EXHIBIT 2 - RATE BASE

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EXHIBIT 2 - RATE BASE

RATE BASE

Overview

The rate base used for the purpose of calculating the revenue requirement used in this Application follows *Chapter 2 of the Filing Requirements for Electricity Distribution Applications* issued by the Ontario Energy Board ("Board") on July 18, 2015 (the "Filing Requirements"). In accordance with the Filing Requirements, Grimsby Power Incorporated has calculated the rate base as an average of the net capital balances at the beginning and the end of the 2016 Test Year plus a working capital allowance, which is 7.5% of the sum of the cost of power and controllable expenses.

The net fixed assets include distribution assets that are associated with activities that enable the conveyance of electricity for distribution purposes. Contributed capital from third parties has been included in the average net book value calculation. For purposes of this Exhibit, distribution assets refer to those assets that are most directly related to the distribution system, such as poles, overhead and underground lines, and transformers. General plant refers to assets that support the operation of the distribution system such as computer hardware and software, vehicles, buildings, and equipment. Capital assets include property, plant and equipment ("PP&E") and intangible assets; these are referred to as "capital" or "fixed" assets throughout this evidence. The rate base calculation excludes any non-distribution assets.

Controllable expenses include operations and maintenance, billing and collecting, community relations and administration expenses.

Since its last Cost of Service application for 2012 rates, Grimsby Power has not applied for, nor received, any Incremental Capital Module ("ICM") adjustments.

For rate setting purposes, Grimsby Power has filed 2012 to 2016 information using modified IFRS (MIFRS).

Grimsby Power has provided its rate base calculations for the years 2012 OEB Approved, 2012 Actual, 2013 Actual, 2014 Actual, 2015 Bridge Year and 2016 Test Year in Table 2-1 below:

Table 2-1
Summary of Rate Base
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	2013 Actual	2014 Actual	2015 Bridge Year	2016 Test Year
Reporting Basis	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
Gross Fixed Assets, Opening Balance	13,857,585	13,937,159	15,622,269	16,816,110	26,481,074	28,036,032
Gross Fixed Assets, Closing Balance	15,245,234	15,622,269	16,816,110	18,801,099	28,036,032	29,746,212
Average Gross Fixed Assets	**14,551,409**	**14,779,714**	**16,219,189**	**17,808,605**	**27,258,553**	**28,891,122**
Accumulated Depreciation, Opening Balance	(588,256)	(509,703)	(1,117,383)	(1,785,747)	(4,527,226)	(5,497,082)
Accumulated Depreciation, Closing Balance	(1,357,157)	(1,117,383)	(1,785,747)	(2,511,792)	(5,497,082)	(6,533,506)
Average Accumulated Depreciation	**(972,707)**	**(813,543)**	**(1,451,565)**	**(2,148,770)**	**(5,012,154)**	**(6,015,294)**
Average Net Book Value	**13,578,703**	**13,966,171**	**14,767,624**	**15,659,835**	**22,246,399**	**22,875,829**
Working Capital	20,417,296	19,650,354	20,652,775	21,958,185	26,326,533	27,782,522
Working Capital Allowance (%)	15.00%	15.00%	15.00%	15.00%	15.00%	7.50%
Working Capital Allowance	**3,062,594**	**2,947,553**	**3,097,916**	**3,293,728**	**3,948,980**	**2,083,689**
Rate Base	**16,641,297**	**16,913,725**	**17,865,541**	**18,953,562**	**26,195,379**	**24,959,518**
Return on Rate Base	**1,063,215**	**1,094,983**	**1,122,443**	**1,156,295**	**1,669,364**	**1,544,665**

Rate Base Variance Analysis

Based on the Grimsby Power's annual revenue (under ten million) the materiality threshold is set up at $50,000.

Table 2-2
Rate Base Materiality
2016 Test Year

Description	2016 Test Year
Distribution Revenue Requirement	$6,273,356
Materiality Threshold under $10,000,000 of Distribution Revenue	$50,000

The following Table 2-3 and Table 2-4 shows Grimsby Power's rate base and working capital for 2012 Board Approved and 2012 Actual, 2013 Actual, 2014 Actual, 2015 Bridge Year and 2016 Test Year complete with variances.

