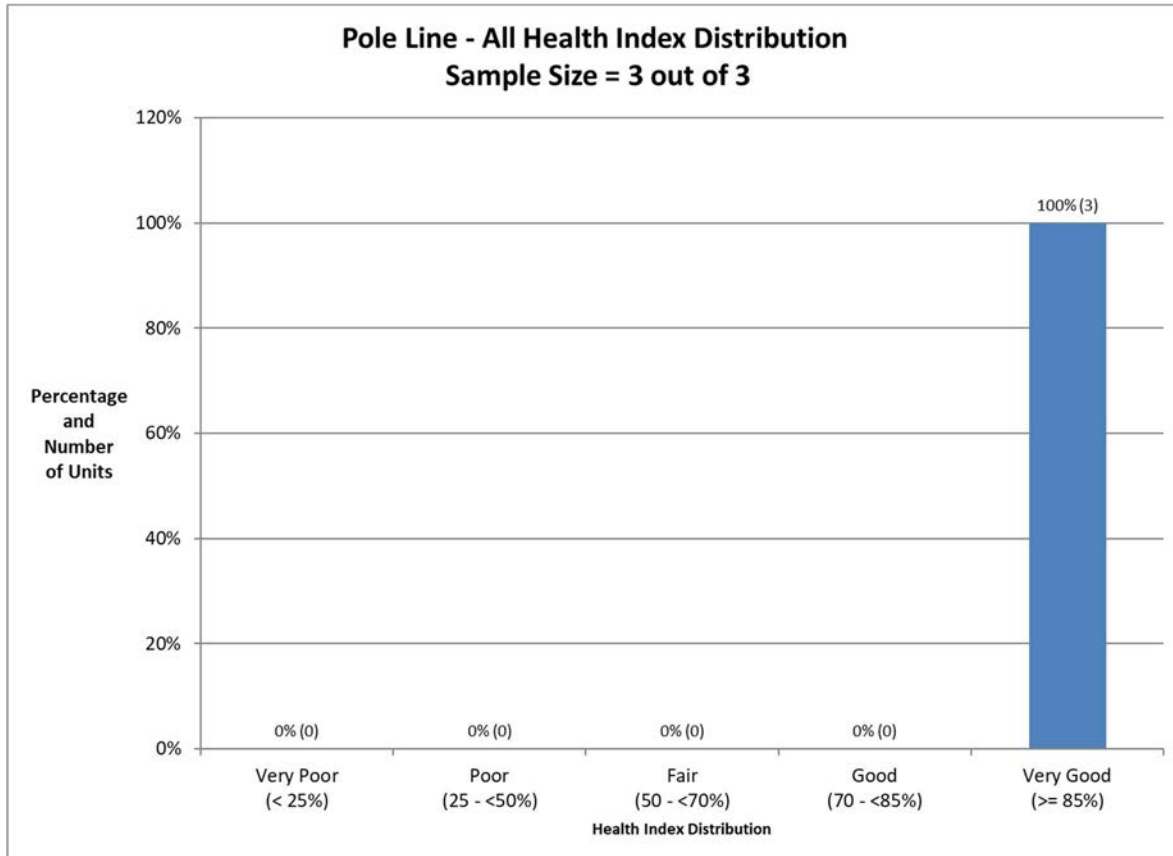


**Figure A 9-3 Pole Lines Health Index Distribution**



## 9.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each breaker was set to 0% (i.e. least critical).

No Pole Lines were flagged for action in the next 10 years.



9.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 9-3 Pole Lines HI Based Prioritized List

| Asset Information |           |      |                |     | DAI  | HI Calculated                  |           |             | Final HI |             | Risk Index<br>100% = Most Risk<br>0% = Least Risk | FFA Year |  | HI Parameter Scores |                     |
|-------------------|-----------|------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|---------------------------------------------------|----------|--|---------------------|---------------------|
| #                 | Object ID | Type | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |                                                   |          |  | Physical Condition  | Accessory Condition |
| 1                 | M3K       | Wood | 2001           | 22  | 100% | 93.22%                         | 1.00      | N           | 93%      | Very Good   | 0%                                                | >20      |  | 100%                | 82%                 |
| 2                 | K5A       | Wood | 2001           | 22  | 100% | 99.69%                         | 1.00      | N           | 100%     | Very Good   | 0%                                                | >20      |  | 100%                | 100%                |
| 3                 | M9K       | Wood | 2008           | 15  | 100% | 99.65%                         | 1.00      | N           | 100%     | Very Good   | 0%                                                | >20      |  | 100%                | 99%                 |



## 9.4 Data Assessment

The available data for Pole Lines were age and inspections for wood poles of pole lines.

| Asset Category | Population | Average DAI |
|----------------|------------|-------------|
| Pole Lines     | 3          | 78%         |

The data gaps for this asset category include inspection and age data for pole line conductors and pole line shield wires, as well as historic fault rate per unit length.

## 10. CVTs

This section summarizes the ACA results for FNEI's oil filled CVTs. There were a total of 26 units

All of them had age and were therefore included in the assessment. The average age is 16 years; the age distribution is as follows.

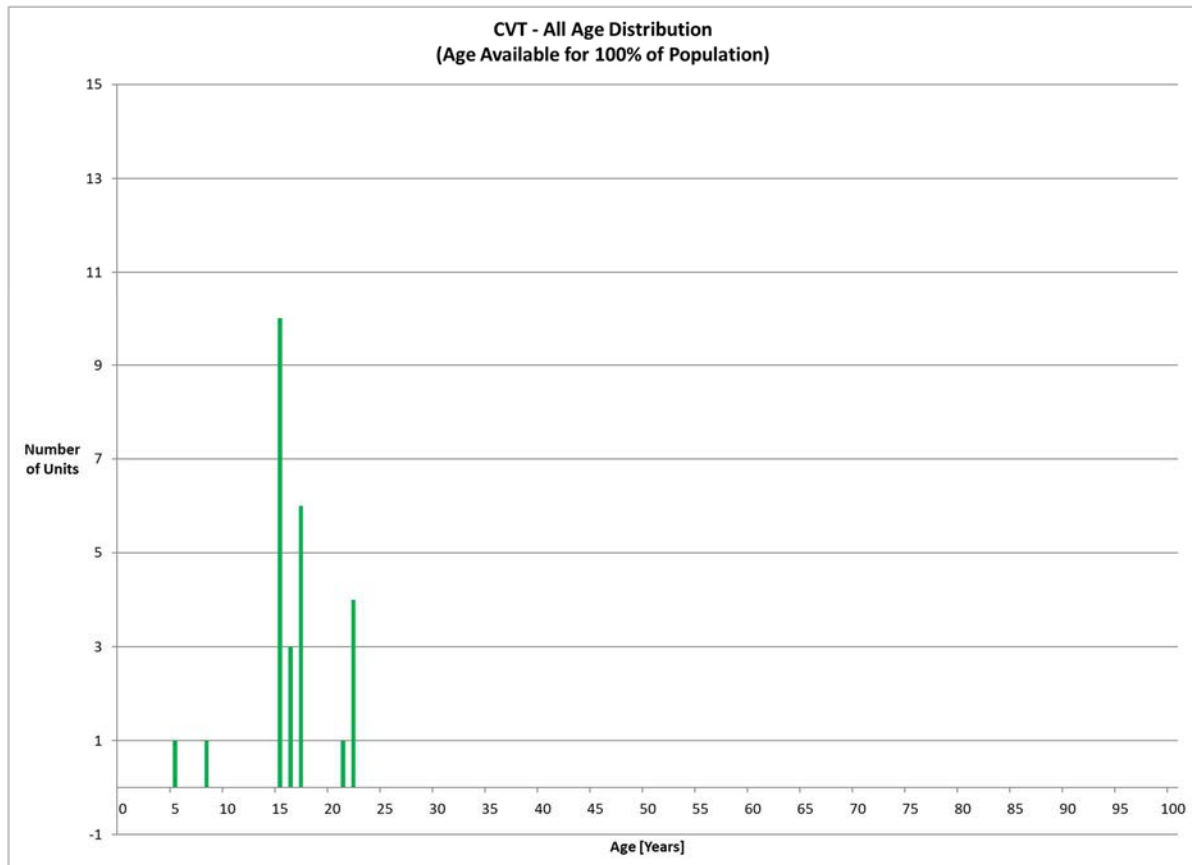


**Figure A 10-1 CVTs Age Distribution**

## 10.1 Health Index

### 10.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 10-1 CVTs Health Index Formula**

| Condition Parameter (CP) |              | Sub-Condition Parameter (SCP) |                   |               |               |
|--------------------------|--------------|-------------------------------|-------------------|---------------|---------------|
| Description              | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table         |
| Surface                  | 1            | Insulation                    | Visual Inspection | 1             | Table A 1-10  |
| Oil                      | 1            | Oil Level                     | Visual Inspection | 1             | Table A 1-10  |
| Sealing                  | 1            | Oil Leak                      | Visual Inspection | 1             | Table A 1-10  |
| <b>Age Limiter (AL)</b>  |              | Based on typical life curve   |                   |               | Figure A 10-2 |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 41.849$ ,  $\beta = 6.519$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter.

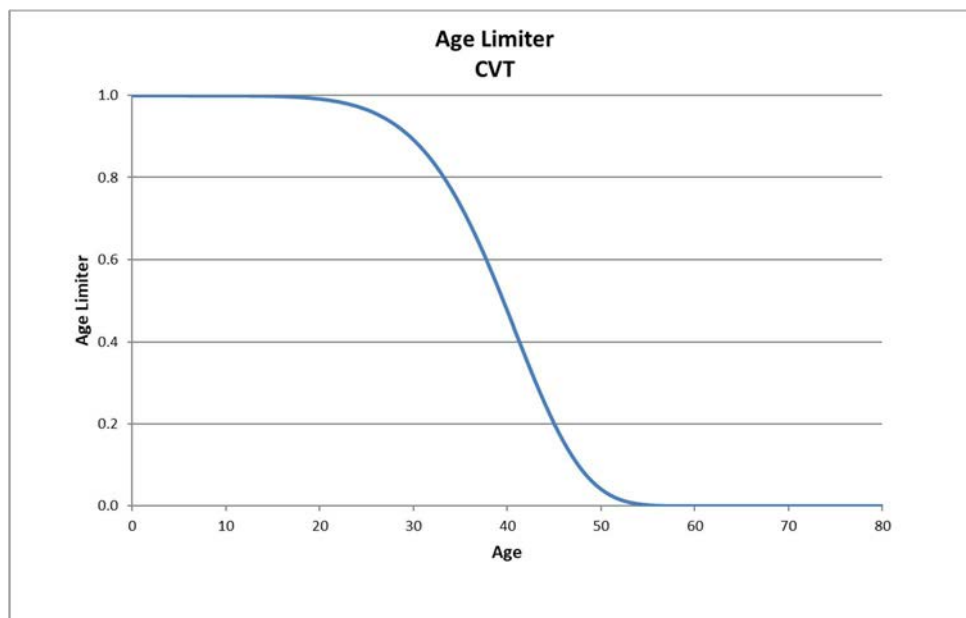


**Figure A 10-2 CVTs Age Limiter**

### 10.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in good/very good condition. The average HI for the asset group was 99%.

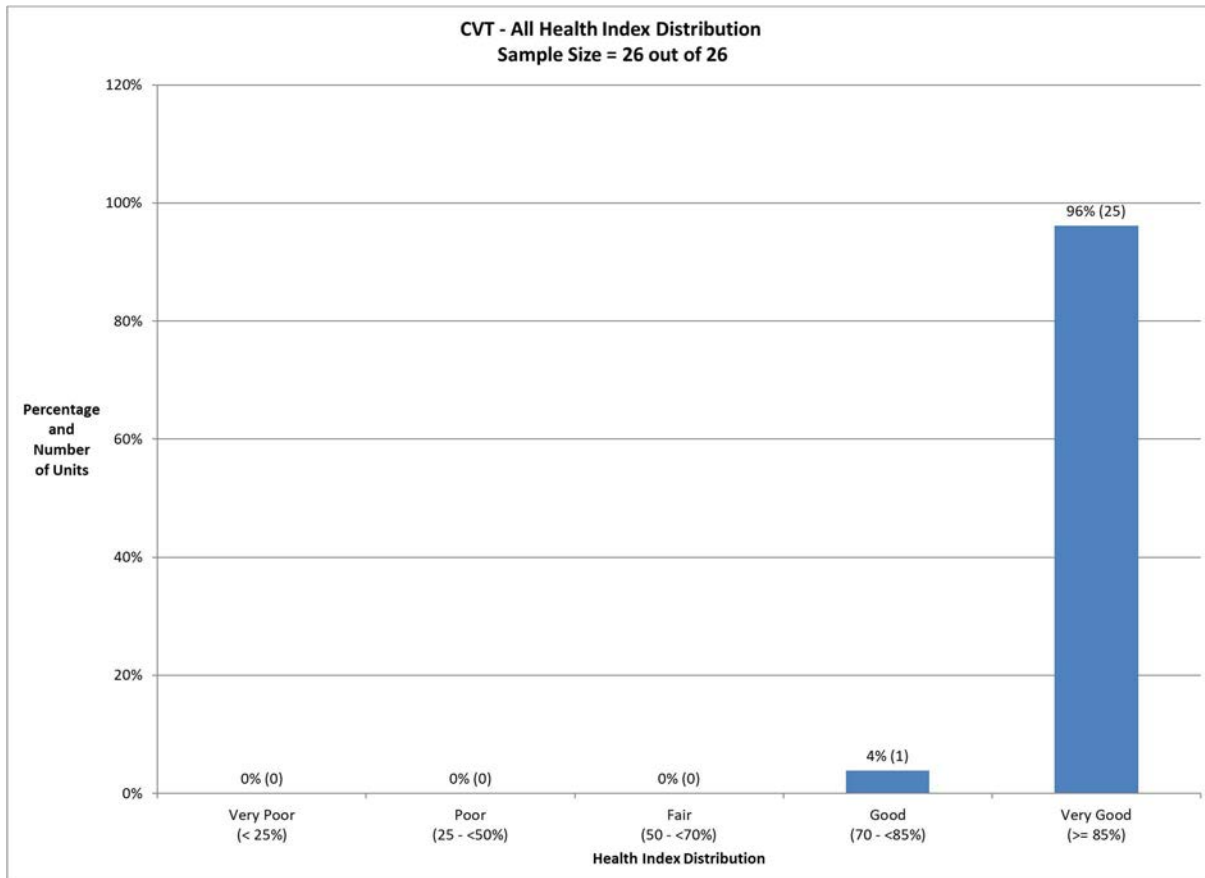


Figure A 10-3 CVTs Health Index Distribution





## 10.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e., the results from 'sample size' (assets with HI) were extrapolated to the population. As it may not always be feasible to address assets per this plan, a 'levelized' plan for better pacing of investments is also provided.

No CVTs were flagged for action in the next 10 years.

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10.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 10-2 CVTs HI Based Priortized List

| Asset Information |           |                |     | DAI  | HI Calculated                  |           |             | Final HI  |             | HI Parameter Scores |           |          |
|-------------------|-----------|----------------|-----|------|--------------------------------|-----------|-------------|-----------|-------------|---------------------|-----------|----------|
| #                 | Object ID | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI        | HI Category | Surface             | Oil Level | Oil Leak |
| 1                 | 3365-B3A  | 2001           | 22  | 100% | 83.33%                         | 0.98      | N           | Good      | 0           | 50%                 | 100%      | 100%     |
| 2                 | 3364-B2B  | 2001           | 22  | 100% | 98.50%                         | 0.98      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 3                 | 3365-B3B  | 2001           | 22  | 100% | 98.50%                         | 0.98      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 4                 | 3365-B3C  | 2001           | 22  | 100% | 98.50%                         | 0.98      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 5                 | 3366-B4B  | 2002           | 21  | 100% | 98.89%                         | 0.99      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 6                 | 3366-K5AA | 2006           | 17  | 100% | 99.72%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 7                 | 3366-K5AB | 2006           | 17  | 100% | 99.72%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 8                 | 3366-K5AC | 2006           | 17  | 100% | 99.72%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 9                 | 3366-A7VA | 2006           | 17  | 100% | 99.72%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 10                | 3366-A7VB | 2006           | 17  | 100% | 99.72%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 11                | 3366-A7VC | 2006           | 17  | 100% | 99.72%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 12                | 3364-M3KA | 2007           | 16  | 100% | 99.81%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 13                | 3364-M3KB | 2007           | 16  | 100% | 99.81%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 14                | 3364-M3KC | 2007           | 16  | 100% | 99.81%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 15                | 3365-M9KA | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 16                | 3365-M9KB | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 17                | 3365-M9KC | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 18                | 3365-K5AA | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 19                | 3365-K5AB | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 20                | 3365-K5AC | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 21                | 3365-M3KA | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 22                | 3365-M3KB | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 23                | 3365-M3KC | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 24                | 3365-B3AB | 2008           | 15  | 100% | 99.88%                         | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 25                | 3364-B2AB | 2015           | 8   | 100% | 100.00%                        | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |
| 26                | 3366-B4A  | 2018           | 5   | 100% | 100.00%                        | 1.00      | Y           | Very Good | 0           | 100%                | 100%      | 100%     |



## 10.4 Data Assessment

The available data for CVTs were age and inspections.

| Asset Category | Population (conductor-km) | Average DAI |
|----------------|---------------------------|-------------|
| CVTs           | 26                        | 100%        |

No major condition parameter data gaps were identified.

## 11. Line Traps

This section summarizes the ACA results for FNEI's Line Traps. There were a total of 12 units

All of them had age and were therefore included in the assessment. The average age is 16 years; the age distribution is as follows.

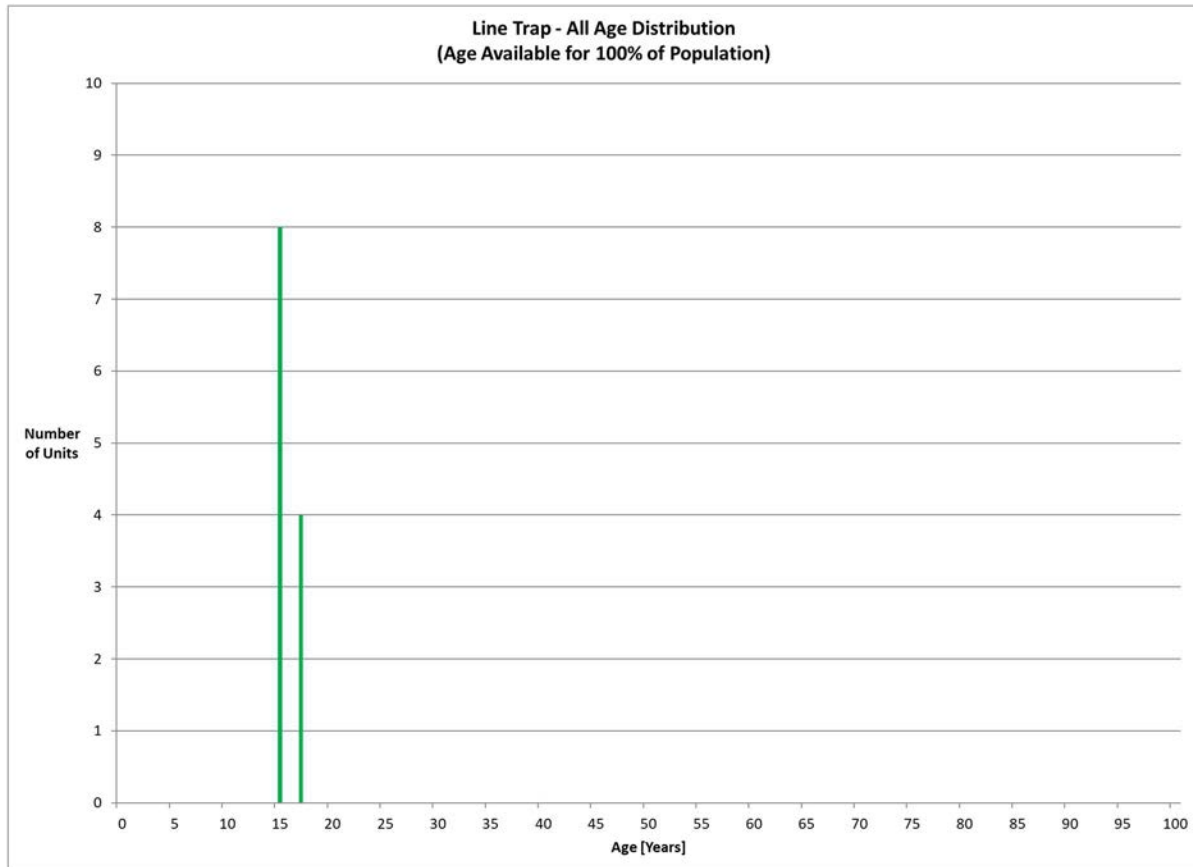


**Figure A 11-1 Line Traps Age Distribution**

## 11.1 Health Index

### 11.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 11-1 Line Traps Health Index Formula**

| Condition Parameter (CP)                                                                                                                                                                           |              | Sub-Condition Parameter (SCP) |                   |               |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------|---------------|--------------|
| Description                                                                                                                                                                                        | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table        |
| Line Trap                                                                                                                                                                                          | 1            | Surface                       | Visual Inspection | 1             | Table A 1-10 |
|                                                                                                                                                                                                    |              | Damage                        | Visual Inspection | 1             | Table A 1-10 |
| Insulation                                                                                                                                                                                         | 1            | Insulator                     | Visual Inspection | 1             | Table A 1-10 |
| Connection                                                                                                                                                                                         | 1            | Termination                   | Visual Inspection | 1             | Table A 1-10 |
| Age Limiter (AL)                                                                                                                                                                                   |              | Based on typical life curve   |                   |               | Figure 11-2  |
| *where there is no available data for any assets, the weight of the parameter is set to 0<br>Since no parameters were available, the assessment was age-based (i.e. equivalent to the Age Limiter) |              |                               |                   |               |              |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 14.054$ ,  $\beta = 1.795$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

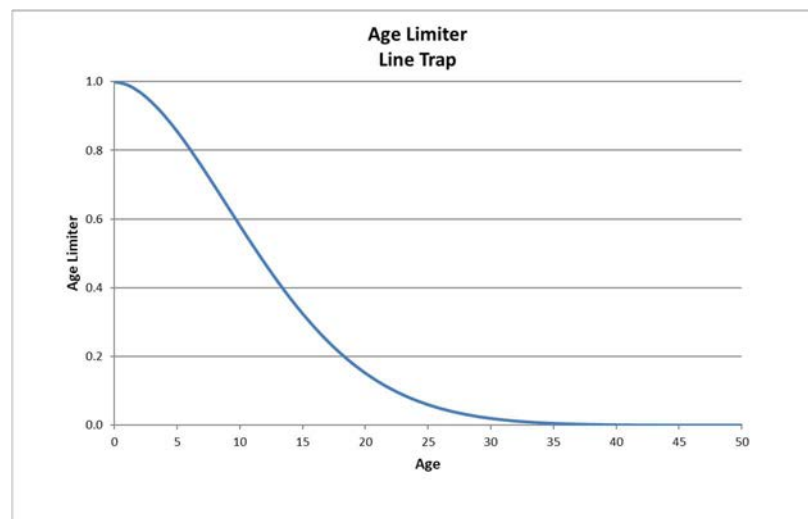


**Figure A 11-2 Line Traps Age Limiter**

### 11.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in poor/very poor condition. The average HI for the asset group was 30%.

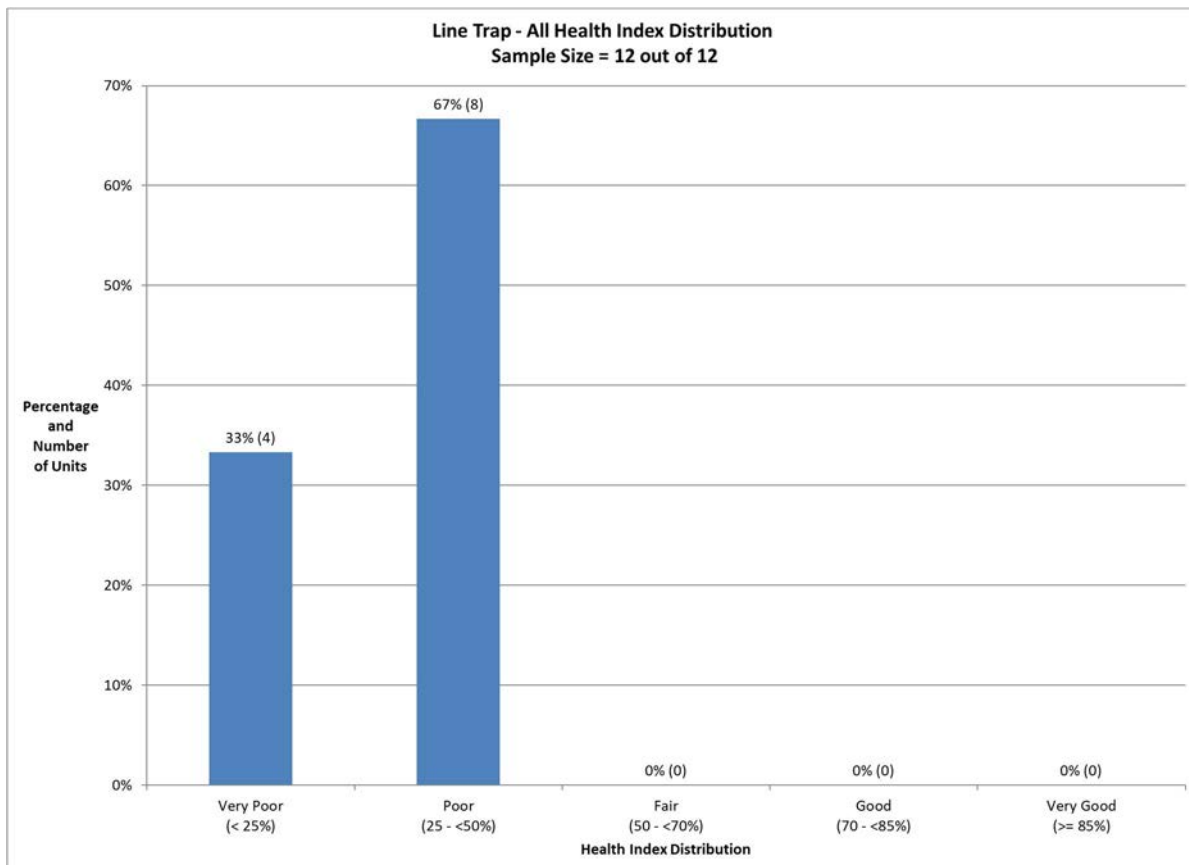


**Figure A 11-3 Line Traps Health Index Distribution**

The reason for such Hi distribution was due to the fact that all the units were approaching the design life expectancy as per industry practice.

## 11.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e., the results from 'sample size' (assets with HI) were extrapolated to the population.

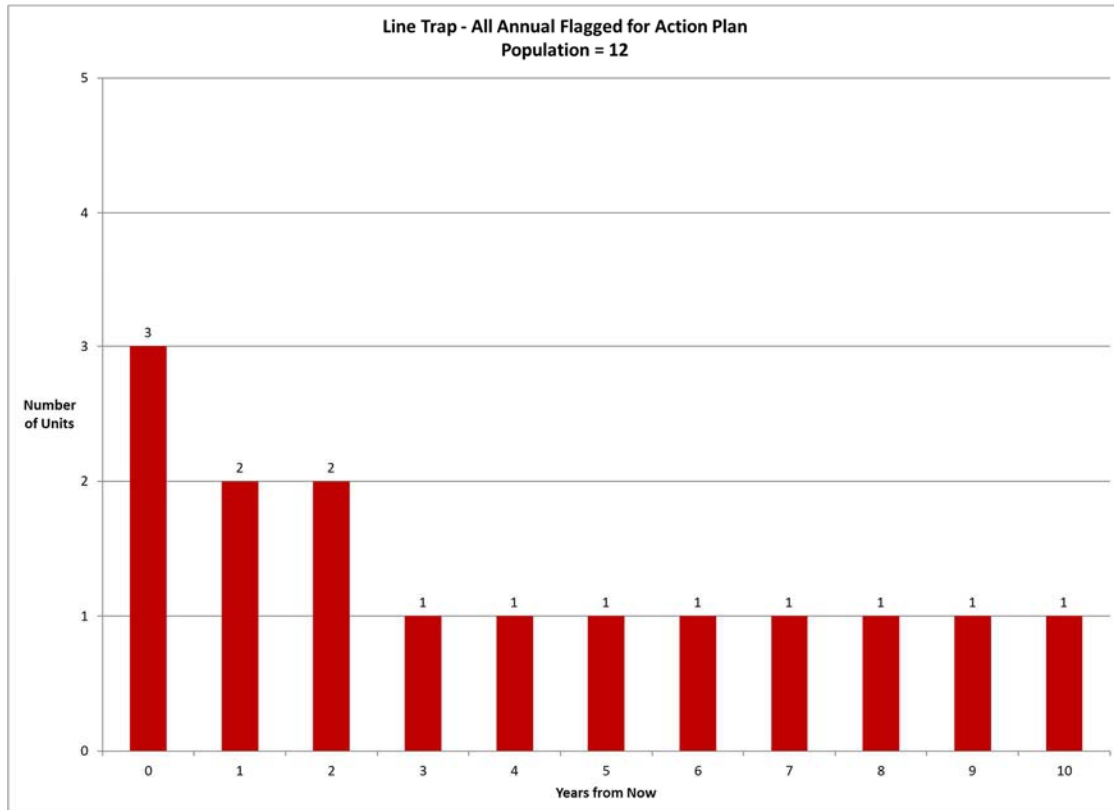


**Figure A 11-4 Line Traps Flagged for Action Plan**



11.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 11-2 Line Traps HI Based Priortized List

| Asset Information |           |                |     | DAI  | HI Calculated                  |           |             | Final HI  |             |  | HI Parameter Scores |            |            |
|-------------------|-----------|----------------|-----|------|--------------------------------|-----------|-------------|-----------|-------------|--|---------------------|------------|------------|
| #                 | Object ID | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI        | HI Category |  | Physical Condition  | Insulation | Connection |
| 1                 | 3364-M3KA | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | Very Poor | 0           |  | 100%                | 100%       | 100%       |
| 2                 | 3364-M3KC | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | Very Poor | 0           |  | 100%                | 100%       | 100%       |
| 3                 | 3366-A7VA | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | Very Poor | 0           |  | 100%                | 100%       | 100%       |
| 4                 | 3366-A7VB | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | Very Poor | 0           |  | 100%                | 100%       | 100%       |
| 5                 | 3365-K5AA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 88%                 | 100%       | 100%       |
| 6                 | 3365-K5AC | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 100%                | 100%       | 100%       |
| 7                 | 3365-M3KA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 100%                | 100%       | 100%       |
| 8                 | 3365-M3KC | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 100%                | 100%       | 100%       |
| 9                 | 3365-M9KA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 100%                | 100%       | 100%       |
| 10                | 3365-M9KC | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 100%                | 100%       | 100%       |
| 11                | 3366-K5AA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 63%                 | 100%       | 100%       |
| 12                | 3366-K5AC | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | Poor      | 0           |  | 100%                | 100%       | 100%       |





## 11.4 Data Assessment

The available data for Line Traps were age and inspections.

| Asset Category | Population (conductor-km) | Average DAI |
|----------------|---------------------------|-------------|
| Line Traps     | 12                        | 100%        |

No major condition parameter data gaps were identified.