Table 2-3
Rate Base & Rate Base Variances
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	Variance from 2012 OEB Approved	2013 Actual	Variance from 2012 Actual	2014 Actual	Variance from 2013 Actual	2015 Bridge Year	Variance from 2014 Actual	2016 Test Year	Variance from 2015 Bridge Year
Gross Fixed Assets	15,245,234	15,622,269	377,035	16,816,110	1,193,841	18,801,099	1,984,989	28,036,032	9,234,933	29,746,212	1,710,180
Accumulated Depreciation	1,357,157	1,117,383	(239,775)	1,785,747	668,365	2,511,792	726,045	5,497,082	2,985,290	6,533,506	1,036,424
Net Book Value	13,888,077	14,504,886	616,810	15,030,362	525,476	16,289,307	1,258,944	22,538,950	6,249,643	23,212,707	673,757
Average Net Book Value	13,578,703	13,966,171	387,469	14,767,624	801,453	15,659,835	892,210	22,246,399	6,586,564	22,875,829	629,429
Working Capital	20,417,296	19,650,354	(766,941)	20,652,775	1,002,421	21,958,185	1,305,410	26,326,533	4,368,348	27,782,522	1,455,988
Working Capital Allowance (%)	15%	15%		15%		15%		15%		7.5%	
Working Capital Allowance	3,062,594	2,947,553	(115,041)	3,097,916	150,363	3,293,728	195,812	3,948,980	655,252	2,083,689	(1,865,291)
Rate Base	**16,641,297**	**16,913,725**	**272,428**	**17,865,541**	**951,816**	**18,953,562**	**1,088,022**	**26,195,379**	**7,241,817**	**24,959,518**	**(1,235,861)**

Table 2-4
Rate Base Variances with Working Capital Detail
2012 OEB Approved to 2016 Test Year

Description	Variance from 2012 OEB Approved	Variance from 2012 Actual	Variance from 2013 Actual	Variance from 2014 Actual	Variance from 2015 Bridge Year
Net Book Value					
Average Net Book Value	387,469	801,453	892,210	6,586,564	629,429
Working Capital Allowace					
Cost of Power	(1,283,150)	1,264,656	1,200,767	3,914,215	770,154
Operations	(41,951)	111,204	71,948	236,509	54,328
Maintenance	294,969	(207,255)	(83,461)	156,998	164,168
Billing & Collecting	10,450	(4,887)	21,700	25,150	126,954
Community Relations	(12,029)	5,779	(5,750)	(500)	2,044
Administration & General Expense	276,971	(159,128)	94,021	35,599	344,369
Donations - LEAP	545	(0)	0	-	2,866
Property Taxes	(2,625)	671	194	1,220	594
Less: Adjustments to Fully Allocated Depreciation	(10,120)	(8,619)	5,990	(843)	(9,488)
Rate Base Variance	**272,428**	**951,816**	**1,088,022**	**7,241,817**	**(1,235,861)**

In order to present a detailed explanation of the annual change in Grimsby Power's rate base from 2012 Board Approved rate base to the 2016 Test Year rate base, the narrative below separates Grimsby Power's Average Net Book Value into three components:

1. Average gross fixed assets additions
2. Average customer contribution
3. Average depreciation expense

As a result of this separation, some figures presented in the ensuring narrative will not tie directly to the Rate Base variances presented in Table 2-3 above. However, the sum of these components matches precisely with the overall annual variances in rate base that is shown in Table 2-3.

The Table 2-5(a thru d) below presents information from the 2012 Board Approved to 2016 Test Year complete with variances. Table 2-5a shows the Cost of Power, Table 2-5b shows

the Cost of Power within the Working Capital Allowance, Table 2-5c shows the consumption used to calculate the Cost of Power, and Table 2-5(d) shows the Average Net Book Value.

Table 2-5(a)
Cost of Power Variance Analysis
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	Variance 2012 Actual to 2012 Board Approved	2013 Actual	Variance 2013 Actual to 2012 Actual	2014 Actual	Variance 2014 Actual to 2013 Actual	2015 Bridge Year	Variance 2015 Bridge Year to 2014 Actual	2016 Test Year	Variance 2016 Test Year to 2014 Actual
Cost of Power Expenses											
Power Purchased	14,316,251	13,532,394	(783,857)	14,672,766	1,140,372	15,890,695	1,217,929	19,212,597	3,321,902	19,937,853	725,256
Wholesale Market Service Charges	1,266,481	964,337	(302,144)	964,881	544	877,016	(87,865)	1,122,821	245,805	1,187,256	64,435
Network Charges	1,261,033	1,182,811	(78,222)	1,221,255	38,444	1,272,289	51,034	1,420,558	148,269	1,742,327	321,769
Connection Charges	1,004,710	921,372	(83,338)	914,201	(7,171)	900,675	(13,526)	1,039,649	138,973	696,637	(343,012)
Low Voltage Charges	130,000	94,410	(35,590)	122,485	28,074	122,313	(172)	176,186	53,874	176,186	-
Smart Meter Entity Charges			-	64,392	64,392	97,760	33,368	103,152	5,392	104,858	1,706
Total COP Expenses	**17,978,475**	**16,695,325**	**(1,283,150)**	**17,959,981**	**1,264,656**	**19,160,748**	**1,200,767**	**23,074,964**	**3,914,215**	**23,845,118**	**770,154**

Table 2-5(b)
Cost of Power in Working Capital Allowance – Variances Analysis
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	Variance 2012 Actual to 2012 Board Approved	2013 Actual	Variance 2013 Actual to 2012 Actual	2014 Actual	Variance 2014 Actual to 2013 Actual	2015 Bridge Year	Variance 2015 Bridge Year to 2014 Actual	2016 Test Year	Variance 2016 Test Year to 2015 Bridge Year
Cost of Power Expenses											
Power Purchased	2,147,438	2,029,859	(117,579)	2,200,915	171,056	2,383,604	182,689	2,881,890	498,285	1,495,339	(1,386,551)
Wholesale Market Service Charges	189,972	144,651	(45,322)	144,732	82	131,552	(13,180)	168,423	36,871	89,044	(79,379)
Network Charges	189,155	177,422	(11,733)	183,188	5,767	190,843	7,655	213,084	22,240	130,675	(82,409)
Connection Charges	150,707	138,206	(12,501)	137,130	(1,076)	135,101	(2,029)	155,947	20,846	52,248	(103,700)
Low Voltage Charges	19,500	14,162	(5,338)	18,373	4,211	18,347	(26)	26,428	8,081	13,214	(13,214)
Smart Meter Entity Charges			-	9,659	9,659	14,664	5,005	15,473	809	7,864	(7,608)
Total COP Expenses in Working Capital Allowance	**2,696,771**	**2,504,299**	**(192,473)**	**2,693,997**	**189,698**	**2,874,112**	**180,115**	**3,461,245**	**587,132**	**1,788,384**	**(1,672,861)**

Table 2-5(c)
Consumption – Variances Analysis
2012 OEB Approved to 2016 Test Year

Consumption	2012 OEB Approved	2012 Actual	Variance 2012 Actual to 2012 Board Approved	2013 Actual	Variance 2013 Actual to 2012 Actual	2014 Actual	Variance 2014 Actual to 2013 Actual	2015 Bridge Year	Variance 2015 Bridge Year to 2014 Actual	2016 Test Year	Variance 2016 Test Year to 2015 Bridge Year
kWh	185,106,615	184,156,613	(950,002)	182,595,172	(1,561,441)	179,890,867	(2,704,305)	183,452,120	3,561,253	182,544,054	(908,066)
kW	195,858	187,690	(8,168)	190,557	2,868	184,395	(6,163)	189,558	5,163	316,626	127,068
Price Variance - Power $/MWh	77.34	73.48	-$ 3.86	$ 80.36	$ 6.87	$ 88.34	$ 7.98	$ 104.73	$ 16.39	$ 109.22	$ 4.49