## 12. Line Tuners

This section summarizes the ACA results for FNEI's Line Tuners. There were a total of 12 units

All of them had age and were therefore included in the assessment. The average age is 16 years; the age distribution is as follows.

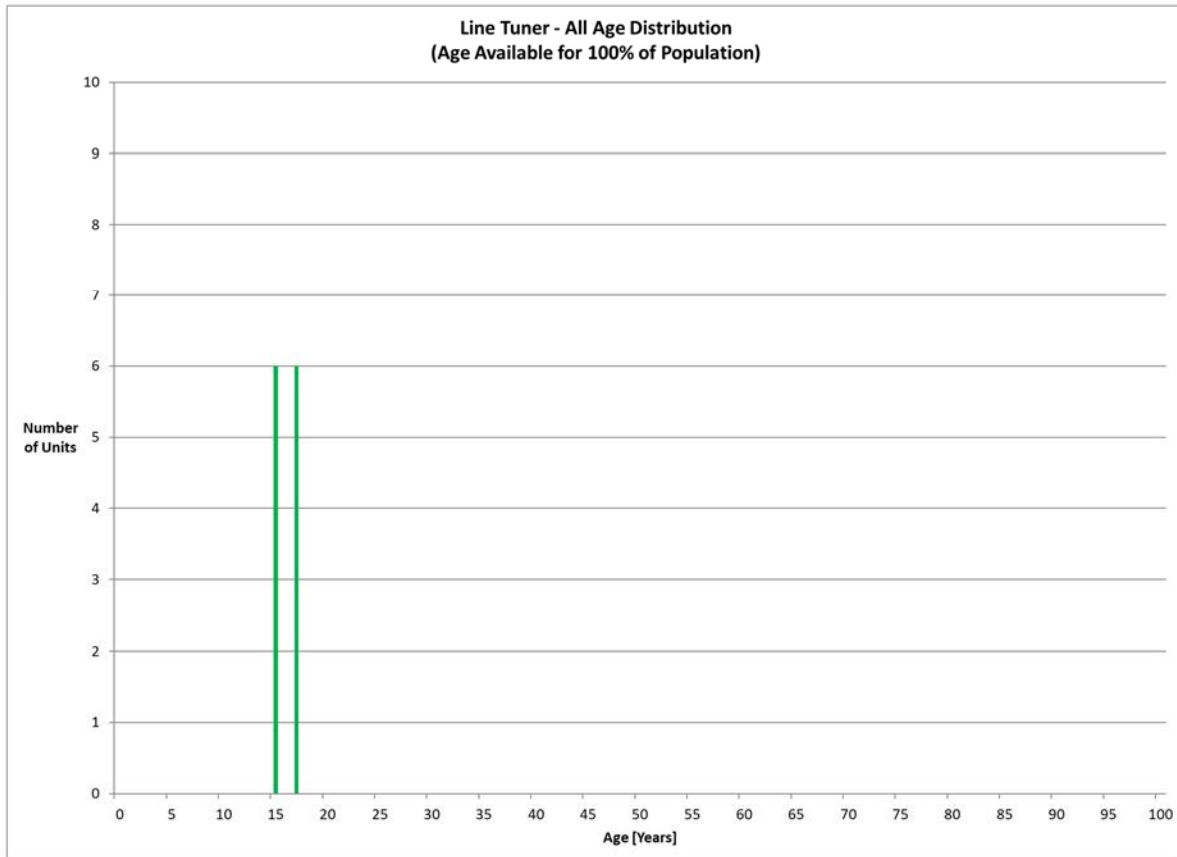


**Figure A 12-1 Line Tuners Age Distribution**

## 12.1 Health Index

### 12.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 12-1 Line Tuners Health Index Formula**

| Condition Parameter (CP)                                                                                                                                                                           |              | Sub-Condition Parameter (SCP) |                   |               |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------|---------------|---------------|
| Description                                                                                                                                                                                        | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table         |
| Physical                                                                                                                                                                                           | 1            | Corrosion                     | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Damage                        | Visual Inspection | 1             | Table A 1-10  |
| Insulation                                                                                                                                                                                         | 1            | Heater                        | Visual Inspection | 1             | Table A 1-10  |
| Connection                                                                                                                                                                                         | 1            | Dust                          | Visual Inspection | 1             | Table A 1-10  |
| Age Limiter (AL)                                                                                                                                                                                   |              | Based on typical life curve   |                   |               | Figure A 12-2 |
| *where there is no available data for any assets, the weight of the parameter is set to 0<br>Since no parameters were available, the assessment was age-based (i.e. equivalent to the Age Limiter) |              |                               |                   |               |               |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 14.054$ ,  $\beta = 1.795$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

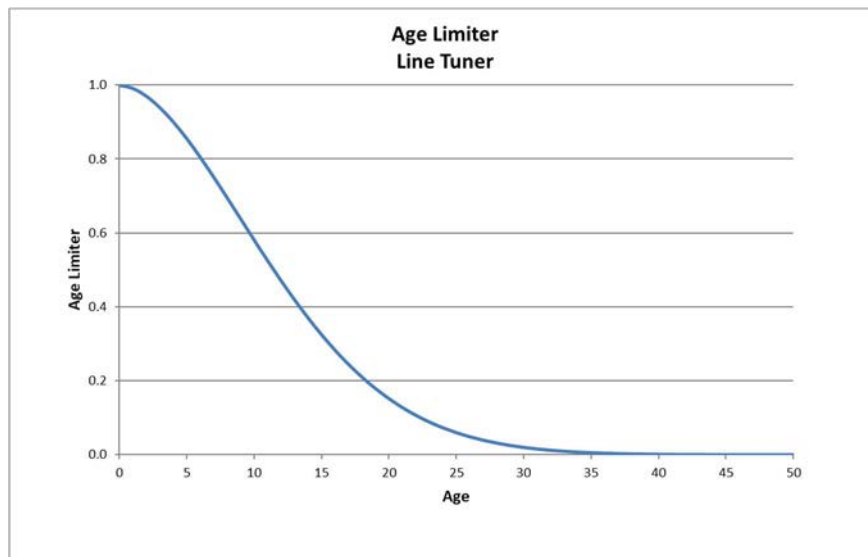


**Figure A 12-2 Line Tuners Age Limiter**

### 12.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in poor/very poor condition. The average HI for the asset group was 28%.

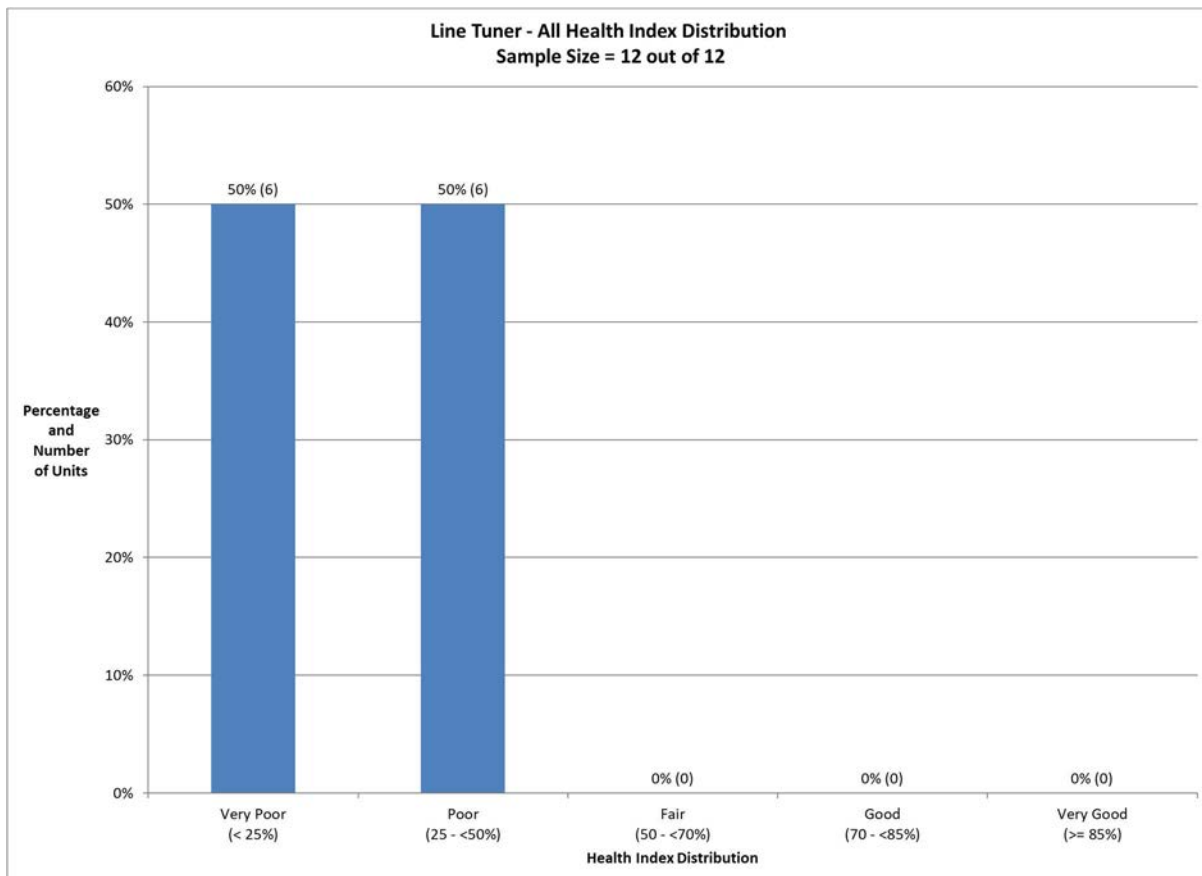


**Figure A 12-3 Line Tuners Health Index Distribution**

The reason for such Hi distribution was due to the fact that all the units were approaching the design life expectancy as per industry practice.

## 12.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e., the results from 'sample size' (assets with HI) were extrapolated to the population.

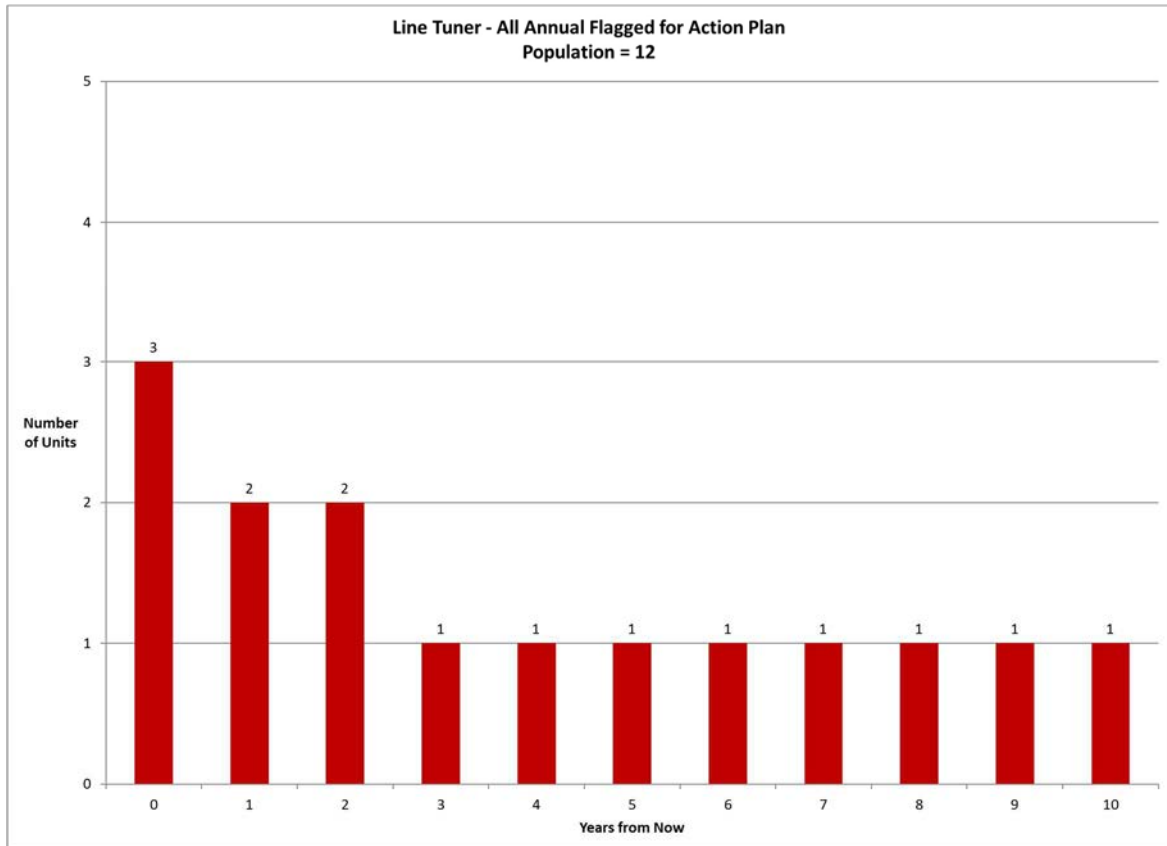


**Figure A 12-4 Line Tuners Flagged for Action Plan**



12.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 12-2 Line Tuners HI Based Priortized List

| Asset Information |           |                |     | DAI  | HI Calculated                  |           |             | Final HI |             |  | HI Parameter Scores |            |            |
|-------------------|-----------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|--|---------------------|------------|------------|
| #                 | Object ID | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |  | Physical Condition  | Connection | Insulation |
| 1                 | 3364-M3KA | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | 24%      | Very Poor   |  | 100%                | 100%       | 100%       |
| 2                 | 3364-M3KC | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | 24%      | Very Poor   |  | 100%                | 100%       | 100%       |
| 3                 | 3366-K5AA | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | 24%      | Very Poor   |  | 100%                | 100%       | 100%       |
| 4                 | 3366-K5AC | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | 24%      | Very Poor   |  | 100%                | 100%       | 100%       |
| 5                 | 3366-A7VA | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | 24%      | Very Poor   |  | 100%                | 75%        | 100%       |
| 6                 | 3366-A7VB | 2006           | 17  | 100% | 24.49%                         | 0.24      | Y           | 24%      | Very Poor   |  | 100%                | 100%       | 100%       |
| 7                 | 3365-K5AA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | 32%      | Poor        |  | 100%                | 100%       | 100%       |
| 8                 | 3365-K5AC | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | 32%      | Poor        |  | 100%                | 100%       | 100%       |
| 9                 | 3365-M3KA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | 32%      | Poor        |  | 100%                | 100%       | 100%       |
| 10                | 3365-M3KC | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | 32%      | Poor        |  | 100%                | 100%       | 100%       |
| 11                | 3365-M9KA | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | 32%      | Poor        |  | 100%                | 100%       | 100%       |
| 12                | 3365-M9KB | 2008           | 15  | 100% | 32.50%                         | 0.32      | Y           | 32%      | Poor        |  | 100%                | 100%       | 100%       |



## 12.4 Data Assessment

The available data for Line Tuners were age and inspections.

| Asset Category | Population (conductor-km) | Average DAI |
|----------------|---------------------------|-------------|
| Line Tuners    | 12                        | 100%        |

No major condition parameter data gaps were identified.

### 13. Power Line Carriers

This section summarizes the ACA results for FNEI's Power Line Carriers (PLCC). There were a total of 10 units.

All of them had age and were therefore included in the assessment. The average age is 15 years; the age distribution is as follows.

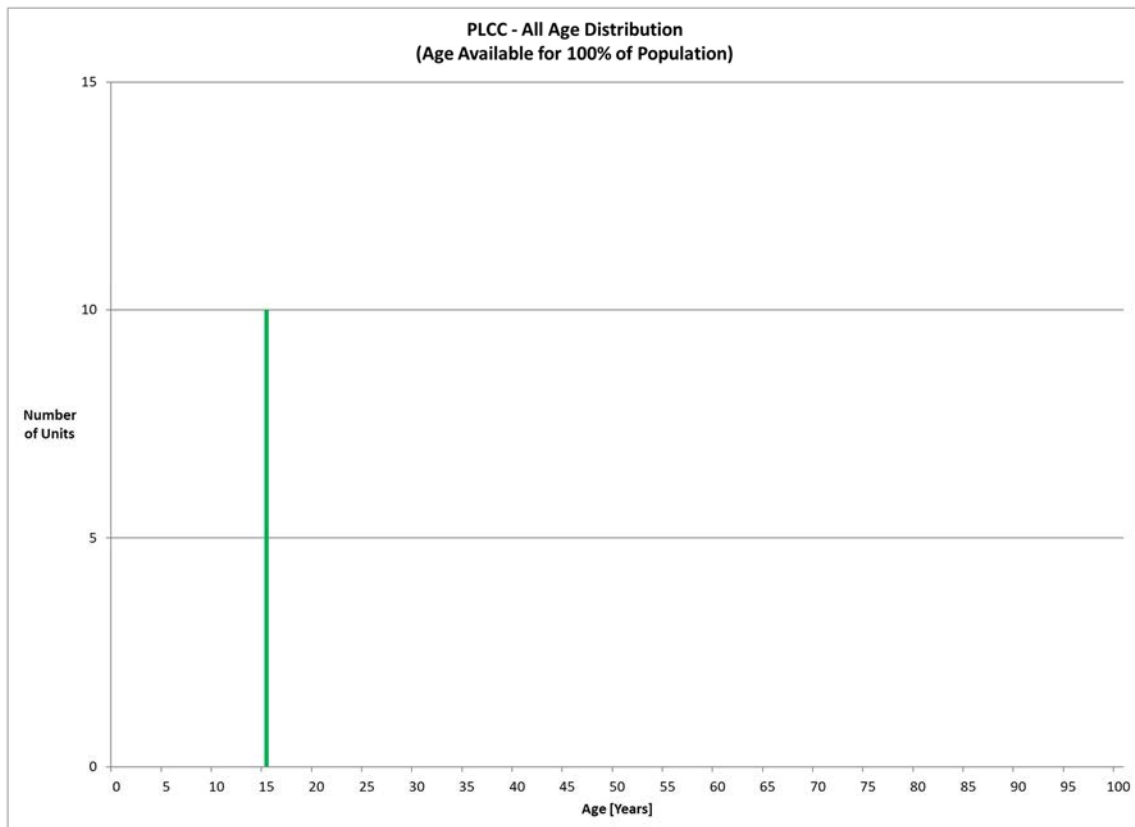


Figure A 13-1 Power Line Carriers Age Distribution



## 13.1 Health Index

### 13.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 13-1 Power Line Carriers Health Index Formula**

| Condition Parameter (CP)                                                                                                                                                                           |              | Sub-Condition Parameter (SCP) |                   |               |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------|---------------|---------------|
| Description                                                                                                                                                                                        | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table         |
| PLC                                                                                                                                                                                                | 1            | Corrosion                     | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Surface                       | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Damage                        | Visual Inspection | 1             | Table A 1-10  |
| Connection                                                                                                                                                                                         | 1            | Dust                          | Visual Inspection | 1             | Table A 1-10  |
| Age Limiter (AL)                                                                                                                                                                                   |              | Based on typical life curve   |                   |               | Figure A 13-2 |
| *where there is no available data for any assets, the weight of the parameter is set to 0<br>Since no parameters were available, the assessment was age-based (i.e. equivalent to the Age Limiter) |              |                               |                   |               |               |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 13.832$ ,  $\beta = 2.580$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

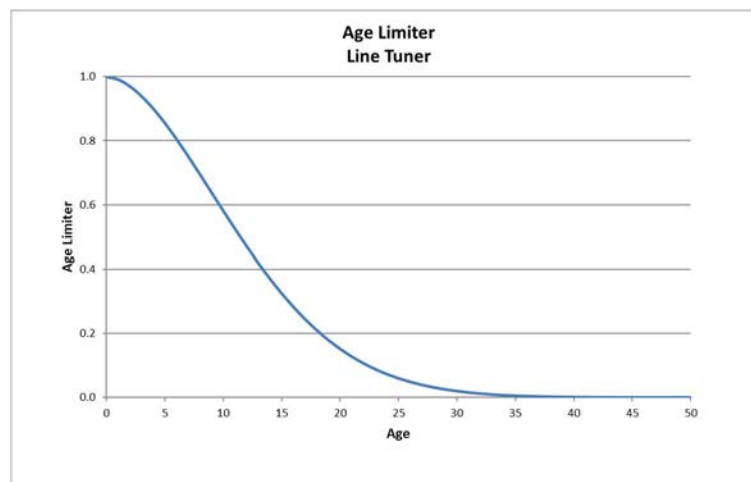


**Figure A 13-2 Power Line Carriers Age Limiter**

### 13.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in poor condition. The average HI for the asset group was 29%.

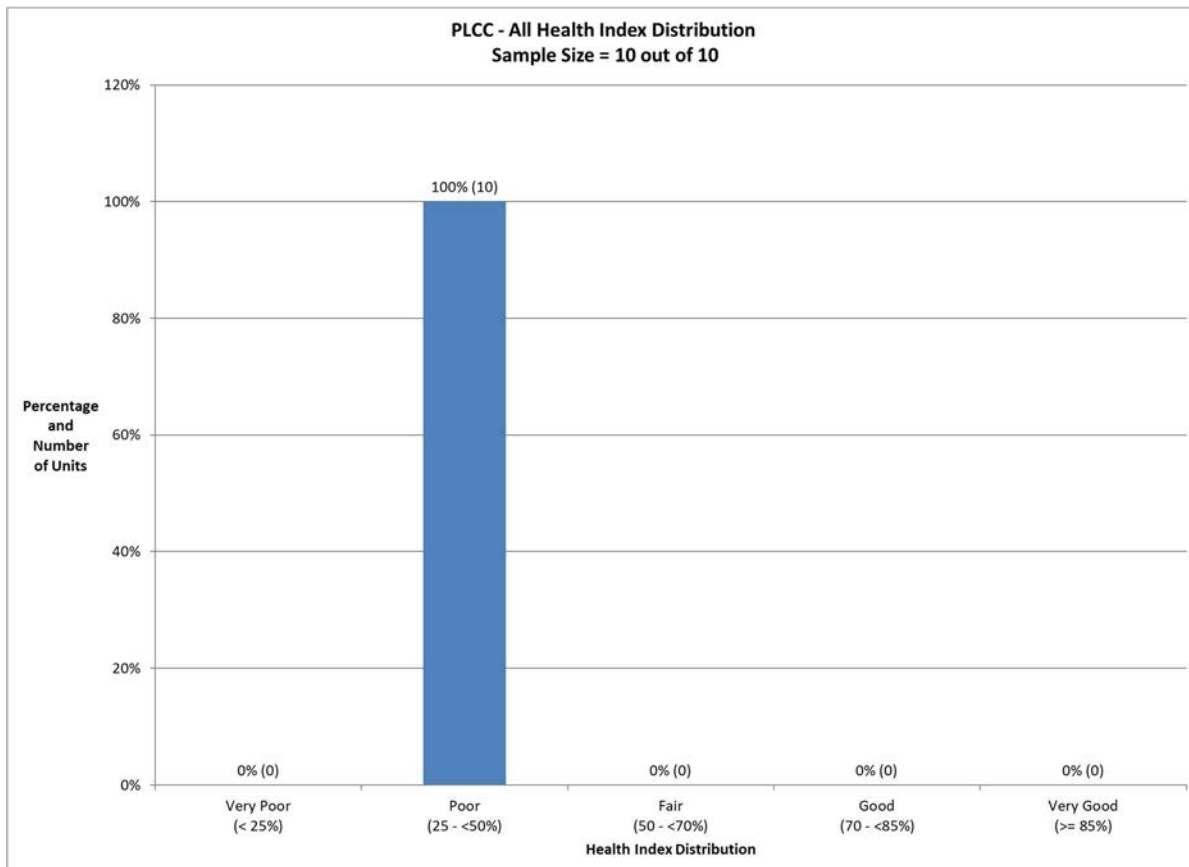


**Figure A 13-3 Power Line Carriers Health Index Distribution**

The reason for such HI distribution was that all units are approaching the design life expectancy as per industry practice.

## 13.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e., the results from 'sample size' (assets with HI) were extrapolated to the population. As it may not always be feasible to address assets per this plan, a 'levelized' plan for better pacing of investments is also provided.

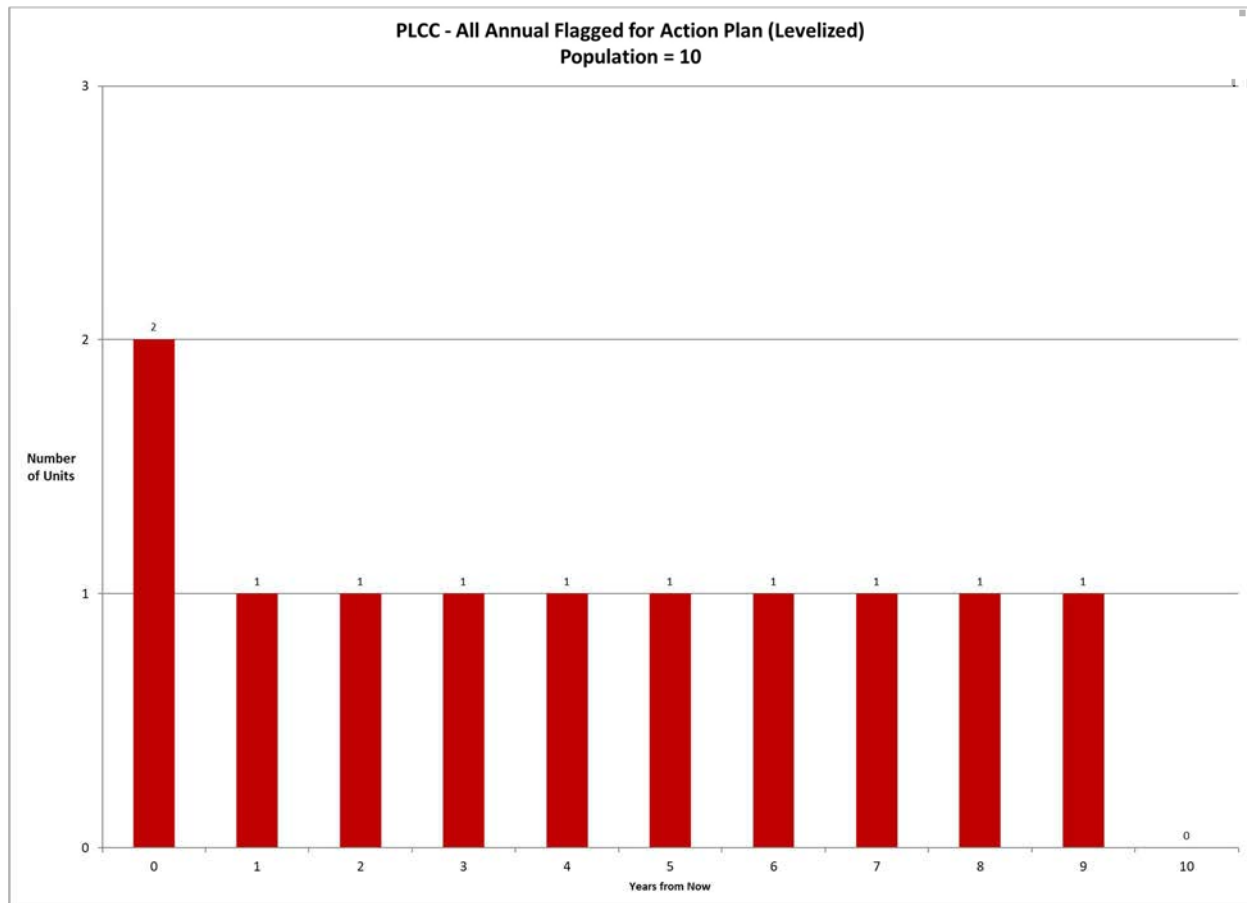


**Figure A 13-4 Power Line Carriers Flagged for Action Plan (levelized)**



13.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 13-2 Power Line Carriers HI Based Priortized List

| Asset Information |            |                |     | DAI  | HI Calculated                  |           |             | Final HI |             |  | HI Parameter Scores |            |
|-------------------|------------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|--|---------------------|------------|
| #                 | Object ID  | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |  | Physical Condition  | Connection |
| 1                 | 3364-PLCC1 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 2                 | 3365-PLCC1 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 3                 | 3365-PLCC2 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 4                 | 3365-PLCC3 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 5                 | 3365-PLCC4 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 6                 | 3365-PLCC5 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 7                 | 3366-PLCC1 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 8                 | 3366-PLCC2 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 9                 | 3366-PLCC3 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |
| 10                | 3366-PLCC4 | 2008           | 15  | 100% | 29.15%                         | 0.29      | Y           | 29%      | Poor        |  | 100%                | 100%       |



### 13.4 Data Assessment

The available data for Power Line Carriers were age and inspections.

| Asset Category      | Population (conductor-km) | Average DAI |
|---------------------|---------------------------|-------------|
| Power Line Carriers | 10                        | 100%        |

No major condition parameter data gaps were identified.