Table 2-5(d)
Average Net Book Value – Variances Analysis
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	Variance 2012 Actual to 2012 OEB Approved	2013 Actual	Variance 2013 Actual to 2012 Actual	2014 Actual	Variance 2014 Actual to 2013 Actual	2015 Bridge Year	Variance 2015 Bridge Year to 2014 Actual	2016 Test Year	Variance 2016 Test year to 2015 Bridge Year
Fixed Assets, Opening Balance	26,708,078	14,646,488	(12,061,590)	16,634,564	1,988,075	18,196,327	1,561,764	28,954,535	10,758,208	32,375,315	3,420,780
Fixed Assets, Closing Balance	28,655,056	16,634,564	(12,020,492)	18,196,327	1,561,764	21,274,560	3,078,233	32,375,315	11,100,755	34,646,746	2,271,431
Average Gross Fixed Assets	**27,681,567**	**15,640,526**	**(12,041,041)**	**17,415,445**	**1,774,919**	**19,735,444**	**2,319,998**	**30,664,925**	**10,929,482**	**33,511,031**	**2,846,106**
Contributed Capital, Opening Balance	(150,000)	(709,329)	(559,329)	(1,012,295)	(302,965)	(1,380,217)	(367,923)	(2,473,461)	(1,093,243)	(4,339,283)	(1,865,822)
Contributed Capital, Closing Balance	(709,329)	(1,012,295)	(302,966)	(1,380,217)	(367,923)	(2,473,461)	(1,093,243)	(4,339,283)	(1,865,822)	(4,900,534)	(561,251)
Average Contributed Capital	**(429,665)**	**(860,812)**	**(431,147)**	**(1,196,256)**	**(335,444)**	**(1,926,839)**	**(730,583)**	**(3,406,372)**	**(1,479,533)**	**(4,619,909)**	**(1,213,537)**
Gross Fixed Assets, Opening Balance	26,558,078	13,937,159	(12,620,919)	15,622,269	1,685,110	16,816,110	1,193,841	26,481,074	9,664,964	28,036,032	1,554,958
Gross Fixed Assets, Closing Balance	27,945,727	15,622,269	(12,323,458)	16,816,110	1,193,841	18,801,099	1,984,989	28,036,032	9,234,933	29,746,212	1,710,180
Average Gross Fixed Assets	**27,251,903**	**14,779,714**	**(12,472,188)**	**16,219,189**	**1,439,475**	**17,808,605**	**1,589,415**	**27,258,553**	**9,449,949**	**28,891,122**	**1,632,569**
Fixed Assets Accumulated Depreciation, Opening Balance	(13,359,799)	(518,908)	12,840,891	(1,149,056)	(630,148)	(1,849,655)	(700,600)	(4,643,521)	(2,793,866)	(5,705,204)	(1,061,683)
Fixed Assets Accumulated Depreciation, Closing Balance	(14,057,650)	(1,149,056)	12,908,595	(1,849,655)	(700,600)	(2,628,087)	(778,432)	(5,705,204)	(3,077,117)	(6,864,625)	(1,159,420)
Fixed Assets Average Accumulated Depreciation	**(13,708,725)**	**(833,982)**	**12,874,743**	**(1,499,355)**	**(665,374)**	**(2,238,871)**	**(739,516)**	**(5,174,363)**	**(2,935,491)**	**(6,284,914)**	**(1,110,552)**
Contributed Capital Accumulated Depreciation, Opening Balance	9,205	9,205	-	31,673	22,468	63,908	32,235	116,295	52,387	208,122	91,827
Contributed Capital Accumulated Depreciation, Closing Balance	61,844	31,673	(30,171)	63,908	32,235	116,295	52,387	208,122	91,827	331,119	122,997
Contributed Capital Average Accumulated Depreciation	**35,524**	**20,439**	**(15,086)**	**47,790**	**27,352**	**90,101**	**42,311**	**162,209**	**72,107**	**269,621**	**107,412**
Total Accumulated Depreciation, Opening Balance	(13,350,594)	(509,703)	12,840,891	(1,117,383)	(607,680)	(1,785,747)	(668,365)	(4,527,226)	(2,741,479)	(5,497,082)	(969,856)
Total Accumulated Depreciation, Closing Balance	(13,995,806)	(1,117,383)	12,878,423	(1,785,747)	(668,365)	(2,511,792)	(726,045)	(5,497,082)	(2,985,290)	(6,533,505)	(1,036,424)
Total Average Accumulated Depreciation	**(13,673,200)**	**(813,543)**	**12,859,657**	**(1,451,565)**	**(638,022)**	**(2,148,770)**	**(697,205)**	**(5,012,154)**	**(2,863,384)**	**(6,015,294)**	**(1,003,140)**
Average Net Book Value	**13,578,702**	**13,966,171**	**387,469**	**14,767,624**	**801,453**	**15,659,835**	**892,210**	**22,246,399**	**6,586,564**	**22,875,829**	**629,429**