## 14. Relays

This section summarizes the ACA results for FNEI's Relays. There were a total of 45 units

All of them had age and were therefore included in the assessment. The average age is 12 years; the age distribution is as follows.

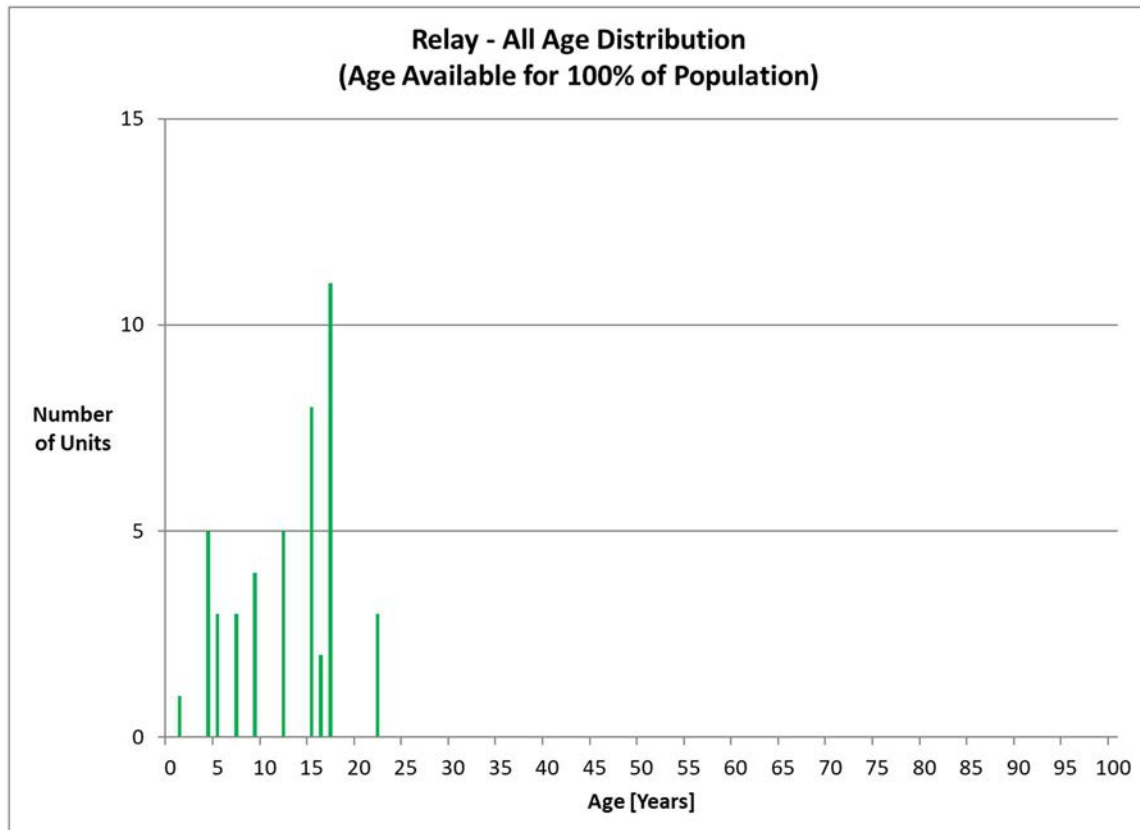


**Figure A 14-1 Relays Age Distribution**

## 14.1 Health Index

### 14.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 14-1 Relays Health Index Formula**

| Condition Parameter (CP)                                                                                                                                                                           |              | Sub-Condition Parameter (SCP) |                   |               |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------|---------------|---------------|
| Description                                                                                                                                                                                        | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table         |
| Relay                                                                                                                                                                                              | 1            | Corrosion                     | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Surface                       | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Damage                        | Visual Inspection | 1             | Table A 1-10  |
| Connection                                                                                                                                                                                         | 1            | Dust                          | Visual Inspection | 1             | Table A 1-10  |
| Age Limiter (AL)                                                                                                                                                                                   |              | Based on typical life curve   |                   |               | Figure A 14-2 |
| *where there is no available data for any assets, the weight of the parameter is set to 0<br>Since no parameters were available, the assessment was age-based (i.e. equivalent to the Age Limiter) |              |                               |                   |               |               |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 37.540$ ,  $\beta = 2.990$ ). The resultant survival curve (1 – likelihood of removals) is shown in below. This survival curve was used as the Age Limiter.

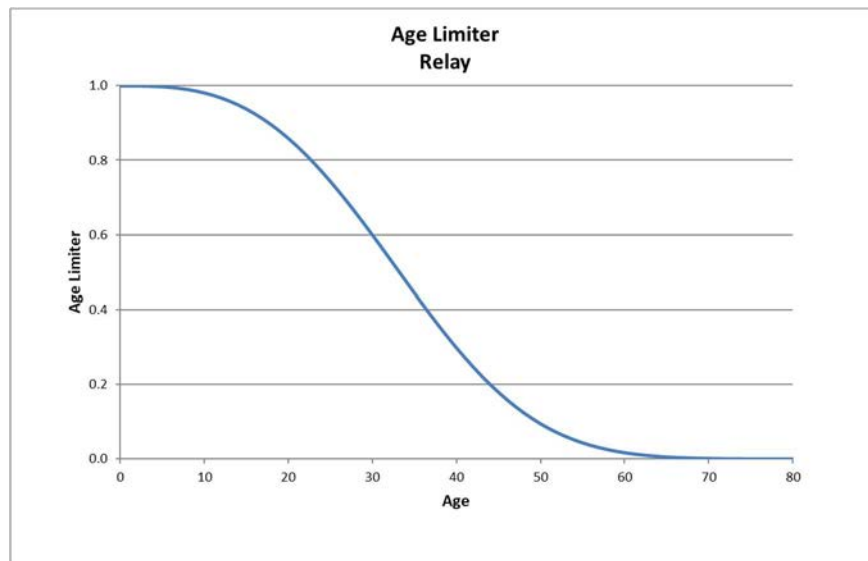


**Figure A 14-2 Relays Age Limiter**

### 14.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in good/very good condition. The average HI for the asset group was 93%.

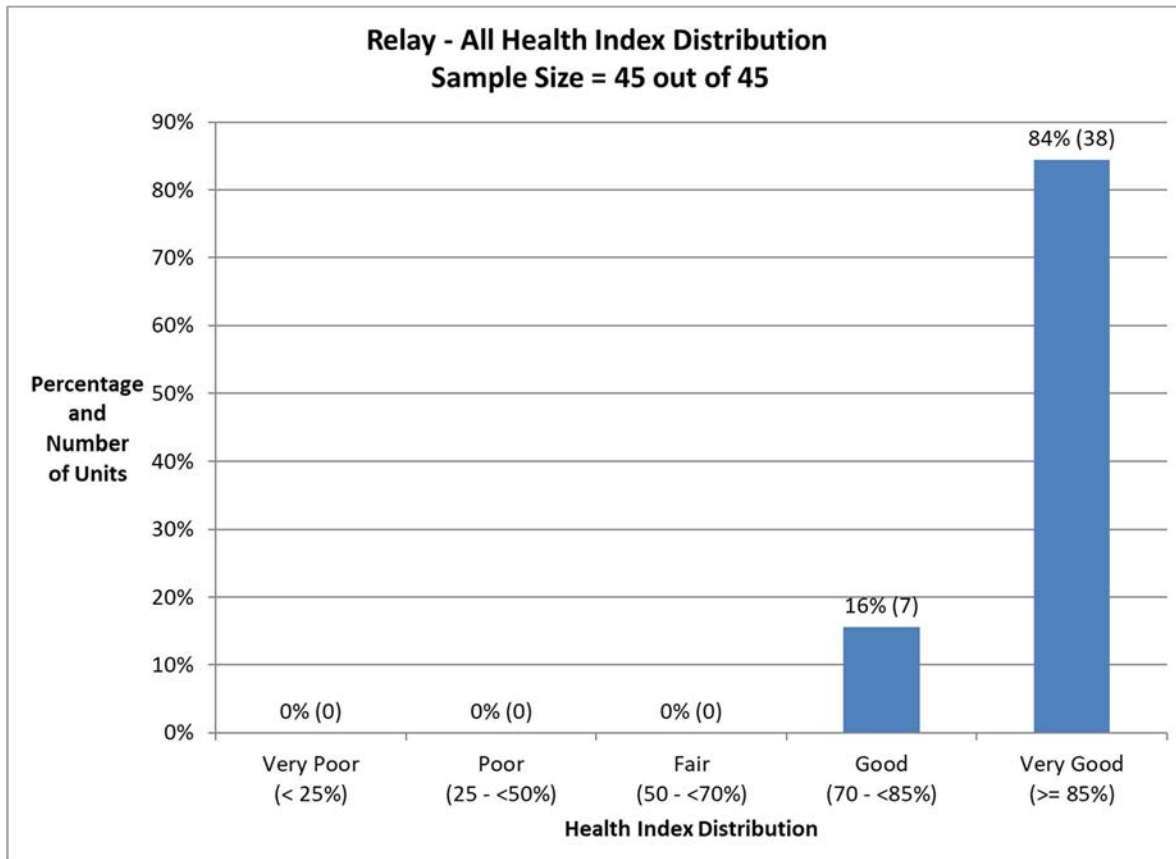


Figure A 14-3 Relays Health Index Distribution



## 14.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e., the results from 'sample size' (assets with HI) were extrapolated to the population.

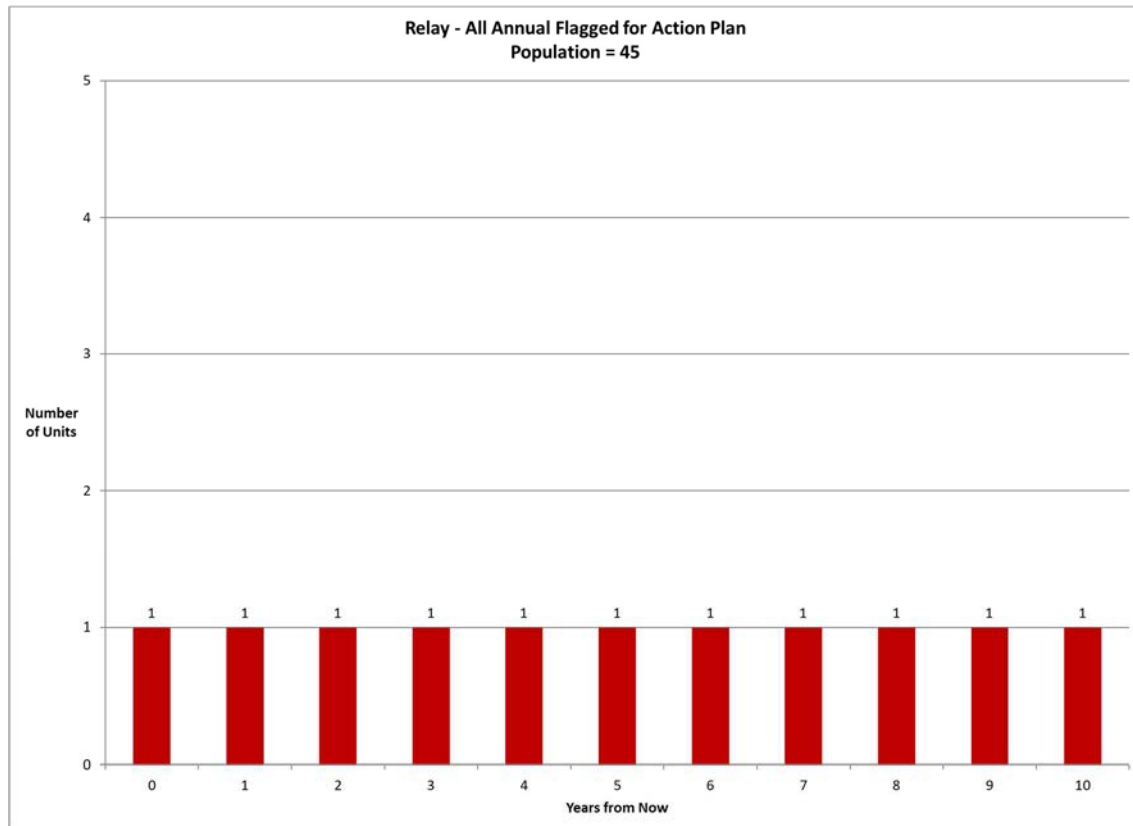


Figure A 14-4 Relays Flagged for Action Plan

No Relays were flagged for action in the next 10 years.



14.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 14-2 Relays HI Based Priortized List

| Asset Information |                  |                |     | DAI  | HI Calculated                  |           |             | Final HI |             |  | HI Parameter Scores |            |
|-------------------|------------------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|--|---------------------|------------|
| #                 | Object ID        | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |  | Physical Condition  | Connection |
| 1                 | 3365-F1-REF541   | 2001           | 22  | 100% | 81.68%                         | 0.82      | Y           | 82%      | Good        |  | 100%                | 75%        |
| 2                 | 3365-M3KA-REL511 | 2001           | 22  | 100% | 81.68%                         | 0.82      | Y           | 82%      | Good        |  | 100%                | 100%       |
| 3                 | 3365-M3KB-REL511 | 2001           | 22  | 100% | 81.68%                         | 0.82      | Y           | 82%      | Good        |  | 100%                | 100%       |
| 4                 | 3364-F2-REF541   | 2006           | 17  | 100% | 83.33%                         | 0.91      | N           | 83%      | Good        |  | 92%                 | 75%        |
| 5                 | 3365-F3-REF541   | 2008           | 15  | 100% | 83.33%                         | 0.94      | N           | 83%      | Good        |  | 92%                 | 75%        |
| 6                 | 3365-TIE-REF541  | 2008           | 15  | 100% | 83.33%                         | 0.94      | N           | 83%      | Good        |  | 92%                 | 75%        |
| 7                 | 3364-TIE-REF541  | 2014           | 9   | 100% | 83.33%                         | 0.99      | N           | 83%      | Good        |  | 92%                 | 75%        |
| 8                 | 3364-F1-REB670   | 2006           | 17  | 100% | 87.50%                         | 0.91      | N           | 88%      | Very Good   |  | 100%                | 75%        |
| 9                 | 3364-T1-REF543   | 2014           | 9   | 100% | 87.50%                         | 0.99      | N           | 88%      | Very Good   |  | 100%                | 75%        |
| 10                | 3364-F1-REF541   | 2014           | 9   | 100% | 87.50%                         | 0.99      | N           | 88%      | Very Good   |  | 100%                | 75%        |
| 11                | 3366-T3-RET543   | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 100%                | 100%       |
| 12                | 3366-T3-REX521   | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 100%                | 100%       |
| 13                | 3366-T3A-RET543  | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 92%                 | 100%       |
| 14                | 3366-T3A-REX521  | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 92%                 | 100%       |
| 15                | 3366-A7V-REL511A | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 92%                 | 100%       |
| 16                | 3366-A7V-REL511B | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 92%                 | 100%       |
| 17                | 3366-A7V-REF543  | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 92%                 | 100%       |
| 18                | 3366-F3-REF541   | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 92%                 | 100%       |
| 19                | 3366-TIE-REF541  | 2006           | 17  | 100% | 91.06%                         | 0.91      | Y           | 91%      | Very Good   |  | 100%                | 100%       |
| 20                | 3364-T1A-RET543  | 2007           | 16  | 100% | 92.49%                         | 0.92      | Y           | 92%      | Very Good   |  | 100%                | 100%       |
| 21                | 3364-T1A-REX521  | 2007           | 16  | 100% | 92.49%                         | 0.92      | Y           | 92%      | Very Good   |  | 100%                | 100%       |
| 22                | 3365-T2-RET543   | 2008           | 15  | 100% | 93.76%                         | 0.94      | Y           | 94%      | Very Good   |  | 100%                | 100%       |
| 23                | 3365-T2-REX521   | 2008           | 15  | 100% | 93.76%                         | 0.94      | Y           | 94%      | Very Good   |  | 100%                | 100%       |
| 24                | 3365-T2A-RET543  | 2008           | 15  | 100% | 93.76%                         | 0.94      | Y           | 94%      | Very Good   |  | 100%                | 100%       |
| 25                | 3365-T2A-REX521  | 2008           | 15  | 100% | 93.76%                         | 0.94      | Y           | 94%      | Very Good   |  | 100%                | 100%       |



| Asset Information |                   |                |     | DAI  | HI Calculated                  |           |             | Final HI |             |  | HI Parameter Scores |            |
|-------------------|-------------------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|--|---------------------|------------|
| #                 | Object ID         | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |  | Physical Condition  | Connection |
| 26                | 3365-M9KA-REL511  | 2008           | 15  | 100% | 93.76%                         | 0.94      | Y           | 94%      | Very Good   |  | 100%                | 100%       |
| 27                | 3365-BAY2-REF543  | 2008           | 15  | 100% | 93.76%                         | 0.94      | Y           | 94%      | Very Good   |  | 100%                | 100%       |
| 28                | 3366-F1-REF541    | 2014           | 9   | 100% | 95.83%                         | 0.99      | N           | 96%      | Very Good   |  | 92%                 | 100%       |
| 29                | 3366-F2-REF541    | 2016           | 7   | 100% | 95.83%                         | 0.99      | N           | 96%      | Very Good   |  | 92%                 | 100%       |
| 30                | 3365-ACDC-RER111C | 2011           | 12  | 100% | 96.75%                         | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%       |
| 31                | 3365-ACDC-MAJOR   | 2011           | 12  | 100% | 96.75%                         | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%       |
| 32                | 3365-RX-REF543    | 2011           | 12  | 100% | 96.75%                         | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%       |
| 33                | 3365-M9KB-REL511  | 2011           | 12  | 100% | 96.75%                         | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%       |
| 34                | 3365-BAY1-REF543  | 2011           | 12  | 100% | 96.75%                         | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%       |
| 35                | 3364-R1-REF543    | 2016           | 7   | 100% | 99.34%                         | 0.99      | Y           | 99%      | Very Good   |  | 100%                | 100%       |
| 36                | 3364-R2-REF543    | 2016           | 7   | 100% | 99.34%                         | 0.99      | Y           | 99%      | Very Good   |  | 100%                | 100%       |
| 37                | 3364-T1-REX521    | 2018           | 5   | 100% | 99.76%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 38                | 3364-R2-SEL751    | 2018           | 5   | 100% | 99.76%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 39                | 3364-R1-SEL751    | 2018           | 5   | 100% | 99.76%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 40                | 3365-RX-SEL751    | 2019           | 4   | 100% | 99.88%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 41                | 3365-K5AA-REL670  | 2019           | 4   | 100% | 99.88%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 42                | 3365-K5AB-REL670  | 2019           | 4   | 100% | 99.88%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 43                | 3366-R1-REF543    | 2019           | 4   | 100% | 99.88%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 44                | 3366-R1-SEL751    | 2019           | 4   | 100% | 99.88%                         | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |
| 45                | 3366-F4-REC670    | 2022           | 1   | 100% | 100.00%                        | 1.00      | Y           | 100%     | Very Good   |  | 100%                | 100%       |



## 14.4 Data Assessment

The available data for Relays were age and inspections.

| Asset Category | Population (conductor-km) | Average DAI |
|----------------|---------------------------|-------------|
| Relays         | 45                        | 100%        |

No major condition parameter data gaps were identified.

## 15. Battery Banks

There are 6 Battery Banks at FNEI. All of them had sufficient data for assessment. The average age of the population is 19 years; age distribution is as follows:

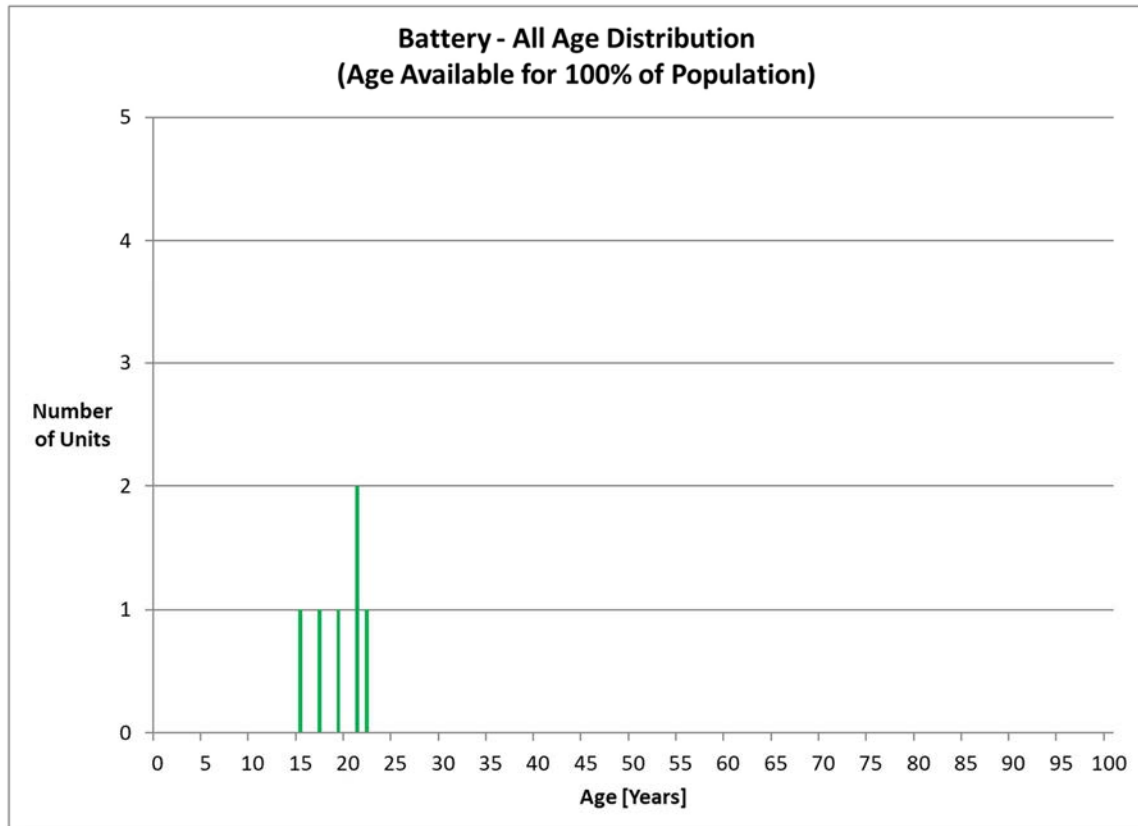


**Figure A 15-1 Battery Banks Age Distribution**

## 15.1 Health Index

### 15.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 15-1 Battery Banks Health Index Formula**

| Condition Parameter (CP) |              | Sub-Condition Parameter (SCP) |             |               |               |
|--------------------------|--------------|-------------------------------|-------------|---------------|---------------|
| Description              | Weight (WCP) | Description                   | Data Source | Weight (WSCP) | Criteria      |
| Physical Condition       | 1            | Intercell Resistance          | Test        | 1             | Table A 15-2  |
| Battery                  | 3            | Impedance                     | Test        | 1             | Table A 15-2  |
| Operation                | 2            | Bank Voltage                  | Test        | 2             | Table A 15-2  |
|                          |              | Electrolyte                   | Inspection  | 1             | Table A 15-3  |
| Age Limiter (AL)         |              | Based on typical life curve   |             |               | Figure A 15-2 |

### Measurement Variation

**Table A 15-2 Impedance/Resistance Test Criteria**

| Score | Deviation D % from Initial Measurement |                      |              |
|-------|----------------------------------------|----------------------|--------------|
|       | Cell Internal Impedance                | Intercell Resistance | Bank Voltage |
| 4     | D < 2%                                 | D < 2%               | D < 1%       |
| 3     | 2% ≤ D < 10%                           | 2% ≤ D < 5%          | 1% ≤ D < 2%  |
| 2     | 10% ≤ D < 20%                          | 5% ≤ D < 10%         | 2% ≤ D < 5%  |
| 1     | 20% ≤ D < 30%                          | -                    | 5% ≤ D < 10% |
| 0     | D ≥ 30%                                | D ≥ 10%              | D ≥ 10%      |

### Electrolyte

**Table A 15-3 Defect Electrolyte Percentage Criteria**

|                                                                                                                    |  |
|--------------------------------------------------------------------------------------------------------------------|--|
| $Score = 4 \times \left( 1 - \frac{\text{Number of Cells with Electrolyte Issue}}{\text{Number of Cells}} \right)$ |  |
|--------------------------------------------------------------------------------------------------------------------|--|

## Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 27.744$ ,  $\beta = 3.389$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter.

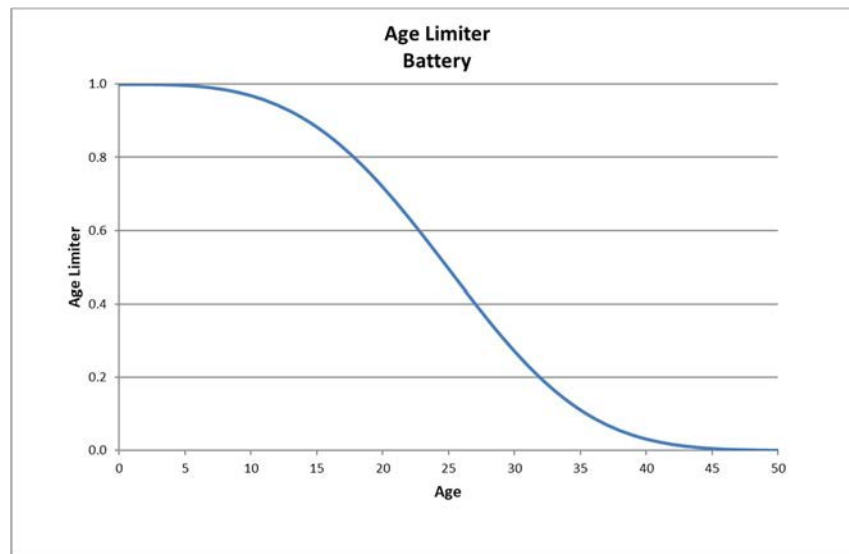


**Figure A 15-2 Battery Banks Age Limiter**

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### 15.1.2 Health Index Results

The HI Distribution for Battery Banks, in terms of number of units and percentage of units, is shown below. One unit was found to be in very poor condition due to poor test results. The average HI for the asset group was 66%.

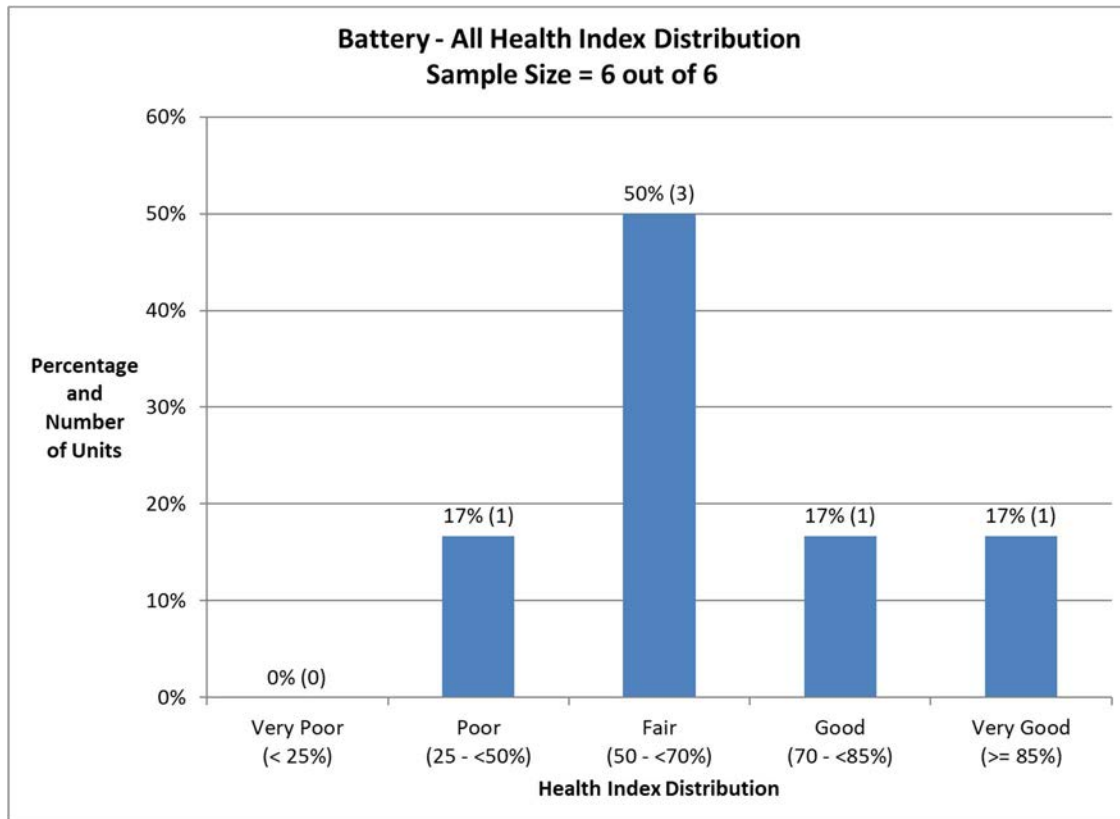


**Figure A 15-3 Battery Banks Health Index Distribution (1-Ph)**

### 15.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. In this study, all units were assumed to have equal criticality. As such, the Criticality Index for each unit was set to 100% (i.e. most critical).

One unit from 3364-B2-BC2 was flagged for action in the next 10 years.



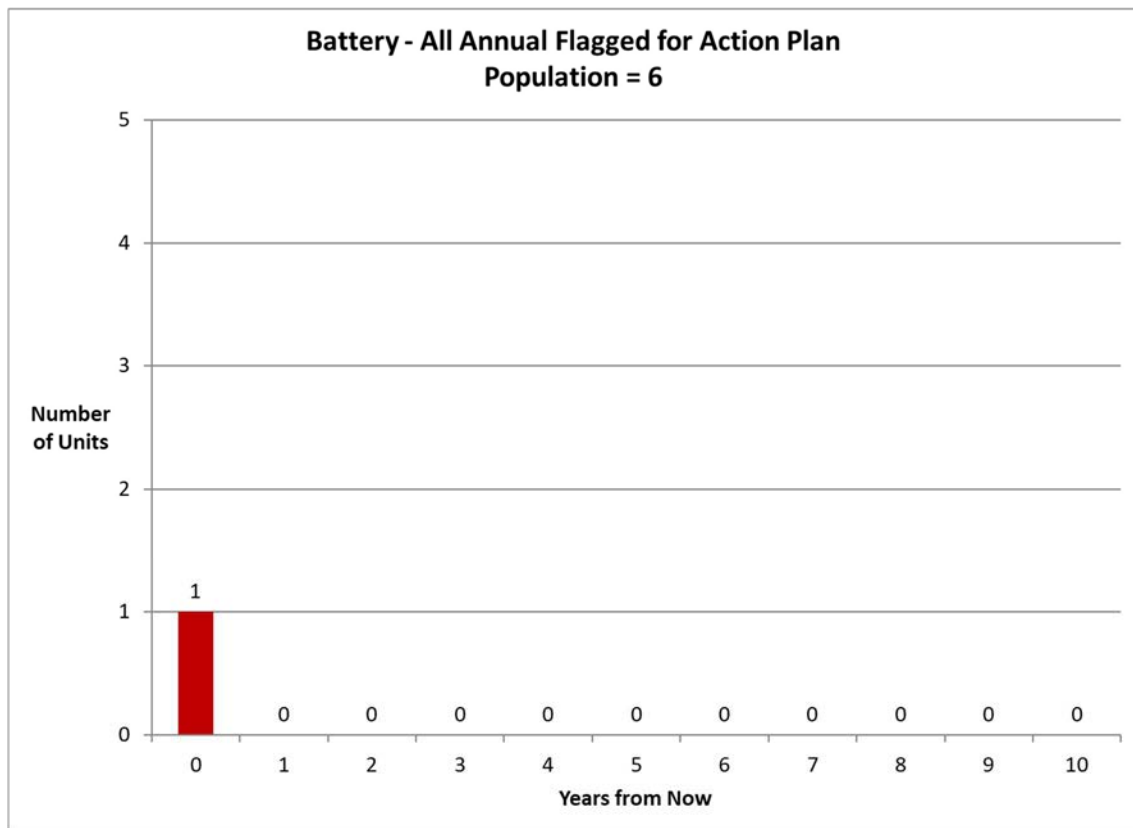


**Figure A 15-4 Battery Banks Flagged for Action Plan**

15.3 Risk Based Prioritized List

The following table shows the risk-based prioritization lists for this asset category. The results are sorted by highest to lowest Risk Index. Because the FFA Plan was developed using the risk-based approach, an FFA Year was determined for each asset.

Table A 15-4 Battery Banks Risk Based Prioritized List

| Asset Information |             |         |                |     | DAI  | HI Calculated                  |           |             | Final HI |             | Risk Index<br>100% = Most Risk<br>0% = Least Risk | FFA Year | HI Parameter Scores |                   |           |
|-------------------|-------------|---------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|---------------------------------------------------|----------|---------------------|-------------------|-----------|
| #                 | Object ID   | Type    | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |                                                   |          | Physical Condition  | Battery Condition | Opeartion |
| 1                 | 3364-B2-BC2 | Battery | 2004           | 19  | 100% | 28.86%                         | 0.76      | N           | 29%      | Poor        | 0%                                                | >20      | 0%                  | 0%                | 87%       |
| 2                 | 3365-B1-BC1 | Battery | 2001           | 22  | 33%  | 89.42%                         | 0.63      | Y           | 63%      | Fair        | 0%                                                | >20      |                     |                   | 89%       |
| 3                 | 3364-B1-BC1 | Battery | 2002           | 21  | 100% | 85.31%                         | 0.68      | Y           | 68%      | Fair        | 0%                                                | >20      | 50%                 | 100%              | 81%       |
| 4                 | 3366-B1-BC1 | Battery | 2002           | 21  | 100% | 94.20%                         | 0.68      | Y           | 68%      | Fair        | 0%                                                | >20      | 100%                | 100%              | 83%       |
| 5                 | 3365-B2-BC2 | Battery | 2006           | 17  | 33%  | 88.66%                         | 0.83      | Y           | 83%      | Good        | 0%                                                | >20      |                     |                   | 89%       |
| 6                 | 3366-B2-BC2 | Battery | 2008           | 15  | 100% | 100.00%                        | 0.88      | Y           | 88%      | Very Good   | 0%                                                | >20      | 100%                | 100%              | 100%      |

Units 3364-B2-BC2 had noticeable measurement reading increase for both intercell connection resistance and cell impedance, during the period of 2022-2023. FNEI is recommended to conduct further investigation.



## 15.4 Data Assessment

The available data for Battery Banks were age, inspections, and test results.

| Asset Category | Population | Average DAI |
|----------------|------------|-------------|
| Battery Banks  | 6          | 78%         |

No major condition parameter data gaps were identified.

## 16. SCADAs

This section summarizes the ACA results for FNEI's compact SCADAs. There were a total of 6 units

All of them had age and were therefore included in the assessment. The average age is 13 years; the age distribution is as follows.

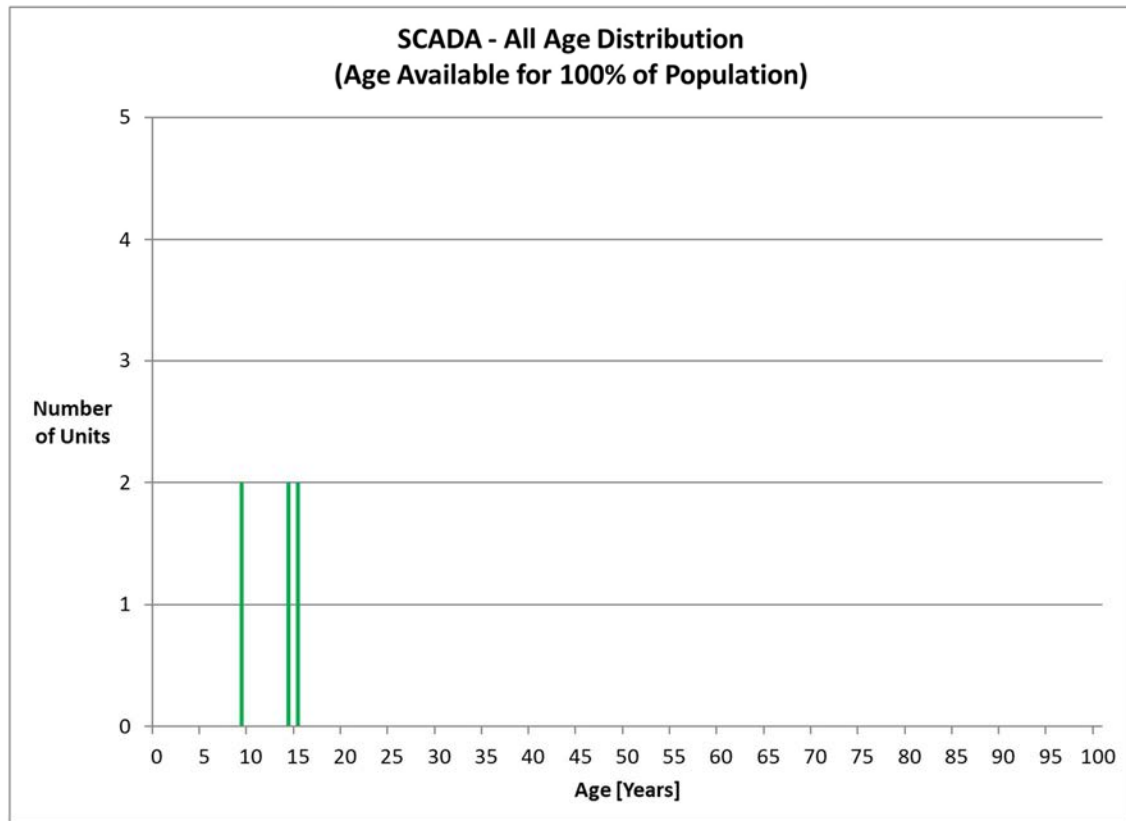


**Figure A 16-1 SCADAs Age Distribution**

## 16.1 Health Index

### 16.1.1 Health Index Formula

HI is a function of scores and weights of condition and sub-condition parameters and is calculated using Equation 1 and Equation 2 described in Section 2.1. This section defines the condition and sub-condition parameters, as well as criteria.

**Table A 16-1 SCADAs Health Index Formula**

| Condition Parameter (CP)                                                                                                                                                                           |              | Sub-Condition Parameter (SCP) |                   |               |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------|---------------|---------------|
| Description                                                                                                                                                                                        | Weight (WCP) | Description                   | Source            | Weight (WSCP) | Table         |
| Physical                                                                                                                                                                                           | 1            | Corrosion                     | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Surface                       | Visual Inspection | 1             | Table A 1-10  |
|                                                                                                                                                                                                    |              | Damage                        | Visual Inspection | 1             | Table A 1-10  |
| Ventilation                                                                                                                                                                                        | 1            | Fan                           | Visual Inspection | 1             | Table A 1-10  |
| Ingress                                                                                                                                                                                            | 1            | Dust                          | Visual Inspection | 1             | Table A 1-10  |
| Age Limiter (AL)                                                                                                                                                                                   |              | Based on typical life curve   |                   |               | Figure A 16-2 |
| *where there is no available data for any assets, the weight of the parameter is set to 0<br>Since no parameters were available, the assessment was age-based (i.e. equivalent to the Age Limiter) |              |                               |                   |               |               |

### Age Limiter

The Age Limiter used is equivalent to the survival function of the asset group, as described in Equation 5. As the client does not have available historical removal data, the age limiter curve was based on statistical information from North American utilities ( $\alpha = 22.385$ ,  $\beta = 3.747$ ). The resultant survival curve ( $1 - \text{likelihood of removals}$ ) is shown in below. This survival curve was used as the Age Limiter.

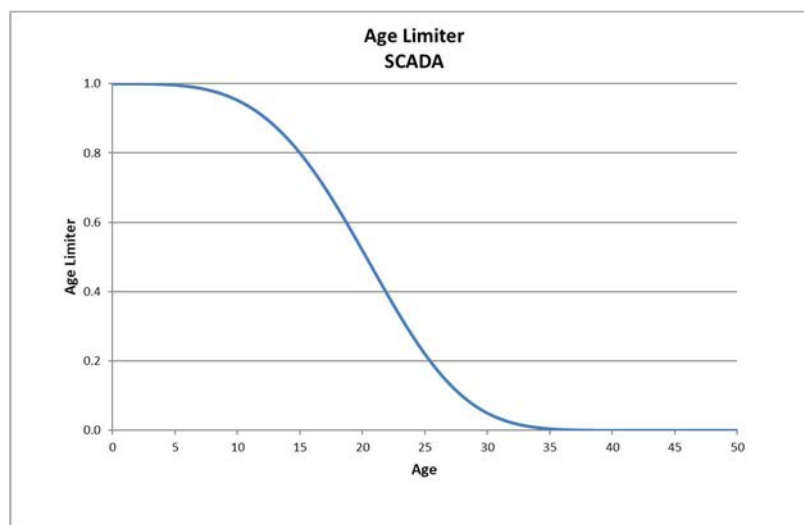


**Figure A 16-2 SCADAs Age Limiter**

### 16.1.2 Health Index Results

The HI Distribution, in terms of number of units and percentage of units, is shown below. All the units were found to be in fair/good/very good condition. The average HI for the asset group was 81%.

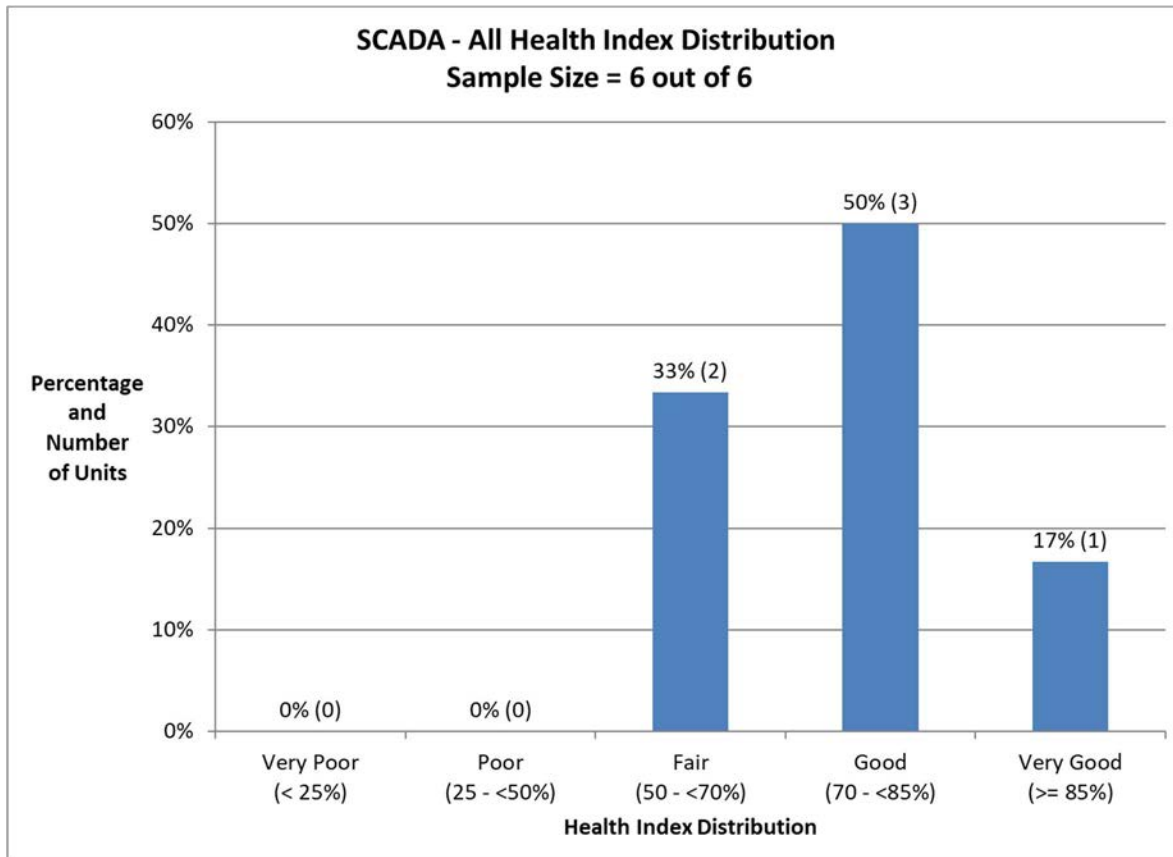


Figure A 16-3 SCADAs Health Index Distribution

## 16.2 Flagged for Action Plan

The flagged for action plan, which was derived using the life curve method in Section 2.2 shows the expected number of assets to be addressed each year. The plan accounts for the entire asset population, i.e., the results from 'sample size' (assets with HI) were extrapolated to the population.

One SCADAs was flagged for action in the next 10 years.

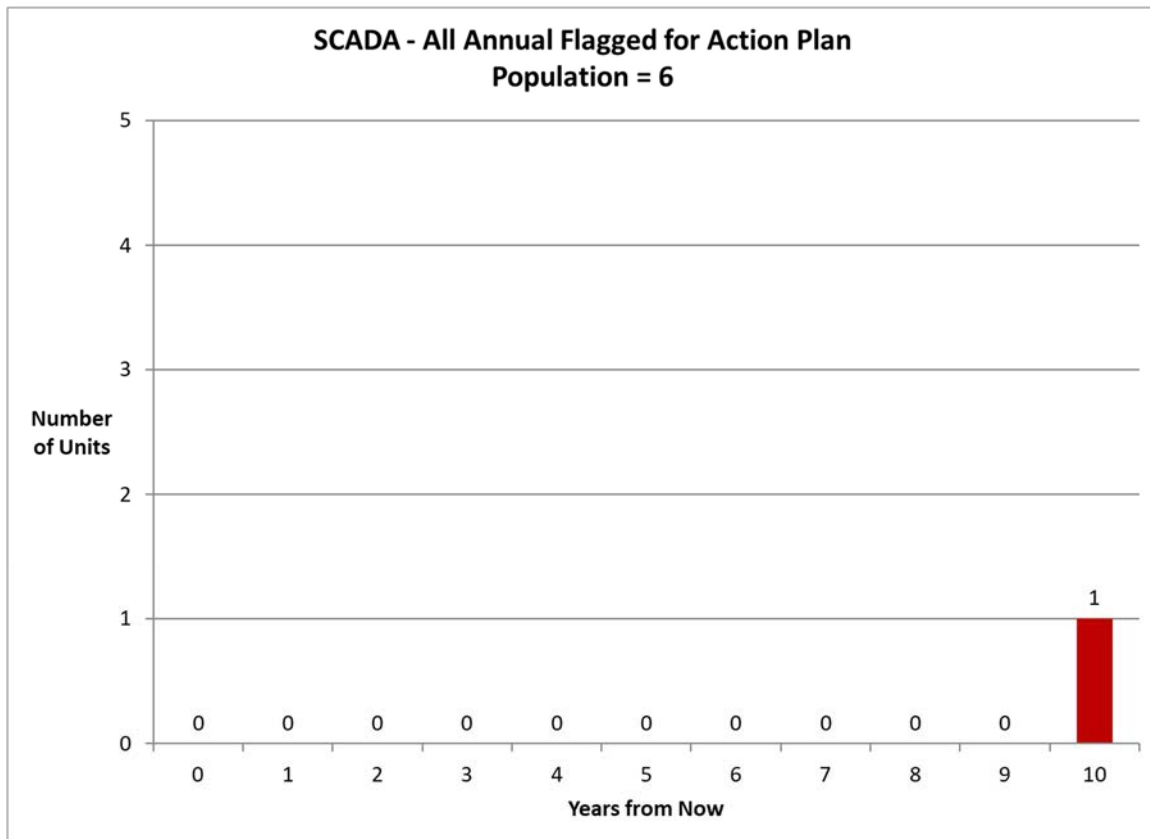


**Figure A 16-4 SCADAs Flagged for Action Plan**



16.3 Health Index Based Prioritized List

Health Index based prioritized list is provided for all the individual units in this asset group. The results are sorted by lowest to highest HI.

Table A 16-2 SCADAs HI Based Priortized List

| Asset Information |             |                |     | DAI  | HI Calculated                  |           |             | Final HI |             |  | HI Parameter Scores |         |             |
|-------------------|-------------|----------------|-----|------|--------------------------------|-----------|-------------|----------|-------------|--|---------------------|---------|-------------|
| #                 | Object ID   | Year Installed | Age |      | Calculated HI (with De-rating) | Age Limit | Age Limited | HI       | HI Category |  | Physical Condition  | Ingress | Ventilation |
| 1                 | 3365-Comp1B | 2008           | 15  | 100% | 61.11%                         | 0.80      | N           | 61%      | Fair        |  | 58%                 | 75%     | 50%         |
| 2                 | 3365-Comp1A | 2008           | 15  | 100% | 72.22%                         | 0.80      | N           | 72%      | Good        |  | 67%                 | 75%     | 75%         |
| 3                 | 3366-Comp1A | 2009           | 14  | 100% | 84.17%                         | 0.84      | Y           | 84%      | Good        |  | 100%                | 100%    | 100%        |
| 4                 | 3366-Comp1B | 2009           | 14  | 100% | 84.17%                         | 0.84      | Y           | 84%      | Good        |  | 100%                | 100%    | 100%        |
| 5                 | 3364-Comp1B | 2014           | 9   | 100% | 88.89%                         | 0.97      | N           | 89%      | Very Good   |  | 92%                 | 75%     | 100%        |
| 6                 | 3364-Comp1A | 2014           | 9   | 100% | 96.76%                         | 0.97      | Y           | 97%      | Very Good   |  | 100%                | 100%    | 100%        |





## 16.4 Data Assessment

The available data for SCADAs were age and inspections.

| Asset Category | Population (conductor-km) | Average DAI |
|----------------|---------------------------|-------------|
| SCADAs         | 12                        | 100%        |

No major condition parameter data gaps were identified.



**Filing Date: July 8, 2025**

**EB-2025-0129**

**Exhibit 2 – Transmission System Plan**

## **8 APPENDIX 4 – REGIONAL PLANNING NEEDS ASSESSMENT**

# **NEEDS ASSESSMENT REPORT**

## **North of Moosonee**

**Revision:**

**Date June 16, 2021**

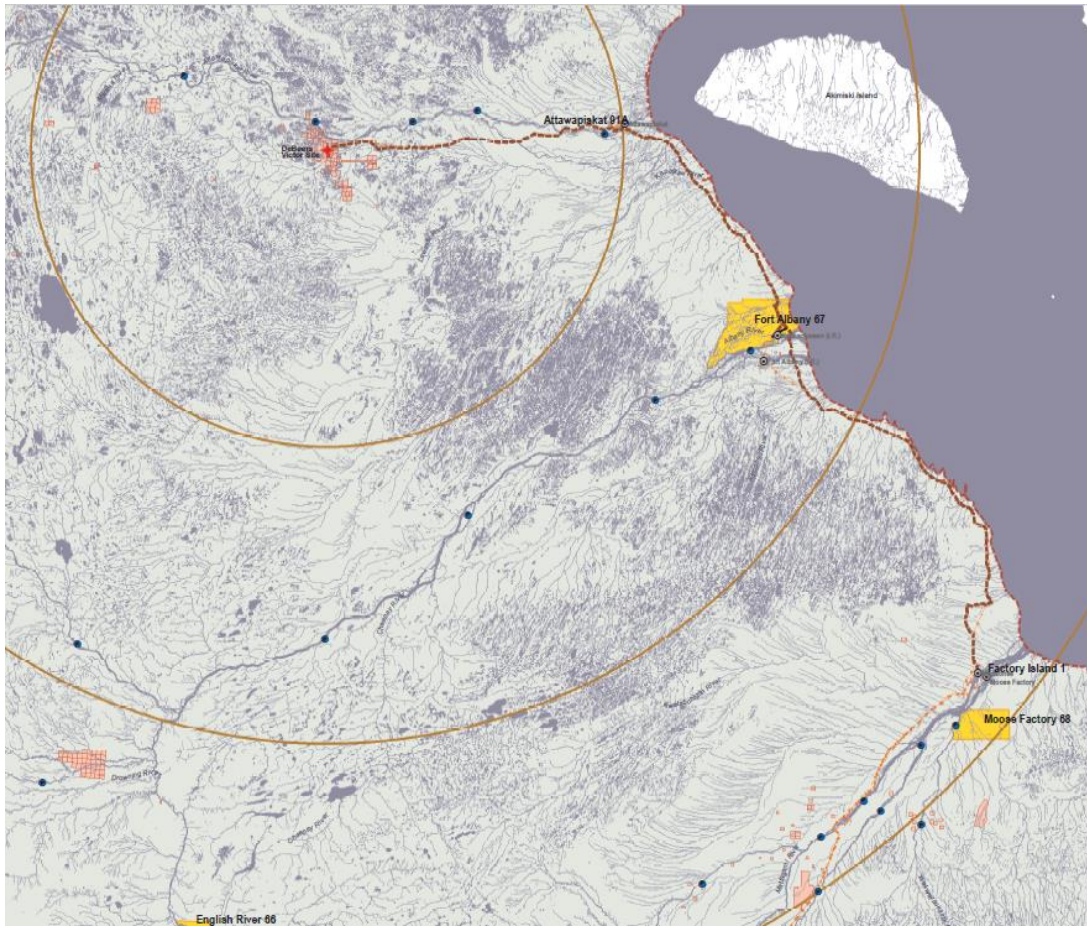


**Prepared by: Five Nations Energy Inc. Operations Department**

## DISCLAIMER

This Needs Assessment Report was prepared for the purpose of identifying potential needs in the North of Moosonee Region and to assess whether those needs require further coordinated regional planning. The potential needs that have been identified through this Needs Assessment Report may be studied further through subsequent regional planning processes and may be reevaluated based on the findings of further analysis. The load forecast and results reported in this Needs Assessment Report are based on the information and assumptions provided by study team participants.

Study team participants, their respective affiliated organizations, and Five Nations Energy Inc. (collectively, “the Authors”) make no representations or warranties (express, implied, statutory or otherwise) as to the Needs Assessment Report or its contents, including, without limitation, the accuracy or completeness of the information therein and shall not, under any circumstances whatsoever, be liable to each other, or to any third party for whom the Needs Assessment Report was prepared (“the Intended Third Parties”), or to any other third party reading or receiving the Needs Assessment Report (“the Other Third Parties”), for any direct, indirect or consequential loss or damages or for any punitive, incidental or special damages or any loss of profit, loss of contract, loss of opportunity or loss of goodwill resulting from or in any way related to the reliance on, acceptance or use of the Needs Assessment Report or its contents by any person or entity, including, but not limited to, the aforementioned persons and entities.



## NEEDS ASSESSMENT SUMMARY REPORT

|                   |                                |                 |              |
|-------------------|--------------------------------|-----------------|--------------|
| <b>NAME</b>       | North of Moosonee Region Study |                 |              |
| <b>LEAD</b>       | Five Nations Energy Inc.,      |                 |              |
| <b>REGION</b>     | Group 3 - North of Moosonee    |                 |              |
| <b>START DATE</b> | April 20, 2021                 | <b>END DATE</b> | June 7, 2021 |

## 1. INTRODUCTION

The purpose of this Needs Assessment report is to undertake an assessment of the North of Moosonee Region (WJB-Region) to determine if there are regional needs that would lead to coordinated regional planning. Where regional coordination is not required and a “wires” only solution is necessary such needs will be addressed among the relevant Local Distribution Companies (LDCs), FNEI and other parties as required.

For needs that require further regional planning and coordination, the Independent Electricity System Operator (IESO) will initiate the Scoping process to determine whether an IESO-led Integrated Regional Resource Planning (IRRP) process or the transmitter-led Regional Infrastructure Plan (RIP) process (wires solution) is required, or whether both are required.

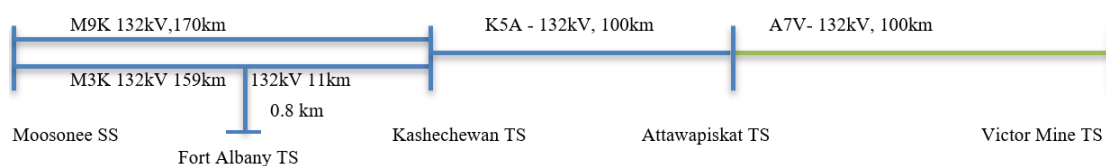
## 2. REGIONAL ISSUES/TRIGGER

The Needs Assessment for the North of Moosonee Region was triggered in response to the Ontario Energy Board’s (OEB) new Regional Planning process approved in August 2013. To prioritize and manage the regional planning process, Ontario’s 21 regions were assigned to one of three groups. North of Moosonee belongs to Group 3 and the Needs Assessment for this Region was triggered on April 20, 2021 and was completed on June 7, 2021.

## 3. SCOPE OF NEEDS ASSESSMENT

The scope of this Needs Assessment was limited to the next 10 years and, hence, relevant data and information was collected up to the year 2031. Needs emerging over the near-term (0-5 years) and mid-term (6-10 years) that require coordinated regional planning would be further assessed as part of the IESO-led Scoping Assessment and/or IRRP, or in the next planning cycle to develop a 20-year plan and strategic direction for the Region.