Variance of 2012 Actual vs. 2012 Board Approved Rate Base

The variance between the 2012 Actual and the 2012 Board approved Rate Base was $272,248 (Table 2-4). The main drivers that explain the variance are:

1. A decrease in Working Capital and the Working Capital Allowance due to a reduced cost of power of $1,283,150 (Table 2-5(a)); the decrease in cost of power reflects a lower actual consumption of 950,002 kwhrs (Table 2-5(c)) than was estimated in the rate application.

   A higher Average Net Book Value of assets of $387,469 (Table 2-3). In reviewing the variances between the 2012 Approved and 2012 Actual Balances, it is evident that 2012 Actual balances were significantly lower than was estimated and approved. The primary reason for this decrease is due to Grimsby Power's election to restate gross capital costs of Property, Plant and Equipment to reflect the carrying costs or Net Book Value, when adopting MIFRS. As a result, effective January 1, 2011 Grimsby Power's gross capital asset value decreased from $24,007,789 to $11,307,296. Under MIFRS these carrying values were then used to calculate depreciation on a go-forward basis based on the appropriate estimated useful lives remaining for each asset category.

Variance of 2013 Actual vs. 2012 Actual

The variance between the 2013 Actual and the 2012 Actual was $951,816. The main drivers that explain the variance are:

1. A $1,002,421 increase in Working Capital Allowance due to an increase in the Cost of Power of $1,264,656 (please see Table 2-5(a) Cost of Power Variance Analysis).

2. An increase in the Average Net Book Value of assets of $801,453 (Table 2-3) as a result of increased average actual capital spending of $1,774,919 (Table 2-5d) offset by average customer contributions of $335,444 (Table 2-5d) and an average depreciation expense of $638,022. (For more details please see Exhibit 2, Summary of Capital Expenditures Table 2-20.)

Variance of 2014 Actual vs. 2013 Actual Rate Base

The variance between the 2014 Actual and the 2013 Actual was $1,088,022. The main drivers that explain the variance were:

1. A $1,305,410 increase in Working Capital Allowance due to an increase in the Cost of Power of $1,200,767 (please see table 2-5 Cost of Power Variance Analysis).

2. An increase in the Average Net Book Value of assets of $892,210 (Table 2-3) as a result of increased average actual capital spending of $2,319,998 (Table 2-5d) offset by average customer contributions of $730,583 (Table 2-5d) and an average depreciation expense of $697,205. (For more details please see Exhibit 2, Summary of Capital Expenditures Table 2-2-20)

Variance of 2015 Actual vs. 2014 Actual Rate Base

The variance between the 2015 Actual and the 2014 Actual was $7,241,817. The main drivers that explain the variance were:

1. A $4,638,348 increase in Working Capital Allowance due to an increase in the Cost of Power of $3,914,215 (please see Table 2-5a Cost of Power Variance Analysis).

2. An increase in the Average Net Book Value of assets of $6,586,564 (Table 2-3) as a result of increased average actual capital spending of $10,929,482 (Table 2-5d) offset by average customer contributions of $1,479,534 (Table 2-5d) and an average depreciation expense of $2,863,384. The higher increased in the Net Book value is the result of the amalgamation between Grimsby Power and Niagara West Transformation Corporation the Net Book value of the fixed assets increased by $5,664,541 ($7,679,975 in cost and $2,015,434 in accumulated depreciation). (For more details please see Exhibit 2, Summary of Capital Expenditures Table 2-20)

Variance of 2016 Actual vs. 2015 Actual Rate Base

The variance between the 2016 Actual and the 2015 Actual was ($1,235,861). The main drivers that explain the variance were:

1. A $1,455,988 increase in Working Capital Allowance due to an increase in the Cost of Power of $770,514 (please see table 2-5a Cost of Power Variance Analysis).