This Needs Assessment included a review of transmission system connection facilities capacity which covers station loading, thermal and voltage analysis, system reliability, operational issues such as load restoration and asset sustainment plans. The electricity supply to the North of Moosonee region is via two single circuit 132 kV transmission lines M9K and M3K from Moosonee SS to Kashechewan TS with Fort Albany TS tapped to circuit M3K. A single circuit 132 kV transmission line K5A connects Attawapiskat TS. The area includes four transformer stations, Attawapiskat TS (132/4.16kV), Kashechewan TS, Fort Albany TS (132kV/8.32kV) as well as single transmission line (A7V) and station to service the Victor mine on the western edge of the region owned and operated by De Beers Canada. The area includes three LDCs, Attawapiskat Power Corporation, Fort Albany Power Corporation, and Kashechewan Power Corporation, as well as De Beers - Victor Mine.



The only generation facilities of note are communities remaining diesel generators, which are on occasion used for backup purposes. These are two 1.285MW units at Attawapiskat TS, and three 1.1MW units at Kashechewan TS. Victor Mine backup generators, is 6MW in total. These generation facilities are not considered as load modifiers or as generating resources in this study.

#### 4. INPUTS/DATA (INFORMATION REQUIRED TO COMPLETE ASSESSMENT)

Study team participants, the IESO, local LDCs and FNEI provided information and input to FNEI for the Western James Bay Region. The information provided includes the following:

- Actual 2020 regional non-coincident peak load and historical load;
- Community development plans and forecast;
- Conservation and Demand Management (CDM) data provided by IESO; note that no Distributed Generation (DG) data was provided by the IESO because there is no DG within the region that is contracted with the IESO
- Any known reliability and/or operating issues conditions identified by LDCs or the IESO<sup>1</sup>;
- Planned transmission and distribution investments provided by the transmitter and LDCs, etc.

As per the data provided by the study team, the residential load is expected to grow for the communities at different seasonal levels for each community, from 2.8% to 7.14% for summer and 1.55% to 5.16% winter. Energy efficiency and conservation programs may keep zero growth or even negative growth for summer season, with estimated rates: from (-1.6%) to 2.77% for summer and (-2.85%) to 0.76% for winter, annually from 2021 to 2031. The industrial loads will be close to zero, with DeBeers Victor Mine closure and no new development in the area by 2025.

<sup>1</sup> No operational concerns were identified by the IESO.



## 5. ASSESSMENT

The assessment's primary objective over the study period (2021 to 2031) is to identify the electrical infrastructure needs in the region. The study reviewed available information; load forecast and conducted single contingency analysis to confirm need, if and when required.

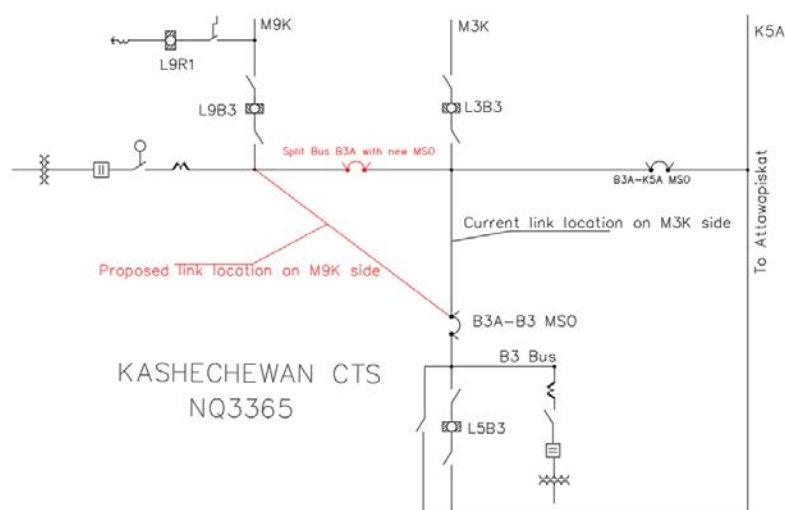
The following methodology and assumptions are made in this Needs Assessment:

1. The region typically has a winter peak; therefore, this assessment is based on a winter peak load. Non-coincident forecasts by station are assumed to be conservative.
2. The gross demand is used to develop a worst/stress case scenario to identify needs; gross demand and net demand (considering conservation) are both used to determine timing of needs as applicable. All assessments are made using the non-coincident peak load. Note that the CDM estimates provided for the purposes of this Needs Assessment are based on the CDM estimates for the Northeast zone, and allocated to the region based on station peak load. The resulting CDM estimates may be more reflective of the customer segmentation within the zone than within the North of Moosonee region. For this reason, the gross demand forecasts are also used for the assessments to test the identification of needs.
3. Consider impact of any planned developments, including planned work on the transmission system in the area.
4. Station capacity is assessed by comparing the non-coincident peak load with the station's normal planning supply capacity by assuming a 90% lagging power factor. Normal planning supply capacity is determined by the 10-day Limited Time Rating (LTR), which is not expected to be reached in the planning period.
5. Transmission adequacy assessment is primarily based on the following criteria:
  - a. With all elements in service, the system is to be capable of supplying forecast demand with equipment loading within continuous ratings and voltages within normal range.
  - b. With one element out of service, the system is to be capable of supplying forecast demand with circuit loading within their long-term emergency (LTE) ratings and transformers within their summer 10-Day LTR.
  - c. All voltages must be within pre- and post-contingency ranges as per Ontario Resource and Transmission Assessment Criteria (ORTAC).
  - d. The system is capable of meeting the load restoration time limits as per ORTAC criteria.

## 6. RESULTS

### A. Connection Facilities

- Based on the demand forecast, there are sufficient capacity at all three 132kV connected load stations throughout the study period. No action is required at this time and the capacity needs will be reviewed in the next planning cycle. Each station equipped with two, 10 MVA transformers, is not expected to be loaded beyond 50% capacity of one transformer, considering peak loads and CDM factors. Main load limitation is feeder capacity, which is currently being addressed with additional feeder installation and reconfigurations on the LDC side, as noted below.
- The 4.16kV distribution side in Attawapiskat was upgraded in 2018 with feeder #3 and will have feeder #4 by winter 2021 and the 8.32 kV distribution side in Kashechewan may require an additional feeder by 2024, depends on new house construction progress.
- Based on the demand forecast over the study period, no overload or capacity need was identified for the loss of a single 132kV circuit in the region.
- The 132 kV side of the transformer stations in Kashechewan require small modification as an extension of previously completed work, for better flexibility in switching for regular maintenance procedures. Kashechewan TS incoming twin lines are connected to the same bus; this can be split and the bypass line section installed for previous modifications can be used for rerouting power during maintenance. This modification will reduce the frequency and duration of planned outages otherwise required for regular station maintenance work. This upgrade is planned to be completed in 2022.



## **B. System Reliability, Operation and Restoration Review**

- There are no significant system reliability and operating issues identified for one element out of service for the sections of the system where there are two or more parallel elements.
- In the case of a single line failure from Kashechewan TS to the Attawapiskat TS, the Ontario Resource and Transmission Assessment Criteria (ORTAC) restoration criteria of 8 hours (plus travel time) cannot always be met due to remoteness, lack of all-season road access and the often, extreme weather conditions that accompany an unplanned outage. ORTAC recognizes that restoration times are intended for locations that are near staffed centers and that in more remote locations, restoration times should be commensurate with travel times and accessibility. For this reason, solutions to enhance restoration (such as additional wires or non-wires alternatives) are typically driven by integrated needs to ensure cost-effectiveness. While there are no other regional needs in the North of Moosonee area, this should be monitored in future planning cycles.

## **C. Sustainment Replacement Plans**

Sustainment activities are scheduled within the study period at the stations listed below. The new equipment ratings at these stations were considered in this need assessment. Plans to replace major equipment do not change the supply capacity of FNEI Stations.

- Attawapiskat TS (equipment, relaying & communication)
- Kashechewan TS (equipment, relaying & communication)
- Fort Albany TS (equipment, relaying & communication)
- Moosonee Fiber shelter (communication equipment)

## **7. RECOMMENDATION**

Based on the findings of the Needs Assessment, the study team's recommendations are that no further coordinated regional planning is required for this region at this time. FNEI will continue with planned station work as well as planned sustainment work. The next regional planning cycle is expected to be undertaken in Q1 2026 or earlier if a new need emerges.

PREPARED BY: FNEI Operations Manager: Vladimir Govorov

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## EXHIBIT 3 – RATE BASE

### 2026 Cost of Service

Five Nations Energy Inc.

EB-2025-0129

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## 1.0 RATE BASE OVERVIEW

This exhibit provides Five Nations Energy Inc.'s ("FNEI") Rate Base from 2018 OEB-approved up to the 2026 Test Year and provides a description of each Rate Base component, as well as a comparison of historical actuals, and the 2025 Bridge Year.

The Rate Base underlying FNEI's proposed 2026 Revenue Requirement includes a forecast of net Property, Plant and Equipment ("PP&E"), calculated on a mid-year average basis, as well as a Working Capital Allowance. FNEI has included a Fixed Asset Continuity Schedule in tab 2-BA of Attachment FNEI\_2026RR\_Appendices\_20250704. FNEI's 2026 Rate Base is \$36.53M as shown in Table 1 below:

**Table 1 –2026 Rate Base**

| Item                                    | \$ (millions)  |
|-----------------------------------------|----------------|
| Gross PP&E Open                         | 97.61          |
| Gross PP&E Close                        | 99.11          |
| <b>Average PP&amp;E</b>                 | <b>98.36</b>   |
| Accumulated Depreciation Open           | (61.04)        |
| Accumulated Depreciation Close          | (63.05)        |
| <b>Average Accumulated Depreciation</b> | <b>(62.04)</b> |
| <b>Average Net PP&amp;E</b>             | <b>36.31</b>   |
| Working Capital Allowance               | 0.22           |
| <b>Rate Base</b>                        | <b>36.53</b>   |

## 2.0 PROPERTY, PLANT & EQUIPMENT

Table 2 below shows FNEI's Rate Base from 2017 OEB-approved, through to 2025 Bridge and 2026 Test Years, including all Actuals for the intervening years. A comprehensive breakdown of Gross PP&E and Accumulated Depreciation by asset category per the OEB's Uniform System of Accounts ("UsoA") is provided in tab 2-BA of Attachment FNEI\_2026RR\_Appendices\_20250704.

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Table 2 – 2017 OEB-Approved to 2026 Test Year Rate Base

| (\$ millions)                           | Board<br>Approved | Actual         | Board<br>Approved | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         | Bridge         | Test           |
|-----------------------------------------|-------------------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Item                                    | 2017              | 2017           | 2018              | 2018           | 2019           | 2020           | 2021           | 2022           | 2023           | 2024           | 2025           | 2026           |
| Gross PP&E Open                         |                   | 61.81          |                   | 63.16          | 64.05          | 69.50          | 71.67          | 72.72          | 73.47          | 93.62          | 96.08          | 97.61          |
| Gross PP&E Close                        |                   | 63.22          |                   | 64.10          | 69.50          | 71.67          | 72.72          | 73.47          | 93.62          | 96.08          | 97.61          | 99.11          |
| <b>Average PP&amp;E</b>                 |                   | <b>62.52</b>   |                   | <b>63.63</b>   | <b>66.78</b>   | <b>70.59</b>   | <b>72.19</b>   | <b>73.09</b>   | <b>83.55</b>   | <b>94.85</b>   | <b>96.85</b>   | <b>98.36</b>   |
| Accumulated Depreciation Open           |                   | -25.72         |                   | -27.24         | -28.64         | -30.30         | -32.18         | -33.84         | -35.86         | -57.12         | -59.07         | -61.04         |
| Accumulated Depreciation Close          |                   | -27.24         |                   | -28.75         | -30.30         | -32.18         | -33.84         | -35.86         | -57.12         | -59.07         | -61.04         | -63.05         |
| <b>Average Accumulated Depreciation</b> |                   | <b>(26.48)</b> |                   | <b>(27.99)</b> | <b>(29.47)</b> | <b>(31.24)</b> | <b>(33.01)</b> | <b>(34.85)</b> | <b>(46.49)</b> | <b>(58.09)</b> | <b>(60.05)</b> | <b>(62.04)</b> |
| <b>Average Net PP&amp;E</b>             | <b>35.32</b>      | <b>36.04</b>   | <b>35.32</b>      | <b>35.64</b>   | <b>37.30</b>   | <b>39.34</b>   | <b>39.18</b>   | <b>38.24</b>   | <b>37.06</b>   | <b>36.76</b>   | <b>36.79</b>   | <b>36.31</b>   |
| Working Capital Allowance               | 0.15              | 0.13           | 0.15              | 0.17           | 0.13           | 0.12           | 0.13           | 0.16           | 0.20           | 0.19           | 0.19           | 0.22           |
| <b>Rate Base</b>                        | <b>35.47</b>      | <b>36.17</b>   | <b>35.47</b>      | <b>35.81</b>   | <b>37.43</b>   | <b>39.47</b>   | <b>39.31</b>   | <b>38.40</b>   | <b>37.25</b>   | <b>36.95</b>   | <b>36.99</b>   | <b>36.53</b>   |

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### 3.0 WORKING CAPITAL ALLOWANCE

FNEI proposes inclusion of a Working Capital Allowance in its 2026 Rate Base of \$0.22M, calculated in a manner consistent with the OEB's Decision and Order in EB-2016-0231. Specifically, the Working Capital Allowance proposed has been calculated as 3.55% of FNEI's 2026 OM&A budget. The previously approved Working Capital Allowance rate of 3.55% was determined on the basis of a lead / lag analysis completed by Navigant Consulting Limited in 2016, and FNEI submits the results of this analysis remain valid for the purpose of determining the utility's Working Capital Allowance in 2026. Table 3 below presents calculation of FNEI's Working Capital Allowance for 2026.

**Table 3 – 2026 Working Capital Allowance**

| Item                             | \$<br>(millions) |
|----------------------------------|------------------|
| Total OM&A                       | 6.19             |
| Working Capital Allowance Rate   | 3.55%            |
| <b>Working Capital Allowance</b> | <b>0.22</b>      |

### 4.0 IN-SERVICE ADDITIONS

In-service additions represent increases to Rate Base as a result of capital work being declared in-service and ready for use. FNEI has not included any Capital Work in Progress ("CWIP") in the 2026 Test Year for the purpose of establishing Rate Base, and as such capital expenditures and in-service additions are one and the same. Please refer to tabs 2-AB and 2-BA of Attachment FNEI\_2026RR\_Appendices\_20250704.

### 5.0 VARIANCE ANALYSES

Table 4 below shows variances in Rate Base and its sub-components of Gross PP&E, Accumulated Depreciation, and Working Capital Allowance as between 2017 and 2018 Board-approved vs. Actuals, year-over-year Actuals up to 2024, 2024 Actuals vs. the 2025 Bridge Year, and the 2025 Bridge vs. the 2026 Test Year.



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Table 4 – 2017 Board-Approved to 2026 Test Year Rate Base Variances

(\$ millions)

|                                         | Board-<br>Approved vs.<br>Actual | Board-<br>Approved<br>vs. Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Actual vs.<br>Prior Year<br>Actual | Bridge vs.<br>Prior Year<br>Actual | Test vs.<br>Bridge |
|-----------------------------------------|----------------------------------|----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|--------------------|
| Item                                    | 2017                             | 2018                             | 2018                               | 2019                               | 2020                               | 2021                               | 2022                               | 2023                               | 2024                               | 2025                               | 2026                               |                    |
| Gross PP&E Open                         |                                  |                                  | 1.35                               | 0.88                               | 5.45                               | 2.17                               | 1.05                               | 0.76                               | 20.15                              | 2.47                               | 1.53                               |                    |
| Gross PP&E Close                        |                                  |                                  | 0.88                               | 5.40                               | 2.17                               | 1.05                               | 0.76                               | 20.15                              | 2.47                               | 1.53                               | 1.50                               |                    |
| <b>Average PP&amp;E</b>                 |                                  |                                  | <b>1.11</b>                        | <b>3.14</b>                        | <b>3.81</b>                        | <b>1.61</b>                        | <b>0.90</b>                        | <b>10.45</b>                       | <b>11.31</b>                       | <b>2.00</b>                        | <b>1.51</b>                        |                    |
| Accumulated Depreciation Open           |                                  |                                  | 1.51                               | 1.40                               | 1.66                               | 1.87                               | 1.66                               | 2.02                               | 21.26                              | 1.95                               | 1.97                               |                    |
| Accumulated Depreciation Close          |                                  |                                  | 1.51                               | 1.56                               | 1.87                               | 1.66                               | 2.02                               | 21.26                              | 1.95                               | 1.97                               | 2.01                               |                    |
| <b>Average Accumulated Depreciation</b> |                                  |                                  | <b>1.51</b>                        | <b>1.48</b>                        | <b>1.77</b>                        | <b>1.77</b>                        | <b>1.84</b>                        | <b>11.64</b>                       | <b>11.60</b>                       | <b>1.96</b>                        | <b>1.99</b>                        |                    |
| <b>Average Net PP&amp;E</b>             | <b>0.71</b>                      | <b>0.32</b>                      | <b>-0.40</b>                       | <b>1.66</b>                        | <b>2.04</b>                        | <b>-0.16</b>                       | <b>-0.94</b>                       | <b>-1.19</b>                       | <b>-0.30</b>                       | <b>0.04</b>                        | <b>-0.48</b>                       |                    |
| Working Capital Allowance               | -0.01                            | 0.03                             | 0.04                               | -0.04                              | -0.01                              | 0.00                               | 0.03                               | 0.04                               | -0.01                              | 0.00                               | 0.03                               |                    |
| <b>Rate Base</b>                        | <b>0.70</b>                      | <b>0.34</b>                      | <b>-0.36</b>                       | <b>1.62</b>                        | <b>2.03</b>                        | <b>-0.16</b>                       | <b>-0.91</b>                       | <b>-1.15</b>                       | <b>-0.31</b>                       | <b>0.04</b>                        | <b>-0.45</b>                       |                    |

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The nature of FNEI's transmission system is highly stable, in that large changes to Rate Base are infrequent; as demonstrated by the reality that FNEI's Rate Base variances exceed \$1.0M in only 3 of the 11 variance periods analyzed. The following sections provide explanation of variances over relevant segments of the analysis period.

## 5.1 2017 & 2018 Variances

In the OEB's Decision in EB-2016-0231, the OEB established both FNEI's 2017 and 2018 Rate Base as \$35.47M, which:

"...reflects a reduction from FNEI's 2016 actual net fixed asset amount of \$0.4085 million related to the head office building, and a working capital allowance budget of \$0.15 million based on 3.55% of the 2017 approved OM&A budget. The OEB finds that the approved 2017 rate base amount will also be used for 2018 as it will provide sufficient revenue requirement for a reasonable level of capital expenditures in each year. No update to the working capital allowance amount in 2018 is necessary as the expected change is immaterial."<sup>1</sup>

In light of the above, FNEI's Rate Base was established as a static value for both years. Despite Rate Base being held constant on an OEB-approved basis, variances between each year's approved and actual Rate Base were \$0.70M and \$0.34M for 2017 and 2018, respectively. Working Capital Allowance in 2017 was \$0.01 less than approved by the OEB due to lower OM&A expenditures than forecast. OM&A expenditures were higher in 2018, driving positive variances in Working Capital Allowance both relative to 2018 OEB-approved, and 2017 Actuals.

Accumulated depreciation was greater (i.e. a larger negative value) in 2018 relative to 2017 by \$1.51M in an amount commensurate with FNEI's depreciation expense. This annual increase to Accumulated depreciation remains relatively constant to the end of 2022.

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<sup>1</sup> EB-2016-0231, Decision and Order, page 17

## 5.2 2019 & 2020 Variances

2019 marked the implementation of IFRS accounting treatment for FNEI's long-term lease agreements with two First Nations and the Ministry of Natural Resources ("MNR"). Where these agreements had traditionally been treated as a rent operating expense, their term and nature dictated they be deemed Finance Leases, and be included in Rate Base. Two of FNEI's three long-term leases began in 2019, contributing to a positive variance in Gross PP&E of \$5.4M on Close, and \$3.14M Average, relative to 2018. The impact of these two Finance Leases persists into 2020 in the variance analysis, with a higher opening Gross PP&E balance. Accumulated depreciation remain stable during this period. Working capital allowance decreased from 2018 to 2019 by \$0.04M due to lower OM&A expenditures.

## 5.3 2021 & 2022 Variances

The period of 2021 and 2022 is relatively stable in an analysis of variances in FNEI's Rate Base. Over this time, Average Gross PP&E increases by \$1.61M and \$0.90M in 2021 and 2022, respectively, while Average Accumulated Depreciation increases by \$1.77M and \$1.84M. With accumulated depreciation growing at a faster pace than Gross PP&E during this time, Average Net PP&E decreases slightly by \$0.16M and \$0.94M in 2021 and 2022, respectively.

Working Capital Allowance remains flat from 2020 into 2021, however increasing OM&A costs in 2022 driven by inflation drive an increase of \$0.03M to Working Capital Allowance in 2022 relative to 2021.

## 5.4 2023 & 2024 Variances

2023 marks a material change in FNEI's operations, as the transmission-connected DeBeers Mine ceased operations in January of 2023. On connection to the FNEI system, DeBeers paid a capital contribution to facilitate expansion of portions of the system, as well as connecting assets. The assets placed into service to facilitate provision of service to DeBeers were included within their applicable UsoA accounts, while the DeBeers contribution was recognized over time as Deferred Revenue in Account 2440.

As DeBeers wound down operations and prepared to cease taking service from FNEI's system, an error became apparent in the depreciation of assets constructed to serve DeBeers, as well as the recognition of Deferred Revenue received from DeBeers. Depreciation and Deferred Revenue schedules had been constructed and implemented by FNEI to recognize the applicable assets from their in-service date, up to

the planned end-of-operations by DeBeers late 2022 or early 2023. On review in 2023, it became apparent that prior agreements had stipulated the assets and revenue should be recognized from the date of contract execution with DeBeers, as opposed to the in-service date of the assets. Correction of this issue required the one-time recognition of significant depreciation expense and Deferred Revenue in 2023, driving substantial increases to both Gross PP&E and Accumulated Depreciation in that year. The impact of this recognition is seen in tab 2-BA of Attachment FNEI\_2026RR\_Appendices\_20250704. The net impact of this one-time recognition, combined with normal course capital investments and depreciation expense, resulted in a decrease to Average Net PP&E of \$1.19M and \$0.30M in 2023 and 2024, respectively.

Working Capital Allowance increased in 2023 by \$0.04M as a result of persisting inflation of OM&A expenditures in this year, easing by \$0.01M in 2024.

### **5.5 2025 Bridge Year vs. 2024 Actuals**

The Bridge Year Rate Base forecast represents a return to a steadier state of investment and depreciation recognition for FNEI's system, with capital investments driving a \$2.00M increase in Average Gross PP&E, and Average Accumulated Depreciation increasing by a comparable \$1.96M.

Working Capital Allowance remains flat from 2024 Actuals to the 2025 Bridge Year.

### **5.6 2026 Test Year vs. 2025 Bridge Year**

Similar to the 2025 Bridge Year, FNEI's Rate Base in the 2026 Test Year is forecast to remain relatively stable, with capital investments driving a \$1.51M increase in Average Gross PP&E, and Average Accumulated Depreciation increasing by \$1.99M.

Working Capital Allowance is proposed to increase by \$0.03M relative to the 2025 Bridge Year, driven by FNEI's required OM&A expenditures.

# EXHIBIT 4 – Service Quality and Reporting

## 2026 Cost of Service

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## SERVICE QUALITY AND RELIABILITY PERFORMANCE AND REPORTING

### 1. INTRODUCTION

FNEI proposes seven measures to track its performance for the 2026-2030 period that align with the OEB's Renewed Regulatory Framework ("RRF") outcomes. In assembling its proposed scorecard, FNEI reviewed its previous scorecard (proposed in EB-2016-0231) and the scorecards of other single-asset transmitter utilities to determine appropriate and representative metrics of its performance. FNEI has submitted five years of historical data to inform its performance targets and will track these targets annually. FNEI proposes to track the following measures:

- Average System Availability<sup>1</sup>
- Transmission System Average Interruption Frequency (T-SAIFI)<sup>2</sup>
- Transmission System Average Interruption Duration (T-SAIDI)<sup>3</sup>
- Recordable Injuries per Year
- Maintenance Cost per Circuit Kilometer
- Compliance with FNEI's Vegetation Management Policy
- Achieved Return on Equity Equivalent

Each of these proposed measures is discussed in detail in Section 2.

### 2. History of FNEI's Scorecard

The OEB reviewed an FNEI-proposed scorecard in its 2017 and 2018 transmission revenue requirement decision ("2017 RR Application"). FNEI selected its scorecard measures by modifying the scorecard proposed by Hydro One in its 2018 Transmission Revenue Requirement Application to apply to FNEI's circumstances.<sup>4</sup> In its decision, the OEB instructed FNEI to propose an evolved scorecard that includes performance outcomes or implementation timelines and target outcomes and target dates at its next cost of service

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<sup>1</sup> FNEI contribution, excluding outages upstream of FNEI system

<sup>2</sup> FNEI contribution, excluding outages upstream of FNEI system

<sup>3</sup> FNEI contribution, excluding outages upstream of FNEI system

<sup>4</sup> EB-2016-0231, Decision and Order, pages 26-27. See also: HONI EB-2016-0160.

application. The OEB noted that at its next cost of service application, FNEI may be able to review other OEB-regulated transmitter scorecards and tailor those metrics with targets and dates to its own business.

FNEI has accordingly integrated yearly performance targets for each of its proposed scorecard measures into its proposed performance measures scorecard and has selected measures that are aligned with the reported measures of other single-asset transmitters in Ontario.

### **3. PERFORMANCE MEASURES**

The following section outlines in greater detail each of the metrics proposed for inclusion on FNEI's 2025 to 2030 performance scorecard. These performance measures will be tracked annually and reported to the OEB at FNEI's next revenue requirement application, or as otherwise Ordered by the OEB. FNEI has substantively relied upon the scorecards and metrics used by other single-asset transmitters in Ontario, such as B2M Limited Partnership, Niagara Reinforcement Limited Partnership and Upper Canada Transmission 2.<sup>5</sup>

For all reliability metrics (i.e. ASA, T-SAIDI and T-SAIFI) FNEI has excluded the impacts of its previous Large Customer, DeBeers Victor Mine, as the customer's gradual wind-down of operations over multiple years and use of generating assets was found to skew overall system results.

Where possible, FNEI has compared its performance against those of these other single-asset transmitters.

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<sup>5</sup> As reported in B2M Application EB-2024-0116, Exhibit D, Tab 1, Schedule 1, p. 3; and NRLP Application EB-2024-0117, Exhibit D, Tab 1, Schedule 1, p. 3.



### 3.1. Average System Availability

Average System Availability (“ASA”) is a measure of the extent to which transmission line(s) are available for use within the system. For the purposes of assessing the performance of FNEI, the cause of the forced outage contributing to unavailability must be limited to factors affecting assets owned by FNEI as opposed to other equipment, owned by Hydro One Networks Inc. (“HONI”), which could also cause the transmission line(s) to be unavailable.

$$= 1 - \left( \frac{\sum_{i=1}^{N_L} F_{Li}}{T_L} \right) \times 100\%$$

Where:

$F_{Li}$  is the annual forced outage duration in hours due to transmission line-related outages of circuit  $Li$

$T_L$  is the inventory (expressed in 100 km-hours of all in-service transmission circuits)

$N_L$  is the total number of in-service transmission circuits

Table 1 below presents FNEI’s ASA performance over a 5 year period, from 2020 through 2024.

**Table 1 Average System Availability Benchmarking of Peer Utilities**

| Transmitter                               | 2020  | 2021  | 2022  | 2023  | 2024 |
|-------------------------------------------|-------|-------|-------|-------|------|
| Five Nations Energy Inc.                  | 100.0 | 99.9  | 99.9  | 99.9  | 99.9 |
| B2M Limited Partnership                   | 99.8  | 100.0 | 100.0 | 100.0 |      |
| Niagara Reinforcement Limited Partnership | 100.0 | 100.0 | 100.0 | 100.0 |      |

As outlined in Exhibit 1, FNEI operates in a harsh and remote northern environment. Annual variations in weather and storm activity contributed to variations in FNEI’s average system

availability. Despite these challenges, FNEI has a 5 year average ASA value of 99.9. These results are comparable to those of the other single-asset transmitters analyzed, operating in more temperate environments with greater access to the services and materials required to respond to transmission outages.

### 3.2. T-SAIDI and T-SAIFI

T-SAIDI (Transmission System Average Interruption Duration Index) measures the average of total annual interruption per delivery point on the transmission system, while T-SAIFI (Transmission System Average Interruption Frequency Index) measures the average number of annual interruptions per delivery point on the transmission system. For the purpose of reporting and assessing performance, FNEI has limited the interruptions included within the calculation of T-SAIDI and T-SAIFI to those sourced from FNEI's system, excluding loss of supply interruptions from HONI.

The formula for the two metrics are as follows:

$$\text{T-SAIDI} = \frac{\text{Total Interruption Duration}}{\text{Total Delivery Points}}$$

$$\text{T-SAIFI} = \frac{\text{Total No. of Interruptions}}{\text{Total Delivery Points}}$$

Covering the 5 year period from 2020 through 2024, Table 2 presents FNEI's T-SAIDI performance and Table 3 presents FNEI's T-SAIFI performance.

**Table 2 FNEI T-SAIDI Performance**

| Customer Delivery Point              | Interruption Duration (hours) |             |             |             |             |
|--------------------------------------|-------------------------------|-------------|-------------|-------------|-------------|
|                                      | 2020                          | 2021        | 2022        | 2023        | 2024        |
| Attawapiskat                         | 0.50                          | 1.46        | 1.88        | 0.67        | 0.12        |
| Kashechewan                          | 0.38                          | 0.00        | 1.86        | 0.00        | 0.00        |
| Fort Albany                          | 1.16                          | 1.17        | 2.64        | 0.07        | 0.11        |
| <b>A-Total Interruption Duration</b> | <b>2.04</b>                   | <b>2.63</b> | <b>6.38</b> | <b>0.74</b> | <b>0.24</b> |
| B-Delivery Points                    | 3                             | 3           | 3           | 3           | 3           |
| <b>T-SAIDI (A/B)</b>                 | <b>0.68</b>                   | <b>0.88</b> | <b>2.13</b> | <b>0.25</b> | <b>0.08</b> |

**Table 3 FNEI T-SAIFI Performance**

| Customer Delivery Point             | Number of Interruptions per Year |             |             |             |             |
|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|
|                                     | 2020                             | 2021        | 2022        | 2023        | 2024        |
| Attawapiskat                        | 4                                | 5           | 4           | 2           | 2           |
| Kashechewan                         | 1                                | 0           | 3           | 0           | 0           |
| Fort Albany                         | 4                                | 7           | 7           | 3           | 3           |
| <b>A-Total No. of Interruptions</b> | <b>9</b>                         | <b>12</b>   | <b>14</b>   | <b>5</b>    | <b>5</b>    |
| B-Delivery Points                   | 3                                | 3           | 3           | 3           | 3           |
| <b>T-SAIFI (A/B)</b>                | <b>3.00</b>                      | <b>4.00</b> | <b>4.67</b> | <b>1.67</b> | <b>1.67</b> |

FNEI was unable to benchmark its T-SAIDI and T-SAIFI performance against that of the single-asset transmitters analysed, as all three are network assets that do not have customer delivery points.

As is the case with ASA, FNEI's T-SAIDI and T-SAIFI performance experiences variability as a result of weather in its remote northern environment. Despite its challenging operating environment, 5-year average T-SAIDI and T-SAIFI were 0.80 and 3.00, respectively, over the 2020 to 2024 period. Stated differently, on average the communities served by FNEI experienced 3 interruptions per year, and 48 minutes of outage per year as a result of FNEI's system. It is FNEI's view its reliability performance is strong when assessed by these metrics.

### 3.3. Recordable Injuries per Year

In providing direction to transmitters regarding performance scorecards in Section 2.6.1 of the Chapter 2 Transmission Filing Requirements, the OEB recommends review of electricity distributor scorecards. Under the category of operational effectiveness, distributor scorecards include safety as a metric for measurement and reporting. The safety of employees, contractors, the public and the environment is of the utmost importance to FNEI, and as such FNEI proposes inclusion of Recordable Injuries as a metric of safety on its performance scorecard. This is consistent with another single-asset transmitter, Upper Canada Transmission 2, which also reports on Recordable Injuries per Year. Table 4 below presents FNEI's Recordable Injuries per Year from 2020 through 2024 alongside those of Hydro One Sault Ste Marie (Hydro One SSM) over this period.

**Table 4 Recordable Injuries per Year**

| Injuries per Year        | 2020 | 2021 | 2022 | 2023 | 2024 |
|--------------------------|------|------|------|------|------|
| Five Nations Energy Inc. | 0.0  | 0.0  | 1.0  | 0.0  | 0.0  |
| Hydro One SSM            | 0.0  | 0.0  | 0.0  | 0.0  |      |

In 2022, one of FNEI's Substation Electricians suffered a cut to their hand when removing tie wraps from a bundle of wire, requiring six stitches. The team member returned to work the following day, and was placed on office duty until able to perform field work once more. On a 5-year average basis, this incident drives a result for FNEI over the 2020 to 2024 period of 0.20 recordable injuries per year. For the purpose of target setting, FNEI proposes a target of 0 recordable injuries per year moving forward as this represents FNEI's objective and standard experience, subject to the one isolated and well managed incident described above.

### 3.4. Cost per Circuit Kilometre

FNEI's maintenance cost per circuit kilometre averaged \$2,338 over the 2020 through 2024 rate period.

1 Table 5 below shows FNEI's maintenance costs per circuit-km alongside those of B2M and  
2 NRLP, both of whom include this metric on their performance scorecards.

3 **Table 5 Maintenance Costs per Circuit-km**

| \$ (000's)                                | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------------------------------|------|------|------|------|------|
| Five Nations Energy Inc.                  | 2.1  | 1.8  | 2.4  | 2.2  | 3.2  |
| B2M Limited Partnership                   | 5.4  | 3.6  | 2.4  | 2.8  |      |
| Niagara Reinforcement Limited Partnership | 0.1  | 0.0  | 0.2  | 1.2  |      |

4  
5 FNEI cannot comment on the comparability of maintenance costs presented by itself and  
6 other single-asset transmitters in their respective revenue requirement applications, but  
7 expects variances may be driven by differences in operating models and geography.  
8 Nonetheless, FNEI's maintenance costs per circuit-km are in reasonably comparable, and in  
9 some instances favourable, to those of other single-asset transmitters analyzed.

10

### 11 **3.5. Compliance with FNEI Vegetation Management Policy**

12 FNEI does not require compliance with North American Electric Reliability Corporation  
13 ("NERC") standards, based on the exclusion for radial systems that only serve load, and as  
14 such relies on its own standard. FNEI's maintenance policy is described below. The climate and  
15 operating characteristics of FNEI's system influence the cost of maintenance and the utility's  
16 ability to perform it. FNEI operates on the west coast of James Bay, which consists of a swampy  
17 plain (i.e., muskeg) that is not serviced by road or rail, with the exception of an ice road that  
18 is operational for a few weeks each winter. As a result, vegetation management can only be  
19 performed in the winter months when access is available and is only performed with  
20 machinery. Herbicides are not permitted due to local agreements. These characteristics  
21 increased the cost and difficulty of vegetation management.

22

**Table 6 Summary of Planned Maintenance Activities in Compliance with FNEI Vegetation Management Policy**

| Asset                       | Maintenance                     | Frequency                                     | Description                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|---------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overhead Transmission Lines | Helicopter Patrol               | Annually                                      | High speed patrol to identify major defects on overhead transmission line assets and identify vegetation requiring maintenance during the next schedule brush control and line clearing cycle.                                                                                                                                  |
|                             | Ground Patrol                   | 5 years                                       | More detailed ground-based patrol to identify defects on overhead transmission line assets                                                                                                                                                                                                                                      |
|                             | Thermovision                    | As needed based on patrols                    | Identifies defective transmission line components by detecting their heat signature using infrared cameras                                                                                                                                                                                                                      |
| Transmission Rights of Way  | Brush Control and Line Clearing | Based on annual patrols and annual conditions | Includes manual cutting, and/or mechanical clearing to manage vegetation growth, trimming tree branches and removing any unhealthy trees on the right-of-way to ensure adequate clearances and access to FNEI's overhead transmission lines. This work must be performed in the winter and depends on annual winter conditions. |

FNEI proposes a metric on its scorecard measuring compliance with its vegetation management policy, with achievement against this metric measured as "Compliant" or "Non-Compliant" for each year.

### 3.6. Achieved Return on Equity Equivalent

As noted in Exhibit 1 and elsewhere, FNEI is a not-for-profit corporation, and as such does not have shareholders, and does not achieve a traditional return on equity. However, in EB-2016-0231 the OEB determined the following:

Although FNEI has capital contributed from government sources, rather than equity investors, the capital exists. To the extent that FNEI requires new sources of capital in the future, FNEI should be able to compete fairly to attract that capital. The OEB finds that FNEI's capital, regardless of the source, should be regarded the same as capital held by other utilities the OEB regulates.<sup>6</sup>

In light of the above, FNEI has included a Return on Equity component in the calculation of its revenue requirement, as presented in Exhibit 5. Table 7 below presents FNEI's notional regulated return on equity for the years 2020 through 2024:

**Table 7 FNEI Notional Return on Equity**

| \$ (millions)                         | 2020         | 2021         | 2022         | 2023        | 2024        |
|---------------------------------------|--------------|--------------|--------------|-------------|-------------|
| Transmission Revenue                  | 8.11         | 8.18         | 8.42         | 8.59        | 8.55        |
| Other Revenue                         | 2.42         | 2.33         | 8.85         | 0.49        | 0.49        |
| <b>Total Revenue</b>                  | <b>10.53</b> | <b>10.50</b> | <b>17.27</b> | <b>9.08</b> | <b>9.04</b> |
| OM&A                                  | 3.45         | 3.57         | 4.42         | 5.56        | 5.34        |
| Depreciation & Amortization           | 3.93         | 3.98         | 10.33        | 1.86        | 1.85        |
| Deemed Interest                       | 1.17         | 1.16         | 1.13         | 1.10        | 1.09        |
| <b>Total Costs &amp; Expenditures</b> | <b>8.55</b>  | <b>8.71</b>  | <b>15.88</b> | <b>8.52</b> | <b>8.28</b> |
| <b>Utility Net Income</b>             | <b>1.98</b>  | <b>1.80</b>  | <b>1.39</b>  | <b>0.56</b> | <b>0.76</b> |
| Deemed Equity on Actual Rate Base     | 15.79        | 15.72        | 15.36        | 14.90       | 14.77       |
| <b>Notional Return on Equity</b>      | <b>12.6%</b> | <b>11.4%</b> | <b>9.1%</b>  | <b>3.7%</b> | <b>5.2%</b> |

#### 4. COMPLIANCE MATTERS

FNEI does not have any historical, ongoing or outstanding compliance matters to report to the OEB.

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<sup>6</sup> EB-2016-0231, Decision and Order, page 7

## 5. FNEI Proposed Scorecard

FNEI's proposed scorecard for 2026 through 2030 is presented below as Table 8, with all targets set on the basis of 5 year historical averages for the years 2020 through 2024, with three exceptions. First, FNEI proposes the use of its 2026 Test Year maintenance costs per circuit-km for the purpose of establishing the 2026 to 2030 target for this metric. The drivers behind recent and ongoing maintenance costs are articulated in Exhibit 6 of this application, and as a result of those drivers the 2026 Test Year forecast is a more appropriate baseline for this metric than an average of historical results. Second, FNEI proposes to use OEB-approved notional ROE as the target for this metric. FNEI proposes to update this value for the final value approved by the OEB, on the basis of the 2026 Cost of Capital parameters anticipated to be released in the fall of 2025. Finally, FNEI proposes a target for Recordable Injuries per Year of 0.

**Table 8 FNEI Proposed Performance Scorecard**

| Metric                                | 2026      | 2027      | 2028      | 2029      | 2030      |
|---------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Average System Availability           | 99.9      | 99.9      | 99.9      | 99.9      | 99.9      |
| T-SAIDI                               | 0.80      | 0.80      | 0.80      | 0.80      | 0.80      |
| T-SAIFI                               | 3.00      | 3.00      | 3.00      | 3.00      | 3.00      |
| Recordable Injuries per Year          | 0         | 0         | 0         | 0         | 0         |
| Maintenance Cost per Circuit-km       | \$4,350   | \$4,350   | \$4,350   | \$4,350   | \$4,350   |
| Compliance with FNEI Veg. Mgt. Policy | Compliant | Compliant | Compliant | Compliant | Compliant |
| Notional Achieved ROE                 | 9.00%     | 9.00%     | 9.00%     | 9.00%     | 9.00%     |



# EXHIBIT 5 – OPERATING REVENUE & CHARGE DETERMINANT FORECAST

2026 Cost of Service

Five Nations Energy Inc.  
EB-2025-0129

|    |          |                                                   |           |
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| 17 |          |                                                   |           |

## 2 OPERATING REVENUE

Five Nations Energy Inc.'s ("FNEI") operating revenue consists of transmission services revenue earned from owning and operating its transmission system. The amount of annual transmission services revenue received is established on the basis of FNEI's Revenue Requirement, as approved by the Ontario Energy Board ("OEB"). This revenue is received monthly from the Independent Electricity System Operator ("IESO") 14 business days after the end of the month in which it was earned. Variances in transmission services revenue related to OEB-approved Revenue Requirement are driven entirely by variations in provincial peak loads from year to year.

In the 2026 Test Year, FNEI also derives Other Revenue from Interest and Dividend Income. FNEI is forecasting approximately \$0.08M in additional revenues based on cash and investments held, and current interest rates.

The information in this Exhibit supports FNEI's request in this Application for an increase in its Revenue Requirement to support operating expenditures (Exhibit 6), and the Cost of Capital for the utility's Rate Base (Exhibits 2, 3 and 7) for 2026.

FNEI has determined that the Service Revenue Requirement for the 2026 Test Year is \$10.52M, which less Other Revenue of \$0.08M results in a Base Revenue Requirement of \$10.44M.

The calculations on which this determination is based are set out below.

## 3 SUMMARY OF REVENUE REQUIREMENT

FNEI has calculated its revenue requirement as follows:

39

**Table 1 – Revenue Requirement**

| (\$millions)                       | Board<br>Approved | Actual      | Board<br>Approved | Actual       | Actual       | Actual       | Actual       | Actual       | Actual      | Actual      | Bridge      | Test         |
|------------------------------------|-------------------|-------------|-------------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|
| Components                         | 2017              | 2017        | 2018              | 2018         | 2019         | 2020         | 2021         | 2022         | 2023        | 2024        | 2025        | 2026         |
| OM&A                               | 4.23              | 3.77        | 4.38              | 4.88         | 3.74         | 3.45         | 3.57         | 4.42         | 5.56        | 5.35        | 5.41        | 6.19         |
| Depreciation & Amortization        | 1.44              | 3.67        | 1.44              | 3.67         | 5.42         | 4.03         | 3.99         | 10.48        | 1.99        | 1.95        | 1.97        | 2.01         |
| Regulated Return on Capital        | 2.29              | 2.33        | 2.33              | 2.35         | 2.45         | 2.59         | 2.58         | 2.52         | 2.44        | 2.42        | 2.42        | 2.31         |
| <b>Service Revenue Requirement</b> | <b>7.96</b>       | <b>9.78</b> | <b>8.15</b>       | <b>10.90</b> | <b>11.61</b> | <b>10.08</b> | <b>10.14</b> | <b>17.41</b> | <b>9.99</b> | <b>9.71</b> | <b>9.80</b> | <b>10.52</b> |
| Less: External Revenues and Other  | -0.15             | -2.29       | -0.15             | -2.36        | -2.40        | -2.42        | -2.33        | -8.85        | -0.49       | -0.49       | -0.10       | -0.08        |
| <b>Base Revenue Requirement</b>    | <b>7.81</b>       | <b>7.49</b> | <b>8.00</b>       | <b>8.53</b>  | <b>9.21</b>  | <b>7.65</b>  | <b>7.81</b>  | <b>8.56</b>  | <b>9.50</b> | <b>9.23</b> | <b>9.70</b> | <b>10.44</b> |

40

41 The 2026 Test Year base revenue requirement shown above is the amount required by FNEI to achieve its  
42 business objectives, provide responsible stewardship of a safe and reliable system, and minimize the  
43 impact on uniform transmission rates. An excel version of the 2026 revenue requirement has been  
44 provided at Attachment FNEI\_2026RR\_RRWF\_20250704.

## 45 **4 SERVICE REVENUE REQUIREMENT**

46

47 FNEIs' Revenue Requirement consists of the following:

- 48 • Operations, Maintenance and Administration (OM&A) Expense
- 49 • Depreciation/Amortization Expense
- 50 • Return on Rate Base (Deemed Interest & Return on Equity)

51

52 As a Not-for-Profit entity, FNEI does not incur Income Tax or Payments-in-Lieu of Taxes. As such no  
53 amounts for these items are included in FNEI's historical or proposed Revenue Requirement.

## 5 DEFICIENCY OR SUFFICIENCY IN REVENUE

FNEI has provided a detailed calculation supporting its 2026 Revenue Deficiency in Table 2 in this Exhibit, including calculation of Gross Deficiency. FNEI's Gross Deficiency is established as the difference between FNEI's OEB-approved 2018 Revenue Requirement (EB-2016-0231) relied upon by the OEB in periodically updating the Uniform Transmission Rates ("UTRs") and FNEI's corresponding revenue allocation, and FNEI's calculated 2026 Base Revenue Requirement.

The Gross Revenue Deficiency is calculated at \$2.45 million.

Table 2 provides the Revenue Deficiency calculation for the 2026 Test Year at Proposed Revenue Requirement, which provides the required Net Income of \$1.32 million and Total Return on Rate Base.

Table 2 – Revenue Deficiency Determination

| Particulars                                      | 2026 at Existing Rates | 2026 at Proposed Revenue Requirement |
|--------------------------------------------------|------------------------|--------------------------------------|
| <b>Revenue Deficiency from Below</b>             |                        | <b>2,449,482</b>                     |
| Transmission Revenue                             | 7,988,092              | 7,988,092                            |
| Other Operating Revenue Offsets - net            | 80,000                 | 80,000                               |
| Total Revenue                                    | 8,068,092              | 10,517,574                           |
| Operating Expenses                               | 6,192,762              | 6,192,762                            |
| Depreciation & Amortization                      | 2,013,957              | 2,013,957                            |
| Deemed Interest Expense                          | 995,636                | 995,636                              |
| Total Cost and Expenses                          | 9,202,355              | 9,202,355                            |
| <b>Utility Net Income</b>                        | <b>-1,134,263</b>      | <b>1,315,219</b>                     |
| Utility Rate Base                                | 36,533,856             | 36,533,856                           |
| Deemed Equity Portion of Rate Base               | 14,613,542             | 14,613,542                           |
| Income/ (Equity Portion of Rate Base)            | -7.76%                 | 9.00%                                |
| Target Return - Equity on Rate Base              | 9.00%                  | 9.00%                                |
| Deficiency/ Sufficiency in Return on Equity      | <b>-16.76%</b>         | <b>0.00%</b>                         |
| Indicated Rate of Return                         | -0.38%                 | 6.33%                                |
| Requested Rate of Return on Rate Base            | 6.33%                  | 6.33%                                |
| <b>Deficiency/ Sufficiency in Rate of Return</b> | <b>-6.70%</b>          | <b>0.00%</b>                         |
| Target Return on Equity                          | 1,313,314              | 1,313,314                            |
| Revenue Deficiency/ Sufficiency                  | 2,467,299              | 0                                    |
| Gross Revenue Deficiency/ Sufficiency            | 2,467,299              | 0                                    |

## 6 CALCULATION OF REVENUE REQUIREMENT

The details of each Revenue Requirement component are as follows:

**Table 3 – OM&A Expense (\$ millions)**

|                               | <b>2026</b> |
|-------------------------------|-------------|
| Operations                    | 1.60        |
| Maintenance                   | 1.48        |
| Administrative & General      | 3.11        |
| <b>Total OM&amp;A Expense</b> | <b>6.19</b> |

\*Exhibit 6

**Table 4 – Depreciation & Amortization Expense (\$ millions)\***

|                                                      | <b>2026</b> |
|------------------------------------------------------|-------------|
| Depreciation - Property, Plant & Equipment           | 1.92        |
| Amortization - Property Under Finance Lease          | 0.10        |
| <b>Total Depreciation &amp; Amortization Expense</b> | <b>2.01</b> |

\*Exhibit 2

**Table 5 – Return on Capital (\$ millions)\***

|                                | <b>2026</b> |
|--------------------------------|-------------|
| Return on Debt                 | 1.00        |
| Return on Equity               | 1.32        |
| <b>Total Return on Capital</b> | <b>2.31</b> |

\*Exhibits 2 and 7

## 7 REVENUE REQUIREMENT – YEAR OVER YEAR COMPARISON

The following comparisons between the 2026 test year, the 2025 bridge year and the last OEB-approved year (2018) are provided below.

## 7.1 2026 Test Year Compared to 2018 OEB Approved

Table 6 below presents a comparison of the 2026 Test Year against the 2018 OEB approved Revenue Requirement.

**Table 6 – 2026 Test vs. 2018 OEB-Approved Revenue Requirement**

| (\$millions)                       | Board Approved | Test         | Variance    | Variance   |
|------------------------------------|----------------|--------------|-------------|------------|
| Components                         | 2018           | 2026         | \$          | %          |
| OM&A                               | 4.38           | 6.19         | 1.81        | 41%        |
| Depreciation & Amortization        | 1.44           | 2.01         | 0.57        | 40%        |
| Regulated Return on Capital        | 2.33           | 2.31         | -0.02       | -1%        |
| <b>Service Revenue Requirement</b> | <b>8.15</b>    | <b>10.52</b> | <b>2.37</b> | <b>29%</b> |
| Less: External Revenues and Other  | -0.15          | -0.08        | 0.07        | -47%       |
| <b>Base Revenue Requirement</b>    | <b>8.00</b>    | <b>10.44</b> | <b>2.44</b> | <b>30%</b> |

Overall FNEI's Service Revenue Requirement has grown by 29% since last OEB-approved in 2018, representing a compound annual growth rate ("CAGR") of 3.24%. For comparison purposes, application of the OEB's Inflation Factor for electricity transmitters from the years 2019 to 2026 results in overall cost growth of 26%, with a CAGR of 2.92%, indicating FNEI's overall growth in Service Revenue Requirement is consistent with expectations.

The difference between the OEB-approved 2018 and 2026 Test Revenue Requirements is largely driven by an increase in OM&A expenditures in 2026 relative to 2018, which grew at a CAGR of 4.44%. As further articulated in Exhibit 6, increases to FNEI's OM&A expenditures are driven by high levels of inflation, ongoing maintenance cycles, cost impacts from closing the previously connected DeBeers mine line, and staffing changes. As also articulated in Exhibit 6, FNEI has retained the same depreciation rates relied upon in its 2018 Revenue Requirement for the purpose of depreciating Fixed Assets, however the utility has transitioned to IFRS and now recognizes 3 long-term leases as Finance Leases amortized over their contractual terms, in addition to minor variances driven by the accumulation of depreciation and ongoing capital investment. Finally, FNEI's Miscellaneous Services Revenues included within Other Revenue declined to \$21,004 in 2023, and \$2,909 in 2024. FNEI does not forecast any Miscellaneous Services Revenue in the 2025 Bridge or 2026 Test Years, reducing Other Revenue relative to the OEB-approved 2018 Revenue Requirement.



## 7.2 2026 Test Year vs 2025 Bridge

Table 7 below presents a comparison of the 2026 Test Year against the 2025 Bridge Year Revenue Requirement.

**Table 7 – 2026 Test vs. 2025 Bridge Year Revenue Requirement**

| (\$millions)                       | Bridge      | Test         | Variance    | Variance  |
|------------------------------------|-------------|--------------|-------------|-----------|
| Components                         | 2025        | 2026         | \$          | %         |
| OM&A                               | 5.41        | 6.19         | 0.78        | 15%       |
| Depreciation & Amortization        | 1.97        | 2.01         | 0.04        | 2%        |
| Regulated Return on Capital        | 2.42        | 2.31         | -0.11       | -5%       |
| <b>Service Revenue Requirement</b> | <b>9.80</b> | <b>10.52</b> | <b>0.71</b> | <b>7%</b> |
| Less: External Revenues and Other  | -0.10       | -0.08        | 0.02        | -20%      |
| <b>Base Revenue Requirement</b>    | <b>9.70</b> | <b>10.44</b> | <b>0.73</b> | <b>8%</b> |

The difference between the 2025 Bridge and 2026 Test Revenue Requirements is driven by an increase in OM&A expenditures in 2026 relative to 2025, a minor increase to Depreciation and Amortization in 2026, and a decrease to Regulated Return on Capital. As noted above, the drivers of increasing OM&A costs are articulated in Exhibit 6 of this application. The small increase to Depreciation and Amortization is driven by ongoing capital expenditures, as described in Exhibits 2 and 3. Regulated Return on Capital is decreasing as a result of a decrease to the deemed interest rate of 4.59% proposed in this application, relative to the 2018 OEB-approved long-term debt rate of 5.11% relied upon to derive the 2025 Bridge Year Regulated Return on Capital, in addition to a minor reduction in Rate Base. FNEI is forecasting a reduction in Interest and Dividend Income, reducing the 2025 forecast of \$0.1M to \$0.08M in 2026.

## 8 CHARGE DETERMINANT FORECAST

As per the OEB's Decision and Order in EB-2016-0231, FNEI has used the 3-year historical average peak demand figures from 2022 – 2024 to derive its forecast charge determinants. Up until 2022, FNEI was serving three communities and a large transmission-connected large customer ("the Large Customer"). In January 2023, the Large Customer ceased operations and as such their demand has been removed from the historical data for the purpose of determining the charge determinant forecast for 2026.

FNEI's forecast line connection and transformer connection charge determinant forecast is based on the sum of the average monthly peak demand forecast for FNEI's three First Nation community customers; Fort Albany, Kashechewan, and Attawapiskat. For the purpose of determining network charge determinants, FNEI assumes its three community customers do not peak coincident with the Ontario grid in light of limited industrial load, however FNEI does assume its customers peak between the hours of 0700 and 1900 Eastern Standard Time, on weekdays. Based on the OEB's latest Uniform Transmission Rates Decision<sup>1</sup>, the network charge determinates are estimated to be 85% of the line connection and transformation connection charge determinant forecast.

The methodology employed for determining peak demand forecasts relies on a straightforward three-year averaging approach, which has been deemed sufficient for weather normalization purposes. Given the stable nature of the load patterns observed, no additional weather normalization techniques have been implemented beyond this averaging methodology.

Historical analysis and forward-looking assessments of the three communities indicate a pattern of consistent, stable demand without significant variations attributable to economic development or population growth. The communities have maintained steady load profiles, and there are no indicators suggesting departure from these established patterns. Consequently, no specific adjustments have been incorporated to account for growth or economic variables.

With respect to Conservation and Demand Management (CDM) considerations, the historical impact of any CDM initiatives undertaken by these communities is inherently reflected in the recorded peak demand figures. These effects are naturally captured within the averaging methodology used for forecasting charge determinants. Looking forward, there are not to FNEI's knowledge any planned CDM programs or initiatives that would represent a meaningful deviation from historical participation levels, and therefore no explicit CDM adjustments have been incorporated into the forecast.

Similarly, FNEI's system planning indicates no anticipated introduction of new embedded generation facilities that would materially affect peak demand patterns relative to historical observations. As such, no specific adjustments have been made to account for embedded generation impacts in the forecast

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<sup>1</sup> EB-2024-0244, Page 17 of 18

period. This approach aligns with the overall stability observed in the communities' demand profiles and the absence of planned system changes that would necessitate additional adjustments to the forecasting methodology.

The following table provides the historical peak demand data relied upon to derive the charge determinant forecast:

**Table 8: Historical Data Informing Charge Determinant Forecast**

|      | Community #1 |      |      | Community #2 |      |      | Community #3 |      |      | Large User | Large User |
|------|--------------|------|------|--------------|------|------|--------------|------|------|------------|------------|
|      | 2022         | 2023 | 2024 | 2022         | 2022 | 2024 | 2022         | 2023 | 2024 | 2022       | 2023       |
|      | kW           | kW   | kW   | kW           | kW   | kW   | kW           | kW   | kW   | kW         | kW         |
| Jan  | 3929         | 3838 | 3714 | 2889         | 2644 | 2601 | 3544         | 3385 | 3518 | 3032       | 2068       |
| Feb  | 3795         | 4105 | 3752 | 2500         | 2784 | 2707 | 3431         | 3690 | 3544 | 3012       |            |
| Mar  | 3563         | 3519 | 3628 | 2277         | 2374 | 2497 | 3147         | 3174 | 3152 | 2889       |            |
| Apr  | 2789         | 3260 | 2860 | 1806         | 2207 | 1938 | 2632         | 3067 | 2446 | 2486       |            |
| May  | 2342         | 2423 | 2244 | 1498         | 1594 | 1492 | 1817         | 1814 | 2038 | 2386       |            |
| June | 1621         | 1643 | 1735 | 1056         | 1128 | 1130 | 1475         | 1670 | 1715 | 2228       |            |
| Jul  | 1351         | 1270 | 1431 | 928          | 928  | 948  | 1235         | 1193 | 1389 | 2100       |            |
| Aug  | 1697         | 1361 | 1510 | 1071         | 960  | 979  | 1383         | 1309 | 1373 | 2112       |            |
| Sep  | 2344         | 1894 | 2364 | 1381         | 1063 | 1056 | 1789         | 1427 | 1595 | 2371       |            |
| Oct  | 2193         | 2511 | 2462 | 1730         | 1779 | 1675 | 2008         | 2379 | 2143 | 2286       |            |
| Nov  | 3477         | 4076 | 2686 | 2283         | 2227 | 1781 | 3142         | 3073 | 2410 | 1809       |            |
| Dec  | 4643         | 3167 | 3905 | 2549         | 3000 | 2774 | 3250         | 2496 | 2873 | 2102       |            |

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**Table 9: Average Monthly Peak Demand and Charge Determinant Forecast**

|                                                                     | Community #1   |              | Community #2   |              | Community #3   |              | Total          |              |
|---------------------------------------------------------------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
|                                                                     | 2025<br>Bridge | 2026<br>Test | 2025<br>Bridge | 2026<br>Test | 2025<br>Bridge | 2026<br>Test | 2025<br>Bridge | 2026<br>Test |
|                                                                     | kW             | kW           | kW             | kW           | kW             | kW           | kW             | kW           |
| Jan                                                                 | 3,827          | 3,793        | 2,711          | 2,652        | 3,482          | 3,462        | 10,020         | 9,907        |
| Feb                                                                 | 3,884          | 3,914        | 2,664          | 2,718        | 3,555          | 3,596        | 10,103         | 10,228       |
| Mar                                                                 | 3,570          | 3,572        | 2,383          | 2,418        | 3,158          | 3,161        | 9,110          | 9,152        |
| Apr                                                                 | 2,970          | 3,030        | 1,984          | 2,043        | 2,715          | 2,743        | 7,668          | 7,815        |
| May                                                                 | 2,336          | 2,334        | 1,528          | 1,538        | 1,890          | 1,914        | 5,754          | 5,786        |
| June                                                                | 1,666          | 1,681        | 1,105          | 1,121        | 1,620          | 1,668        | 4,391          | 4,471        |
| Jul                                                                 | 1,351          | 1,350        | 934            | 937          | 1,273          | 1,285        | 3,558          | 3,572        |
| Aug                                                                 | 1,523          | 1,465        | 1,003          | 981          | 1,355          | 1,346        | 3,881          | 3,791        |
| Sep                                                                 | 2,201          | 2,153        | 1,166          | 1,095        | 1,603          | 1,541        | 4,970          | 4,789        |
| Oct                                                                 | 2,389          | 2,454        | 1,728          | 1,727        | 2,177          | 2,233        | 6,293          | 6,414        |
| Nov                                                                 | 3,413          | 3,392        | 2,097          | 2,035        | 2,875          | 2,786        | 8,385          | 8,213        |
| Dec                                                                 | 3,905          | 3,659        | 2,774          | 2,850        | 2,873          | 2,748        | 9,553          | 9,256        |
| Total                                                               |                |              |                |              |                |              | 83,687         | 83,395       |
| Line Connection and Transformer Connection Charge Determinants (MW) |                |              |                |              |                |              | 83.69          | 83.39        |
| Network Charge Determinants (MW)                                    |                |              |                |              |                |              | 71.13          | 70.89        |

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## 9 VARIANCE ANALYSIS

Table 10 below shows the average peak demand by year and includes the Large Customer up until 2023

**Table 10: Charge Determinant Variances over Time**

|             | Average<br>Peak<br>Demand<br>(kW) | 2017-2019<br>Yr over Yr | 2020-2022<br>Avg.<br>Change | 2023-2024<br>Yr over Yr | 2025-2026<br>Yr over Yr |
|-------------|-----------------------------------|-------------------------|-----------------------------|-------------------------|-------------------------|
| <b>2017</b> | 6,680                             |                         |                             |                         |                         |
| <b>2018</b> | 6,699                             | <b>0.3%</b>             |                             |                         |                         |
| <b>2019</b> | 6,602                             | <b>-1.5%</b>            |                             |                         |                         |
| <b>2020</b> | 3,330                             |                         | <b>-50%</b>                 |                         |                         |
| <b>2021</b> | 3,180                             |                         |                             |                         |                         |
| <b>2022</b> | 3,527                             |                         |                             |                         |                         |
| <b>2023</b> | 3,216                             |                         |                             | <b>-8.8%</b>            |                         |
| <b>2024</b> | 3,408                             |                         |                             | <b>6.0%</b>             |                         |
| <b>2025</b> | 3,412                             |                         |                             |                         | <b>0.1%</b>             |
| <b>2026</b> | 3,453                             |                         |                             |                         | <b>1.2%</b>             |

In light of the characteristics of FNEI's customers' demand, the most meaningful approach to completing a variance analysis for this application is to examine the variances across three distinct operational phases that characterize FNEI's service territory and customer base.

### 9.1 2017 - 2019

The period from 2017 to 2019 represents a phase of relative stability in demand patterns. During this time, load variations were primarily attributed to normal fluctuations in weather conditions and community consumption, alongside minor variations in FNEI's Large Customer activities. These fluctuations remained within expected variance parameters.

## 9.2 2020 to 2022

A significant transition occurred during this period, marked primarily by the progressive wind-down of FNEI's Large Customer's operations. While the three communities maintained their historically stable demand patterns during this phase, the Large Customer's demand underwent a substantial reduction, falling to less than 20% of its historical average<sup>2</sup>. The overall impact to FNEI's system was an average reduction of 50% in demand relative to the 2017 to 2019 period. Despite this significant reduction in consumption, the Large Customer continued to maintain its transmission service connection throughout this period.

## 9.3 2023 to 2024

This phase represents the current operating environment following the Large Customer's complete cessation of operations in January of 2023. This period is characterized by the continuation of stable demand patterns from the three community customers, unaffected by the large user's closure, demonstrating the resilience and predictability of their residential and commercial load base.

## 9.4 2025 Bridge and 2026 Test

The forecast has been developed using a three-year averaging methodology previously approved by the OEB in EB-2016-0231. This approach is particularly appropriate given the current operating environment, as it captures the stable demand patterns of FNEI's three remaining customers. The forecast reflects the consistent nature of these communities' consumption patterns, which have demonstrated stability despite the significant change of the Large Customer's cessation of operations. For clarity, FNEI has averaged the Charge Determinants of the three communities over a 3-year period, excluding Large Customer Charge Determinants in 2022 and 2023 given the customer's ceasing of operations.

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<sup>2</sup> Variance of Large user's Average Peak Demand between 2017-2019 and 2020-2022

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## EXHIBIT 6 – Operating Costs

2026 Cost of Service

Five Nations Energy Inc.  
EB-2025-0129

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## 1. Operating Costs Overview

Five Nations Energy Inc.'s ("FNEI") operating costs include operations, maintenance and administration ("OM&A") expenses, as well as depreciation and amortization. As a not-for-profit corporation, FNEI does not incur corporate income tax, or make payments-in-lieu of taxes. This exhibit provides an overview of FNEI's operating costs, as summarized in Table 1 below:

**Table 1 Summary of Test Year Cost of Service (\$ millions)**

|                          | 2026        |
|--------------------------|-------------|
| Operations               | 1.60        |
| Maintenance              | 1.48        |
| Administration & General | 3.11        |
| <b>Total OM&amp;A</b>    | <b>6.19</b> |

|                                                      | 2026        |
|------------------------------------------------------|-------------|
| Depreciation - Property, Plant & Equipment           | 1.92        |
| Amortization - Property Under Finance Lease          | 0.10        |
| <b>Total Depreciation &amp; Amortization Expense</b> | <b>2.01</b> |

|                              |             |
|------------------------------|-------------|
| <b>Total Cost of Service</b> | <b>8.21</b> |
|------------------------------|-------------|

## 2. HISTORICAL AND TEST YEAR OM&A LEVELS

FNEI's proposed OM&A expenditures for the 2026 test year will allow for the continued safe, reliable, secure, cost-efficient and environmentally responsible operation of its transmission system. FNEI is seeking approval of OM&A expenditures of \$6.19 million for the 2026 Test Year. The proposed OM&A budget represents an increase in OM&A in the Test Year of \$0.78 million relative to the 2025 Bridge Year, and \$0.85 million relative to 2024 Actuals. The 2026 Test Year OM&A budget represents an increase of \$1.82 million relative to 2018 OEB-approved OM&A, representing a compound annual growth rate ("CAGR") of 4.44% over this time period. Application of the OEB's 2019 to 2026 inflation factors for electricity transmitters to 2018 OEB-approved OM&A yields an increase of \$1.13 million (at

a CAGR of 2.92%), suggesting no less than this portion of the increase can be directly attributed to inflation. Of note, FNEI's Revenue Requirement included within calculation of the Uniform Transmission Rates for the purpose of allocating transmission revenues to FNEI has remained static since 2018, and has not been subject to indexing or inflationary increases. As such, none of the cost increases listed above have to date been borne by ratepayers.

FNEI has determined these proposed expenditure levels through its OM&A budgeting with a mind to execution of its Transmission System Plan. FNEI's budgeting process is further discussed in Section 4 below, and the Transmission System Plan is provided as Exhibit 2 to this application.

### **3. COST DRIVERS AND PRODUCTIVITY**

Increases in FNEI's operational costs since its 2018 rate setting year have been driven by high levels of inflation, ongoing maintenance cycles, cost impacts from closing the previously connected DeBeers line, and staffing changes. Variances in costs across the historical years are impacted by all of these drivers, but are particularly attributable to the seasonal conditions in the far North of Ontario that have a pronounced impact on the performance of the utility's maintenance and vegetation management cycles.

Inflation has had a broad-based impact on FNEI's business operating environment; increasing the cost of materials and supplies, internal labour wages and benefits, and third-party contract services required to operate. Specific impacts range from a doubling in the cost of flights required for business travel and operational maintenance across FNEI's geographically dispersed system, to steep rises in equipment costs, including a tripling in price for voltage regulators. The cost of external service providers that FNEI uses to carry out its operational requirements has also increased in recent years. Broad-based inflation is confirmed by numerous third-party authorities; most notable StatsCan, which reports that the Consumer Price Index ("CPI") grew by an average of 4.3% from 2022-2024, well above its average of 1.6% annual growth over the 2017-2021 period. The OEB's inflation factors from 2022 to 2026, which were not applied to FNEI's revenues, average 3.64%.

FNEI's service territory is located in a remote geographic area of northern Ontario. The utility is a single asset transmitter with a small internal team and a fixed operating environment. Operating a utility in a remote service territory with difficult terrain, a harsh climate, and relatively few service providers, results in a higher-cost operating environment. As a result, opportunities for cost-efficiency improvements are limited relative to those available for large systems in southern Ontario.

Nevertheless, FNEI continues to exercise prudence by seizing available opportunities to control its operational costs.

FNEI minimizes its spending on external contractors by performing its normal course maintenance work in house to the extent possible; reserving spending on external providers for specialty work such as relay work. Over the course of this rate period, FNEI is investing in power line carrier communication equipment that will improve the efficiency of its communications with Hydro One and is anticipated to realize efficiencies in its maintenance costs. FNEI has also deferred investments to upgrade to its asset management software, putting the utility in a position to take advantage of the more numerous and flexible cloud software options that are now available. As further discussed in Exhibit 8, FNEI plans to select and implement new asset management software during its upcoming rate period toward this end. Finally, FNEI continues to perform its vegetation management prudently under a rotating schedule to avoid increased costs from a backlog of work.

#### **4. OM&A BUDGETING PROCESS**

The goal of FNEI's budgeting process is to facilitate the operation of a safe, reliable, secure, cost-efficient and environmentally responsible utility. FNEI prepares its OM&A budget on an annual basis by undertaking the following multi-step process:

FNEI's financial controller reviews the previous year's budget by cost category and updates line items as needed to reflect known annual events that generate budgetary increases or decreases.

After the budget is prepared, it is reviewed by the Executive Committee of the Board of Directors.

Once the Finance Committee recommends the budget for approval, it is then reviewed and approved by FNEI's entire Board of Directors.

As noted, FNEI prepares its operational budget based on a review of its historical costs from the previous budgetary year with modifications based on inputs from key employees and external service providers. The FNEI Operations Manager provides inputs to assess operational costs for the upcoming budgetary year including updates to external service provider costs to reflect inflationary increases, as well as evaluation of whether to address certain tasks internally or through outsourcing.

FNEI prepares its cost estimates for its maintenance budget based on information gathered through FNEI's asset management planning process, which is described in Exhibit 2. Capital asset information is gathered through ongoing inspections and testing carried out by FNEI's internal and external

technical experts. This information is reviewed and informs the establishment of the maintenance budget, which incorporates:

- industry reliability standards;
- good utility practice;
- employee safety considerations;
- public safety considerations;
- sound environmental practices;
- considerations of historical spending patterns; and
- maximizing the operational life of FNEI's existing assets in service

FNEI prepares its cost estimates for its administration budget by reviewing and updating compensation and benefit amounts to reflect increases in line with FNEI's compensation policy, staffing changes and hiring plans. FNEI updates its travel, office, insurance and other expenses by escalating historical costs in line with inflationary increases and to reflect FNEI's plans and known costs for the upcoming budgetary year.

## **5. OM&A Overview**

### **5.1. OM&A SUMMARY**

FNEI's OM&A expenses include but are not limited to the following:

Operations include activities relating to inspection, general engineering, testing, system control and work planning.

Maintenance relates to preventative maintenance activities and corrective maintenance. Preventative maintenance includes maintenance carried out on a cyclical basis for structures and devices to avoid failure and vegetation management. Corrective maintenance is the repair and replacement of equipment that either has failed or is about to fail.

Administration includes activities relating to accounting, insurance, general administration, health, safety, and environment, information technology and regulatory activities.

Table 2 below presents a summary of FNEI's OM&A expenditures from its 2017 and 2018 OEB-approved amounts, up to and including the 2026 Test Year. FNEI's Test Year expenses are available on an account-by-account basis in tab 2-JD of Attachment FNEI\_2026RR\_Appendices\_20250704.

**Table 2 Summary of Historical and Forecast OM&A Expenses (\$millions)**

|                          | Board<br>Approved | Actual       | Board<br>Approved | Actual      | Actual       | Actual       | Actual      | Actual      | Actual      | Actual       | Bridge      | Test        |
|--------------------------|-------------------|--------------|-------------------|-------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Item                     | 2017              | 2017         | 2018              | 2018        | 2019         | 2020         | 2021        | 2022        | 2023        | 2024         | 2025        | 2026        |
| Operations               |                   | 0.97         |                   | 1.02        | 0.90         | 1.00         | 1.03        | 0.92        | 2.28        | 0.78         | 1.05        | 1.60        |
| Maintenance              |                   | 0.72         |                   | 2.02        | 0.93         | 0.71         | 0.62        | 0.82        | 0.74        | 1.08         | 1.45        | 1.48        |
| Administration & General |                   | 2.08         |                   | 1.83        | 1.91         | 1.75         | 1.91        | 2.68        | 2.54        | 3.49         | 2.91        | 3.11        |
| <b>Total OM&amp;A</b>    | <b>4.23</b>       | <b>3.77</b>  | <b>4.38</b>       | <b>4.88</b> | <b>3.74</b>  | <b>3.45</b>  | <b>3.57</b> | <b>4.42</b> | <b>5.56</b> | <b>5.35</b>  | <b>5.41</b> | <b>6.19</b> |
| <b>Variance \$</b>       |                   | <b>-0.45</b> |                   | <b>0.50</b> | <b>-1.14</b> | <b>-0.28</b> | <b>0.11</b> | <b>0.85</b> | <b>1.14</b> | <b>-0.21</b> | <b>0.06</b> | <b>0.78</b> |

## **5.2. OM&A TRENDS AND COST DRIVERS**

This section of FNEI's written evidence explains the drivers of variances in program costs across the historical period and into the Bridge and Test years. Drivers of costs include a rise in operating costs following the closure of FNEI's line to the DeBeers Victor Mine in January of 2023 and the termination of FNEI's cost sharing agreement with DeBeers; increased maintenance requirements stemming from increasing asset age; and high levels of inflation that had a broad impact on the budget, driving compensation and outsourcing costs, increased costs of mandatory travel, and higher equipment, operations and maintenance work costs. These drivers are discussed in detail below.

### **5.2.1. Maintenance**

FNEI's maintenance costs have experienced the highest rate of increase. Increased costs in this area have been driven by higher unit costs and a greater volume of work required to maintain the transmission system. The cost of necessary equipment has increased from inflation, and advancing asset age has required specialty repair work that carries additional costs due to FNEI's remote location. In one example, mandatory repairs to a leaking line voltage compensator and a leaking transformer gasket in 2024 required FNEI to contract work involving three days of contractor travel to and from the job site. FNEI has also been forced to contract out electrician work over the historical period at times when there have been job vacancies on its internal team. FNEI plans to hire one apprentice electrician, one electrician and one supervisor over the upcoming rate period to strengthen its in-house capabilities and insource normal course maintenance work moving forwards.

In order to pace maintenance costs, FNEI alternates the performance of its right of way and transmission line maintenance cycles. FNEI's right of way cycle is focused on vegetation management and takes 5-6 years on average depending on the impact of annual seasonal conditions to perform work. This cycle will be completed in the 2026 test year, after which the utility will move to a 3-4 year transmission line maintenance cycle. This upcoming cycle will also involve vegetation management, as well as guy wire work, pole straightening and woodpecker repairs. FNEI will additionally perform a one-year ground patrol during the upcoming rate period in line with its maintenance policy.

Following the 2023 closure of DeBeers' Victor Mine operations, FNEI began absorbing costs of approximately \$370k per year in maintenance that was previously paid by DeBeers under an

agreement to share a portion of FNEI's costs for vegetation management and right of way maintenance.

## 5.2.2. Operations

Drivers of FNEI's operations costs over the historical period include rising transformer station operating costs due to increasing station telecommunications, rising electricity costs, and aging station assets requiring additional servicing to remain in a state of good repair. Similar to maintenance expenses, DeBeers had previously paid a portion of FNEI's operating costs, including payments for station-building electricity costs and a contribution to FNEI's operating cost agreement with Hydro One. In addition, the cost of operational labour and planned operations hiring and training has increased operations costs, as FNEI has had difficulty retaining operational staff due to the remote nature of the work and a tight geographic market for labour. FNEI has had a high rate of turnover in its operational team from 2022 onwards, requiring it to spend additional money on contractors to perform necessary work.

## 5.2.3. Administration and General Expenses

The drivers of increases in administration and general expenses over the historical period are widely dispersed, and primarily relate to inflation and business conditions. Inflationary pressures have impacted most of the services required for FNEI to operate its business, including but not limited to the cost of travel, information technology systems, outside consultants, lawyers and auditors, and disbursements and honoraria. Similarly, insurance premiums increased year over year in the historical period<sup>1</sup>. As further discussed below, the utility was required over this period to increase total employee compensation to improve retention due to the pressures on employees of inflation, the remote nature of the work and the travel required of employees. Employee compensation is further discussed in the following section.

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<sup>1</sup> 3/4 1/2 1/4 1/8 1/16 1/32 1/64 1/128 1/256 1/512 1/1024 1/2048 1/4096 1/8192 1/16384 1/32768 1/65536 1/131072 1/262144 1/524288 1/1048576 1/2097152 1/4194304 1/8388608 1/16777216 1/33554432 1/67108864 1/134217728 1/268435456 1/536870912 1/1073741824 1/2147483648 1/4294967296 1/8589934592 1/17179869184 1/34359738368 1/68719476736 1/137438953472 1/274877906944 1/549755813888 1/1099511627776 1/2199023255552 1/4398046511104 1/8796093022208 1/17592186044416 1/35184372088832 1/70368744177664 1/140737488355328 1/281474976710656 1/562949953421312 1/1125899906842624 1/2251799813685248 1/4503599627370496 1/9007199254740992 1/18014398509481984 1/36028797018963968 1/72057594037927936 1/144115188075855872 1/288230376151711744 1/576460752303423488 1/1152921504606846976 1/2305843009213693952 1/4611686018427387904 1/9223372036854775808 1/18446744073709551616 1/36893488147419103232 1/73786976294838206464 1/147573952589676412928 1/295147905179352825856 1/590295810358705651712 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## **5.2.4. EMPLOYEE COMPENSATION**

### **5.2.4.1. Compensation**

In accordance with the Filing Requirements, FNEI has prepared tab 2-K of Attachment FNEI\_2026RR\_Appendices\_20250704 setting out employee compensation for the period from 2017 actuals through to the 2026 Test Year. FNEI's employees are split into: (a) Executive & Management; and (b) Non-Management. None of FNEI's employees are unionized.

FNEI's staffing policy is to maintain a small internal team capable of managing and operating the utility, with all FNEI staff performing a wide variety of job tasks. For example, FNEI's Office Manager performs IT work, cybersecurity planning, and human resources and payroll tasks in addition to overseeing the day-to-day operations of FNEI's office. This model has enabled FNEI to manage the utility effectively while controlling its costs through lean staffing.

FNEI's policy is to set compensation for its employees based on the labour pool and talent market available in the Timmins area, and by considering the range of activities captured within each employee's job description. FNEI provides increases to its management salaries informed by cost of living increases, performance and evolving accountabilities by role. FNEI provides compensation increases for its non-management employees based on performance and the salary band for the position in question. FNEI does not provide performance pay. FNEI has historically paid employees a retention amount totalling 10% of their salary, however this policy is being terminated concurrent with changes to FNEI's pension policy discussed below.

### **5.2.4.2. Employees**

FNEI plans to hire one apprentice electrician, one electrician and one supervisor over the test year for a full internal operations complement of one apprentice, three electricians and one supervisor. This hiring will reduce FNEI's reliance on external contractors to perform normal course maintenance work and will reduce its outsourcing costs. FNEI has had to rely on external resources over the 2022-2025 period due to staff vacancies, turnover and a tight labour market, but plans to refresh its internal labour complement to reduce this reliance.

### **5.2.4.3. Benefits**

FNEI offers all of its employees a benefits package. The current group benefits plan is provided to any FNEI employee working a minimum of 20 hours per week, and covers:

- Employee basic life insurance
- Accidental death and dismemberment insurance
- Dependent life insurance
- Short-term disability insurance
- Long-term disability insurance
- Extended health care benefit
- Dental care benefit
- PayDirect drug card

FNEI offers a defined contribution pension plan to employees working a minimum of 20 hours a week. In May 2025, FNEI transitioned from a model in which the utility matched employees' contributions of between 5-9% earnings, to a model where FNEI makes all contributions to employees' plan. As a relatively small labour market, Northern Ontario and Timmins are highly competitive areas for tradespeople, and FNEI must compete with companies including local electricians, mining companies, Hydro One and Ontario Power Generation with respect to salaries, benefits and flexibility of working arrangements. High rates of staff turnover over the historical rate period led FNEI to consider different compensation mechanisms to stay competitive with these other proximate employers, particularly as FNEI is not able to offer the "two weeks on two weeks off" model that some of these other employers provide, and FNEI requires its employees to perform regular remote travel. FNEI improved its pension offerings to improve the utility's retention and maintain market competitive compensation, and made this change after consultation with senior staff at the utility and the chair of its Board of Directors. As noted above, previously issued retention amounts will no longer be disbursed to employees on commencement of the updated pension plan.

## **6. SHARED SERVICES AND corporate cost allocation**

### **6.1. OVERVIEW**

FNEI does not share services with any affiliate. FNEI's three members<sup>2</sup> (Attawapiskat Power Corporation, Fort Albany Power Corporation and Kashechewan Power Corporation; collectively, the "3 LDCs") are not affiliates because none owns a controlling interest in FNEI. Because FNEI is a non-share capital corporation, there are no shareholders in FNEI. Instead, each of the 3 LDCs is an equal member in FNEI. The corporate structure of FNEI is set out in Exhibit 1.

### **6.2. MAINTENANCE SERVICES AGREEMENTS WITH 3 LDCS**

FNEI has ongoing Maintenance Service Agreements ("MSAs") with each of the 3 LDCs, initially established under the OEB's direction to FNEI in the utility's 2009 cost-of-service rate proceeding (EB-2009-0387).

Under these MSAs, FNEI procures the services of the LDC to assist with maintenance work at FNEI stations and to assist in emergency response. FNEI's three stations are located in the three fly-in only communities served by the 3 LDCs, and are thus highly remote. The only individuals with technical skills and qualifications to assist FNEI in these regions are the technical staff employed locally by the 3 LDCs. Lacking these MSAs, FNEI would be required to fly-in personnel or external contractors, which has significant downside due to the cost of travelling to the site of the stations, and the challenges of scheduling remote service or emergency work.

The MSAs are in the form of master services agreements, and do not have a fixed fee for annual services or fixed scope of work. The MSAs allow FNEI to procure services at fixed labour rates and equipment rental rates on an as-needed basis, pursuant to a prescribed form of purchase order. This type of MSA arrangement provides FNEI with the appropriate flexibility to meet its maintenance and emergency response needs. These MSAs are ongoing with annual adjustments for inflation.

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## **7. Purchase of Non-Affiliate Services**

### **7.1. OVERVIEW**

In the course of operating its transmission business, FNEI purchases goods and services from a number of non-affiliated companies. The services purchased by FNEI include audit services, construction activities, legal services, building maintenance, operations and maintenance services, and others.

FNEI has established a purchasing policy as part of its Financial Policies and Procedures to ensure that purchases are made in a consistent, prudent manner.

### **7.2. PURCHASING POLICY**

Regular purchases for day-to-day operational supplies are made via purchase orders, signed by one of FNEI's authorized signing authorities. The Chief Executive Officer is the primary FNEI signing authority for all purchase orders, however, this may be delegated where appropriate.

FNEI relies on RFP and tendering processes where there are opportunities to run a competitive process. Where a competitive process is not possible due to limited availability of services and expertise or other relevant factors, FNEI exercises a diligent review to evaluate vendor costs.

The Finance Controller is required to ensure that any purchases made are within FNEI's budget.

## **8. ONE-TIME COSTS**

FNEI incurs one-time costs related to certain operational, maintenance and administrative activities. FNEI does not anticipate that it will over-recover costs in the 2026 test year or any future IR Plan period years as a result of one-time costs reflected in the 2026 test year. Certain of FNEI's costs, such as the cost of performing maintenance work, varies year-over-year. The expected five-year cost of these activities has been normalized across the upcoming rate term to establish the 2026 test year budget.

FNEI anticipates that it will outlay one-time costs related to its cost sharing responsibilities for the environmental remediation of certain lands located in the community of Attawapiskat. The quantum and timeline for these expenditures is not yet known, and FNEI has proposed the establishment of a deferral account for their capture, as further discussed in Exhibit 8.

## 9. REGULATORY COSTS

FNEI is forecasting a regulatory cost of \$214,105 in the Test Year. FNEI incurs regulatory, legal, intervenor and accounting expenses related to this transmission revenue requirement proceeding. A total forecast of \$305,525 in one-time regulatory costs relating to this proceeding has been divided by 5 (i.e. the number of years requested for FNEI's rate period), and the resulting \$61,105 has been included in within forecast regulatory costs for the 2026 Test Year. The utility additionally incurs normal-course regulatory, legal and accounting costs that are required to operate within its corporate structure. A forecast of one-time regulatory costs has been included in Tab 2-M of Attachment FNEI\_2026RR\_Appendices\_20250704 provides FNEI's.

## 10. CHARITABLE AND POLITICAL DONATIONS

FNEI confirms that no charitable or political contributions have been included for recovery in FNEI's 2026 test year OM&A expense.

## 11. DEPRECIATION AND AMORTIZATION

FNEI uses straight-line depreciation calculations based on the depreciable gross book value of each asset class, in accordance with IFRS.

The depreciation rates used by FNEI have not changed since FNEI's last rates proceeding, EB-2016-0231. As required by IFRS, the estimated useful lives of FNEI's assets are reviewed annually and differences from previous estimates are accounted for prospectively as a change in estimate.

Tab 2-BA of Attachment FNEI\_2026RR\_Appendices\_20250704 provides FNEI's Fixed Asset Continuity Schedule from 2017 to the 2026 Test Year, including reporting of annual depreciation expense and accumulated depreciation.

As part of FNEI's transition to IFRS, FNEI was required to modify the accounting treatment of long-term lease agreements with two First Nations and the Ministry of Natural Resources ("MNR"). Where these agreements had traditionally been treated as a rent operating expense, their term and nature dictated

they be deemed Finance Leases by FNEI's auditor and accounting advisors. As a consequence of this transition, FNEI now calculates the long-term value of each lease and takes on a liability equal to this amount, as shown in Exhibit 7 under Section 5, Long-Term Debt. At the same time, FNEI recognizes an asset of an equal amount, and claims straight-line amortization of this amount over the term of the lease. Amortization of Property Under Finance Lease is included in FNEI's Fixed Asset Continuity Schedule, found in Tab 2-BA of Attachment FNEI\_2026RR\_Appendices\_20250704.

## 12. TAXES

As a non-profit corporation, FNEI is not subject to the payment of income taxes, and therefore no income tax expense forms part of FNEI's revenue requirement<sup>3</sup>.

The majority of FNEI's assets are located on either provincial Crown land or Indian Reserve land and FNEI is not subject to municipal property taxes for those Assets. FNEI does pay municipal property tax on its head office, located in Timmins, Ontario, forecast to be \$51,000 in the 2026 Test Year.

## 13. NON-RECOVERABLE EXPENSES

FNEI is not including any expenses that are non-recoverable in its revenue requirement or that are disallowed for regulatory purposes.

## 14. INTEGRITY CHECKS

The integrity check requirements set out in the Filing Requirements are not applicable to FNEI, since the requirements all relate to tax-related integrity checks. FNEI is a non-profit corporation and does not pay income taxes.

## 15. Z-FACTOR CLAIMS

FNEI proposes to maintain its existing materiality threshold of \$100,000 for Z-factor events in its upcoming rate period. Section 2.8.12 of the Transmission Filing Requirements states that at a minimum the materiality threshold for transmitter Z-Factor claims must exceed the OEB-defined materiality threshold in Section 2.1.1 of the Filing Requirements. Section 2.1.1 of the Filing Requirements for

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<sup>3</sup> FNEI is not subject to the payment of income taxes, and therefore no income tax expense forms part of FNEI's revenue requirement.

Electricity Transmission Applications dated February 11, 2016 states that transmitters with a transmission revenue requirement greater than \$10 million but less than or equal to \$200 million shall have a materiality threshold of 0.5% of transmission revenue requirement. FNEI falls into this category, thus having a materiality threshold of \$52,645. Continuation of the Z-factor materiality threshold approved in EB-2016-0231 is appropriate for the 2026 Test Year and subsequent rate term. A failure to recover the proposed threshold amount of \$100,000 in a Z-factor event would have a significant negative influence on FNEI's operations.

# **EXHIBIT 7 – Capital Structure & Cost of Capital**

## **2026 Cost of Service**

**Five Nations Energy Inc.**  
**EB-2025-0129**



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## 1. INTRODUCTION

The purpose of this evidence is to summarize the method and cost of financing FNEI 's Rate Base for the 2026 application period.

At the time of the Draft Rate Order (DRO) in this proceeding, FNEI intends to update the 2026 revenue requirement based on the OEB's release of its 2026 cost of capital parameters to reflect the OEB-prescribed 2026 return on equity (ROE) and short-term debt rates.

## 2. CAPITAL STRUCTURE

FNEI proposes to continue to rely on a deemed capital structure of 60% debt and 40% equity. The debt component consists of 4% short-term debt and 56% long-term debt. FNEI notes that this is the same capital structure that was approved in FNEI's 2016 rates proceeding (EB-2016-0231).

This structure is consistent with the OEB's Report on the Cost of Capital for Ontario Regulated Utilities, dated December 11, 2009 (EB-2009-0084), its subsequent Review of the Existing Methodology of the Cost of Capital for Ontario's Regulated Utilities dated January 14, 2016, and the OEB's Cost of Capital and Other Matters Decision and Order in EB-2024-0063, issued March 27, 2025.

The cost of capital described in this exhibit has been reflected in FNEI's 2026 revenue requirement. A summary of FNEI's deemed debt-equity structure is presented in Table 1 below. Table 1 includes the 2018 and 2026 rates for ROE, long-term debt, and short-term debt as further discussed in this Exhibit.

**Table 1: Deemed Capital Structure and Rates**

| Deemed Rate                             | 2018<br>Board<br>Approved | 2026<br>Test |
|-----------------------------------------|---------------------------|--------------|
| Long-Term Debt                          | 56.00%                    | 56.00%       |
| Short-Term Debt                         | 4.00%                     | 4.00%        |
| Return On Equity                        | 40.00%                    | 40.00%       |
| <b>Effective Rate</b>                   |                           |              |
| Long-Term Debt                          | 5.11%                     | 4.59%        |
| Short-Term Debt                         | 2.29%                     | 3.91%        |
| Return On Equity                        | 9.00%                     | 9.00%        |
| Weighted Debt Rate                      | 4.92%                     | 4.54%        |
| <b>Weighted Average Cost of Capital</b> | <b>6.55%</b>              | <b>6.33%</b> |

### 3. COMMON EQUITY

FNEI's evidence reflects a return on equity (ROE) of 9.00% as a placeholder for 2026 based on the cost of capital parameters released by the OEB on March 27, 2025, effective for January 1, 2025, rates. FNEI will update the equity cost of capital for the 2026 test year by using the 2026 ROE to be prescribed by the OEB in the fall of 2025.

### 4. DEEMED SHORT-TERM DEBT

The OEB has determined that the deemed amount of short-term debt that should be factored into rate setting be fixed at 4% of rate base. The deemed short-term debt rate of 3.91% is being used by FNEI as a placeholder for 2026 and is based on the Cost of Capital Parameters released by the OEB on March 27, 2025, for rates effective January 1, 2025. FNEI will update the short-term debt rate for the 2026 test year based on the 2026 deemed short-term debt rate to be prescribed by the OEB in the fall of 2025.

### 5. LONG-TERM DEBT

The forecast weighted average long-term debt rate is calculated to be 4.59% for 2026.

FNEI has three outstanding debts, and three outstanding long-term lease liabilities.

Two of the three outstanding debts are with The Manufacturers Life Insurance Company, and the other with Bank of Montreal. Table 2 outlines FNEI's outstanding debts forecast for the 2026 Test Year, and applicable parameters.

**Table 2 – Outstanding Debt**

| Debt Holder                              | Debt<br>Outstanding<br>(2026) | Interest<br>Rate | Maturing   |
|------------------------------------------|-------------------------------|------------------|------------|
| The Manufacturers Life Insurance Company | 947,937                       | 5.49%            | 2028-02-28 |
| The Manufacturers Life Insurance Company | 3,236,784                     | 4.71%            | 2035-10-31 |
| Bank of Montreal                         | 716,228                       | 3.03%            | 2027-11-30 |

As part of FNEI's transition to IFRS, a transition was required in accounting treatment of long-term land leases from rent operating expense to finance leases. Concurrent with the adoption of said

finance leases, FNEI has taken on the long-term liability of the value of the three land leases over the term of the agreements, with a regular payment schedule including interest. Table 3 below outlines the status of FNEI's three finance leases as of the 2026 Test Year, with applicable parameters.

**Table 3 – Long-Term Lease Liabilities**

| Lessor                        | Long-Term Liability | Interest Rate | Maturing   |
|-------------------------------|---------------------|---------------|------------|
| Albany 67                     | 2,202,265           | 4.55%         | 2058-12-31 |
| Attawapiskat First Nation     | 948,313             | 4.55%         | 2049-05-31 |
| Ministry of Natural Resources | 858,084             | 4.55%         | 2058-12-31 |

Table 4 below demonstrates the calculation of FNEI's weighted cost of long-term debt in 2026, based on its outstanding debts and long-term lease liabilities.

**Table 4 – Weighted Cost of Long-Term Debt**

|                                        | 2026         |
|----------------------------------------|--------------|
| Total Interest Cost                    | 260,455      |
| Total Principal Amount                 | 5,568,139    |
| <b>Weighted Cost of Long-Term Debt</b> | <b>4.68%</b> |

## 6. FORECAST DEBT

FNEI is not forecasting any new loans or liabilities in the 2025 Bridge or 2026 Test Years. FNEI's long-term lease liabilities are subject to periodic adjustments to reflect inflationary adjustments to lease payments, however FNEI has not incorporated any such increases in the 2026 Test Year Revenue Requirement.

## 7. COST OF CAPITAL

Based on the Rate Base described in Exhibit 3, and the capital structure and rates applicable to ROE, long-term debt, and short-term debt described in this Exhibit, Table 5 below presents FNEI's 2026 cost of capital as compared against 2018 OEB-approved:

**Table 5 – Cost of Capital**

| 2018 Cost of Capital |             | Proportion of Rate Base | Cost Rate    | Return           |
|----------------------|-------------|-------------------------|--------------|------------------|
| Long-Term Debt       | 56%         | 19,865,720              | 5.11%        | 1,015,138        |
| Short-Term Debt      | 4%          | 1,418,980               | 2.29%        | 32,495           |
| <b>Total Debt</b>    | <b>60%</b>  | <b>21,284,700</b>       | <b>4.92%</b> | <b>1,047,633</b> |
| <b>Total Equity</b>  | <b>40%</b>  | <b>14,189,800</b>       | <b>9.00%</b> | <b>1,277,082</b> |
| <b>Total</b>         | <b>100%</b> | <b>35,474,500</b>       | <b>6.55%</b> | <b>2,324,715</b> |
|                      |             |                         |              |                  |
| 2026 Cost of Capital |             | Proportion of Rate Base | Cost Rate    | Return           |
| Long-Term Debt       | 56%         | 20,458,959              | 4.59%        | 938,497          |
| Short-Term Debt      | 4%          | 1,461,354               | 3.91%        | 57,139           |
| <b>Total Debt</b>    | <b>60%</b>  | <b>21,920,314</b>       | <b>4.54%</b> | <b>995,636</b>   |
| <b>Total Equity</b>  | <b>40%</b>  | <b>14,613,542</b>       | <b>9.00%</b> | <b>1,315,219</b> |
| <b>Total</b>         | <b>100%</b> | <b>36,533,856</b>       | <b>6.52%</b> | <b>2,310,855</b> |

# **EXHIBIT 8 – Deferral and Variance Accounts**

## **2026 Cost of Service**

**Five Nations Energy Inc.**  
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**2. Incremental Cloud Computing Implementation Costs Deferral Account (ICCIDCA)..... 5**

**3. Appendix 1 - Draft Accounting Order for the ERDA..... 7**

The purpose of this exhibit is to provide a description of Five Nations Energy Inc.'s ("FNEI") existing regulatory Deferral and Variance Accounts ("DVA") and articulate any proposals for new DVAs. The regulatory accounts reported by FNEI have been established consistent with the Ontario Energy Board ("OEB") requirements set out in the Accounting Procedures Handbook.

FNEI has no existing deferral and variance accounts, and as such is not the requesting disposition of any balances. FNEI requests the establishment of one new utility-specific deferral account, as well as the use of the OEB's Generic Account 1511, Incremental Cloud Computing Implementation Costs.

## **1. ENVIRONMENTAL REMEDIATION DEFERRAL ACCOUNT (ERDA)**

### **Requested Relief**

FNEI is seeking to establish the ERDA effective January 1, 2026, to track FNEI's portion of costs incurred for environmental remediation of lands in Attawapiskat. Principal balances entered into the ERDA will attract carrying charges at the OEB's prescribed rates for DVAs. Disposition of any amounts in the ERDA will be brought forward for disposition in a future cost-based application to the OEB, such as FNEI's next revenue requirement application, or as otherwise prescribed by the OEB.

### **Background**

Contaminants of Concern (COCs) have been identified at several sites within the Attawapiskat First Nation community and technical planning is currently in process to address the removal of such COCs through environmental remediation. Remediation is expected to be funded by multiple parties, including FNEI, however the allocation of costs for site-specific remediation work has not been finalized amongst the parties at this time. The sites for which FNEI's financial participation is expected contain twelve aboveground bulk fuel storage tanks and a diesel generation station and its associated fuel storage tanks.

### **Remediation Project Cost and Timelines**

FNEI is in the process of finalizing agreements with other parties for the sharing of the cost of a full technical assessment to determine the extent of environmental remediation required and identify the preferred remedial solution. Subsequent to the completion of this assessment, further detail will be available to FNEI and the other potential funding parties with respect to the full extent of remediation required, the cost of such remediation, and the timing for completion of such remediation work.



FNEI anticipates that costs for environmental remediation will be incurred during the 2026 to 2031 revenue requirement term, and expects costs allocated to FNEI will substantially exceed the utility's materiality threshold of \$52,071. At this time, the quantum of costs for environmental remediation is highly certain and the timing of such costs is unknown, rendering FNEI unable to account for such costs within this application on a prospective basis.

#### 1.1. OEB Test for Establishing a Deferral Account

As further articulated below, the ERDA passes the OEB's three-part test for establishing a deferral account.

#### **Causation**

The costs proposed to be recorded in the ERDA are directly related to the claimed driver of environmental remediation. Only costs for the completion of environmental remediation will be entered into the ERDA, and no such costs would be incurred absent the environmental remediation required.

#### **Materiality**

FNEI is confident that its costs for environmental remediation of the COCs will exceed its materiality threshold of \$52,071. FNEI's views on the magnitude of costs expected are informed by the reality that FNEI's share of the costs for the technical planning for environmental remediation of the COCs are themselves expected to exceed the utility's materiality threshold, suggesting completion of the remediation work itself will most certainly exceed FNEI's materiality threshold.

#### **Prudence**

FNEI, working with the other parties funding the technical planning for environmental remediation of the COCs, has retained Stantec Inc., a highly credible and capable firm with experience specifically relating to the environmental remediation of lands in the Attawapiskat First Nation community. The recommendations of Stantec will serve as the basis for the cost-effective environmental remediation of the COCs at the sites in question. Any expenditures ultimately borne by FNEI for environmental remediation will be reviewed concurrent with a disposition request to the OEB, allowing for oversight and confirmation that these costs have been prudently incurred.

1.2. ERDA Draft Accounting Order

Included as Appendix 1 is a Draft Accounting Order for the ERDA for the OEB's consideration.

**2. INCREMENTAL CLOUD COMPUTING IMPLEMENTATION COSTS DEFERRAL  
ACCOUNT (ICCICDA)**

**Requested Relief**

FNEI is seeking to utilize the ICCICDA effective January 1, 2025, to track costs that it incurs from implementing cloud-based technology solutions to update its IT capabilities for performing asset management. Principal balances entered into the ICCICDA will attract carrying charges at the OEB's prescribed rates from DVAs. Disposition of any amounts in the ICCICDA will be brought forward for disposition at FNEI's next revenue requirement application.

**Background**

The OEB has established a generic deferral account for utilities to record the incremental costs of implementing cloud computing solutions. Whereas previously utilities including FNEI made capital investments in on-premise IT infrastructure that were included in rate base, cloud computing solutions are typically expensed from utilities' operations budget as they occur, and utilities do not have an opportunity to recover these costs during the incentive-rate setting period. The OEB expects that utilities consider cloud options when assessing technology solutions and has made this generic account available in order to address the regulatory barriers to cloud computing adoption.

1 **FNEI's investments in Cloud Solutions**

2 FNEI is currently in early procurement of a cloud solution to update its existing asset  
3 management processes, with a new asset management system =. FNEI's transmission system  
4 is now more than twenty years old, and increasingly volatile weather has heightened the  
5 need for the utility to refine its asset management to ensure appropriate capital investments  
6 are made on a pro-active basis as the system ages further. The sustainment of safe and  
7 reliable service in the long-term requires an improved system for asset management in  
8 accordance with sound utility practice.

9 FNEI began the early stages of procurement in Q1 of 2025 and anticipates finalizing selection  
10 of a vendor and solution in Q3 or Q4 of 2025, with implementation planned for 2026. Due to  
11 the timing of procurement, FNEI is not able to establish an operational or capital budget for  
12 these investments within this application and plans to make capital entries for  
13 implementation costs into the ICCICDA, as well as operational entries for ongoing costs post  
14 deployment.

15 FNEI proposes to bring forward balances in ICCICDA for OEB review and disposition as part  
16 of its next revenue requirement application, or as otherwise prescribed by the OEB. FNEI will  
17 maintain compliance with the OEB's Accounting Order and guidance for entries made into  
18 the ICCICDA and will bring forward the necessary and prescribed details required alongside  
19 its future balances to facilitate disposition. The OEB, OEB Staff and intervening parties will  
20 have full opportunity at that time to assess the causality, materiality, prudence, and  
21 compliance with OEB policies of amounts in the ICCICDA, prior to approval of its disposition  
22 being granted by the OEB.

1   **3. APPENDIX 1 - DRAFT ACCOUNTING ORDER FOR THE ERDA**

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**Five Nations Energy Inc.**

**Draft Accounting Order**

**Account 1508 – Other Regulatory Assets, Sub-account Environmental Remediation  
Deferral Account (“ERDA”)**

Five Nations Energy Inc. (FNEI) shall establish the new deferral account, “Environmental Remediation Deferral Account” (ERDA), effective January 1, 2026, to record expenses incurred from FNEI’s portion of costs for the environmental remediation of lands in Attawapiskat that are currently not included in transmission rates.

Amounts entered in the ERDA will be debit entries that are equal to all of the environmental remediation project costs that are incurred by FNEI. Amounts will be credited to the ERDA as incurred. Carrying charges will be applied to the ERDA on a monthly basis at the Ontario Energy Board’s (OEB) prescribed rates.

Balances in the ERDA sought for disposition are subject to an OEB prudence review, which will require the presentation of appropriate supporting documentation. FNEI will seek disposition of the amounts in the ERDA no later than its next Cost of Service application, or as otherwise directed by the OEB. At the time of FNEI’s next Cost of Service application, FNEI will recommend either the continuance or discontinuance of the Sub-Account, and the OEB will make a determination in that matter.

**Annual Entries:**

|                                                                                                                   |                  |
|-------------------------------------------------------------------------------------------------------------------|------------------|
| Cr: 1508                                                                                                          | Sub-Account ERDA |
| Dr: Various Accounts                                                                                              |                  |
| To record expenses generated from FNEI’s portion of costs for environmental remediation of lands in Attawapiskat. |                  |
| Cr: 1508                                                                                                          | Sub-Account ERDA |
| Cr: Various Accounts                                                                                              | Interest Expense |
| To record Carrying Charges associated with amounts recorded in Sub-Account ERDA                                   |                  |

# EXHIBIT 9 – Cost Allocation

## 2026 Cost of Service

Five Nations Energy Inc.  
EB-2025-0129

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## 1.0 COST ALLOCATION

In Five Nations Energy Inc.'s ("FNEI") 2017 and 2018 Revenue Requirement Application (EB-2016-0231), the OEB approved FNEI's use of Hydro One Networks Inc.'s ("HONI") cost allocation methodology for distributing costs across the Network, Line Connection, and Transformer Connection pools. The continued application of this methodology remains appropriate for the current application.

This approach continues to align with FNEI's operational reality, as the company's assets maintain their multi-functional role in providing network, line connection, and transformer connection services. The proportional distribution of costs established in HONI's methodology - with 60% of costs allocated to the network pool, 30% of costs allocated to the transformer connection pool and 10% of costs allocated to the line connection pool - continues to accurately reflect how FNEI's transmission equipment functions in practice.

Table 1 below demonstrates the derivation of HONI's 2025 cost allocation amongst the three transmission pools,<sup>1</sup> and the application these allocators to FNEI's 2026 Revenue Requirement.

**Table 1: Cost Allocation to Transmission Pools**

|                            | Hydro One Networks Inc. |             | FNEI             |                   |                  |
|----------------------------|-------------------------|-------------|------------------|-------------------|------------------|
|                            | 2025                    |             | Current          | Proposed          | Variance         |
|                            | \$                      | %           | \$               | \$                | \$               |
| Network                    | 1,280,063,491           | 60%         | 4,788,179        | 6,256,434         | 1,468,255        |
| Line Connection            | 221,993,543             | 10%         | 830,384          | 1,085,015         | 254,631          |
| Transformer Connection     | 633,465,726             | 30%         | 2,369,529        | 3,096,125         | 726,596          |
| <b>Revenue Requirement</b> | <b>2,135,522,760</b>    | <b>100%</b> | <b>7,988,092</b> | <b>10,437,574</b> | <b>2,449,482</b> |

FNEI notes that its base revenue requirement of \$10.44 million represents a small fraction of the total provincial transmission revenue requirement of approximately \$2.38 billion. Given this scale, any modifications to FNEI's cost allocation methodology would have negligible impact on the UTRs applicable to each transmission pool. Under these circumstances, regulatory efficiency is best served by maintaining the OEB-approved approach to cost allocation.

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<sup>1</sup> EB-2024-0244, Decision and Order



EXHIBIT 10 – Rate Design for Uniform  
Transmission Rates  
2026 Cost of Service

Five Nations Energy Inc.  
EB-2025-0129

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## 1.0 INTRODUCTION

Ontario has maintained Uniform Transmission Rates (UTRs) for all transmitters since April 30, 2002, following the OEB's Decision in RP-2001-0034/RP-2001-0035/RP-2001-0036/RP-1999-0044. The current UTR Schedules, effective January 1, 2025, were established in the OEB's Decision and Rate Order in EB-2024-0244 (issued January 21, 2025, "latest UTR Decision"). The transmission Revenue Requirement and charge determinant details used to calculate the 2025 UTRs appear in Tables 1, 2 and 3 below. The tables have been updated to include FNEI's 2026 Revenue Requirement and charge determinants.

Under the UTR approach, FNEI's requested Revenue Requirement contributes to the total provincial transmission Revenue Requirement collected through the UTRs. To calculate the UTRs applicable to all transmission-connected customers, and to determine the allocation of provincial transmission revenue amongst transmitters, the following approach is taken:

1. The Revenue Requirements of all approved transmitters, including FNEI, are summed up to derive the total transmission Revenue Requirement for the Province. This total Revenue Requirement is allocated across three rate pools: Network, Line Connection, and Transformation Connection. Costs are allocated to the three pools for each transmitter on the basis of cost allocation approvals in their respective OEB-approved Revenue Requirement Applications.
2. The charge determinants applicable to all transmitters with transmission-connected customers are summed to derive the total transmission charge determinant forecast for each pool. Charge determinant forecasts for each transmitter are established on the basis of approvals in their respective OEB-approved Revenue Requirement Applications. Transmitters that do not have transmission-connected customers and serve only a Network purpose within the provincial transmission system, do not have charge determinants.
3. UTRs are determined by dividing total transmission Revenue Requirement by total charge determinants for each pool.
4. Allocation of provincial transmission revenue to each transmitter is determined by dividing the total transmission allocated Revenue Requirement by the total charge determinants for each pool.

## 2.0 UPDATED UNIFORM TRANSMISSION RATES

FNEI has updated the OEB's 2025 Uniform Transmission Rate (UTR) calculations to incorporate FNEI's proposed 2026 Revenue Requirements. The adjustment represents a 0.10% change in the total provincial transmission Revenue Requirement relative to the OEB's latest UTR Decision.

Tables 1 and 2 below provide summaries of the total provincial transmission Revenue Requirement and annual charge determinants based on the latest UTR Decision, updated to include FNEI's 2026 Revenue Requirement and charge determinant forecast. FNEI's 2026 Revenue Requirement has been allocated to the three transmission pools in the manner described in Exhibit 9. FNEI's charge determinant forecast methodology applicable to the three transmission pools is described in Exhibit 5.

**Table 1: Allocation of Revenue Requirement**

| Transmitter             | Revenue Requirement (\$) |                    |                           |                      |
|-------------------------|--------------------------|--------------------|---------------------------|----------------------|
|                         | Network                  | Line Connection    | Transformation Connection | Total                |
| Hydro One               | 1,280,063,491            | 221,993,543        | 633,465,726               | 2,135,522,760        |
| HOSSM                   | 26,007,789               | 4,510,371          | 12,870,489                | 43,388,649           |
| <b>FNEI</b>             | <b>6,256,434</b>         | <b>1,085,015</b>   | <b>3,096,125</b>          | <b>10,437,574</b>    |
| CNPI                    | 2,785,600                | 483,089            | 1,378,511                 | 4,647,200            |
| WPLP                    | 43,489,861               | 0                  | 0                         | 43,489,861           |
| B2MLP                   | 37,647,615               | 0                  | 0                         | 37,647,615           |
| NRLP                    | 8,314,329                | 0                  | 0                         | 8,314,329            |
| UCT 2                   | 75,681,985               | 0                  | 0                         | 75,681,985           |
| CLLP                    | 18,535,124               | 0                  | 0                         | 18,535,124           |
| <b>All Transmitters</b> | <b>1,498,782,228</b>     | <b>228,072,018</b> | <b>650,810,851</b>        | <b>2,377,665,097</b> |

**Table 2: Total Annual Charge Determinants in Megawatts**

| Transmitter             | Total Annual Charge Determinants (MW) |                 |                           |
|-------------------------|---------------------------------------|-----------------|---------------------------|
|                         | Network                               | Line Connection | Transformation Connection |
| Hydro One               | 230,449                               | 223,708         | 190,299                   |
| HOSSM                   | 3,498                                 | 2,735           | 635                       |
| <b>FNEI</b>             | <b>71</b>                             | <b>83</b>       | <b>83</b>                 |
| CNPI                    | 523                                   | 549             | 549                       |
| WPLP                    | 194                                   | 0               | 0                         |
| B2MLP                   | 0                                     | 0               | 0                         |
| NRLP                    | 0                                     | 0               | 0                         |
| UCT 2                   | 0                                     | 0               | 0                         |
| CLLP                    | 0                                     | 0               | 0                         |
| <b>All Transmitters</b> | <b>234,735</b>                        | <b>227,075</b>  | <b>191,567</b>            |

**Tables 4 and 5 compare the following:**

- Table 4 presents the current UTRs and transmitter revenue allocators per the OEB's latest UTR Decision
- Table 5 displays the proposed UTRs and transmitter revenue allocators incorporating FNEI's 2026 Revenue Requirement

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Table 4: 2025 UTRs

| Transmitter                                     | Uniform Rates and Revenue Allocators |                 |                           |
|-------------------------------------------------|--------------------------------------|-----------------|---------------------------|
|                                                 | Network                              | Line Connection | Transformation Connection |
| <b>Uniform Transmission Rates (\$/kW/Month)</b> | <b>6.37</b>                          | <b>1.00</b>     | <b>3.39</b>               |
| Hydro One                                       | 0.85491                              | 0.97444         | 0.97444                   |
| HOSSM                                           | 0.01737                              | 0.01980         | 0.01980                   |
| <b>FNEI</b>                                     | <b>0.00320</b>                       | <b>0.00364</b>  | <b>0.00364</b>            |
| CNPI                                            | 0.00186                              | 0.00212         | 0.00212                   |
| WPLP                                            | 0.02905                              | 0.00000         | 0.00000                   |
| EWTLP                                           | 0.02514                              | 0.00000         | 0.00000                   |
| B2MLP                                           | 0.00555                              | 0.00000         | 0.00000                   |
| NRLP                                            | 0.05055                              | 0.00000         | 0.00000                   |
| CLLP                                            | 0.01238                              | 0.00000         | 0.00000                   |
| <b>All Transmitters</b>                         | <b>1.00000</b>                       | <b>1.00000</b>  | <b>1.00000</b>            |

2

3

Table 5: 2025 Uniform Rates inclusive of FNEI's updated Revenue Requirement

| Transmitter                                     | Uniform Rates and Revenue Allocators |                 |                           |
|-------------------------------------------------|--------------------------------------|-----------------|---------------------------|
|                                                 | Network                              | Line Connection | Transformation Connection |
| <b>Uniform Transmission Rates (\$/kW/Month)</b> | <b>6.38</b>                          | <b>1.00</b>     | <b>3.40</b>               |
| Hydro One                                       | 0.85407                              | 0.97335         | 0.97335                   |
| HOSSM                                           | 0.01735                              | 0.01978         | 0.01978                   |
| <b>FNEI</b>                                     | <b>0.00417</b>                       | <b>0.00476</b>  | <b>0.00476</b>            |
| CNPI                                            | 0.00186                              | 0.00212         | 0.00212                   |
| WPLP                                            | 0.02902                              | 0.00000         | 0.00000                   |
| EWTLP                                           | 0.02512                              | 0.00000         | 0.00000                   |
| B2MLP                                           | 0.00555                              | 0.00000         | 0.00000                   |
| NRLP                                            | 0.05050                              | 0.00000         | 0.00000                   |
| CLLP                                            | 0.01237                              | 0.00000         | 0.00000                   |
| <b>All Transmitters</b>                         | <b>1.00000</b>                       | <b>1.00000</b>  | <b>1.00000</b>            |

4

5

6

A comparison between Tables 4 and 5 demonstrates that FNEI's 2026 proposed Revenue Requirement results in an immaterial impact on UTRs, as described below:

- 0.16% impact on Network rates
- 0.00% impact on Line Connection rates
- 0.29% impact on Transformer Connection rates

### **3.0 BILL IMPACTS**

The immaterial effect of FNEI's 2026 Revenue Requirement on provincial transmission revenue of 0.10% is further illustrated when applied to a typical urban residential customer and typical small commercial customer in Hydro One Networks Inc.'s service territory. Table 6 below compares current and proposed UTRs to determine a weighted average increase in UTRs of 0.18%. Assuming all else is held equal (i.e. no change to UTR Charge Determinants for the distributor, and no change to distribution billing determinants) this increase in UTRs can be directly applied to total Retail Transmission Service Rates (RTSR) charges to determine typical bill impacts. Tables 7 and 8 below show the resulting changes to RTSRs and the overall bill impact following implementation of FNEI's 2026 Revenue Requirement in the UTRs.

**Table 6: Weighted Average Increase in UTRs**

|                                          | <b>Network</b> | <b>Line Connection</b> | <b>Transformation Connection</b> |
|------------------------------------------|----------------|------------------------|----------------------------------|
| <b>Current Rate (\$/kW/mo.)</b>          | 6.37           | 1.00                   | 3.39                             |
| Proposed Rate (\$/kW/mo.)                | 6.38           | 1.00                   | 3.40                             |
| Difference (\$)                          | 0.01           | 0.00                   | 0.01                             |
| Difference (%)                           | 0.16%          | 0.00%                  | 0.29%                            |
| Assumed Allocation                       | 60%            | 10%                    | 30%                              |
| <b>Weighted Average Increase in UTRs</b> |                |                        | <b>0.18%</b>                     |

Table 4: Typical Residential Customer Bill Impact

|                                | Current       | Proposed      | Change (\$) | Change (%)   |
|--------------------------------|---------------|---------------|-------------|--------------|
| Distribution                   | 43.94         | 43.94         |             |              |
| RTSRs                          | 18.87         | 18.90         |             |              |
| <b>Total Delivery</b>          | <b>62.81</b>  | <b>62.84</b>  | <b>0.03</b> | <b>0.05%</b> |
| Regulatory Charges             | 5.01          | 5.01          |             |              |
| Cost of Power                  | 74.90         | 74.90         |             |              |
| <b>Total Bill Before Taxes</b> | <b>142.71</b> | <b>142.74</b> | <b>0.03</b> | <b>0.02%</b> |

Table 5: Typical Small Commercial Customer Bill Impact

|                                | Current       | Proposed      | Change (\$) | Change (%)   |
|--------------------------------|---------------|---------------|-------------|--------------|
| Distribution                   | 108.51        | 108.51        |             |              |
| RTSRs                          | 40.76         | 40.83         |             |              |
| <b>Total Delivery</b>          | <b>149.27</b> | <b>149.35</b> | <b>0.07</b> | <b>0.05%</b> |
| Regulatory Charges             | 13.05         | 13.05         |             |              |
| Cost of Power                  | 199.72        | 199.72        |             |              |
| <b>Total Bill Before Taxes</b> | <b>362.04</b> | <b>362.12</b> | <b>0.07</b> | <b>0.02%</b> |