2. An increase in the Average Net Book Value of assets of $629,429 (Table 2-3) as a result of increased average actual capital spending of $2,846,106 (Table 2-5d) offset by average customer contributions of $1,213,537 (Table 2-5d) and an average depreciation expense of $1,003,140. (For more details please see Exhibit 2, Summary of Capital Expenditures Table 2-20)

Fixed Asset Continuity Schedules

Opening and closing balances of gross assets and accumulated depreciation correspond to the fixed asset continuity statements. The net book value balances are the balances included in the rate base calculation.

Grimsby Power has completed the requirement of Appendix 2-BA in Tables 2-6 through 2-10.

Table 2-6
Appendix 2-BA
Fixed Asset Continuity Schedule
2012

Accounting Standard MIFRS
Year 2012

			Cost				Accumulated Depreciation				
CCA Class [2]	**OEB Account [3]**	**Description [3]**	**Opening Balance**	**Additions [4]**	**Disposals**	**Closing Balance**	**Opening Balance**	**Additions**	**Disposals**	**Closing Balance**	**Net Book Value**
12	1611	Computer Software (Formally known as Account 1925)	$ 289,366	$ 169,010		$ 458,376	$ (66,774)	$ (88,383)		$ (155,158)	$ 303,219
CEC	1612	Land Rights (Formally known as Account 1906)				$ -	$ -			$ -	$ -
N/A	1805	Land				$ -	$ -			$ -	$ -
47	1808	Buildings				$ -	$ -			$ -	$ -
13	1810	Leasehold Improvements				$ -	$ -			$ -	$ -
47	1815	Transformer Station Equipment >50 kV				$ -	$ -			$ -	$ -
47	1820	Distribution Station Equipment <50 kV				$ -	$ -			$ -	$ -
47	1825	Storage Battery Equipment				$ -				$ -	$ -
47	1830	Poles, Towers & Fixtures	$ 3,337,033	$ 289,356	$ (663)	$ 3,625,726	$ (92,307)	$ (98,555)		$ (190,863)	$ 3,434,863
47	1835	Overhead Conductors & Devices	$ 1,897,776	$ 310,666	$ (18,663)	$ 2,189,779	$ (31,933)	$ (36,449)		$ (68,382)	$ 2,121,397
47	1840	Underground Conduit	$ 1,853,805	$ 18,680		$ 1,872,485	$ (49,359)	$ (49,818)		$ (99,177)	$ 1,773,308
47	1845	Underground Conductors & Devices	$ 1,058,668	$ 147,279	$ (2,972)	$ 1,202,975	$ (38,442)	$ (42,670)		$ (81,112)	$ 1,121,863
47	1850	Line Transformers	$ 2,978,874	$ 318,468	$ (3,089)	$ 3,294,253	$ (96,178)	$ (102,290)		$ (198,468)	$ 3,095,785
47	1855	Services (Overhead)	$ 134,454	$ 3,270		$ 137,724	$ (2,172)	$ (2,414)		$ (4,585)	$ 133,139
47	1855	Services (Underground)	$ 505,122	$ 187,877		$ 692,999	$ (14,154)	$ (17,310)		$ (31,464)	$ 661,535
47	1860	Meters (Smart Meters)	$ 1,519,758	$ 86,864		$ 1,606,622	$ (52,400)	$ (105,593)		$ (157,993)	$ 1,448,629
47	1860	Meters >50	$ 162,827	$ 10,190		$ 173,017	$ (8,378)	$ (8,295)		$ (16,673)	$ 156,344
47	1860	Meters CT's & PT's	$ 69,489	$ 1,893	$ (1,612)	$ 69,770	$ (2,163)	$ (2,218)	$ 387	$ (3,994)	$ 65,776
N/A	1905	Land	$ 111,556			$ 111,556	$ -			$ -	$ 111,556
47	1908	Buildings & Fixtures (50 years)	$ 311,426			$ 311,426	$ (12,457)	$ (12,457)		$ (24,914)	$ 286,512
47	1908	Buildings & Fixtures (40 years)	$ 29,372			$ 29,372	$ (1,406)	$ (1,406)		$ (2,811)	$ 26,560
47	1908	Buildings & Fixtures (25 years)	$ 174,026	$ 26,790		$ 200,815	$ (5,123)	$ (7,717)		$ (12,840)	$ 187,975
13	1910	Leasehold Improvements				$ -				$ -	$ -
8	1915	Office Furniture & Equipment (10 years)	$ 25,914	$ 47,232		$ 73,147	$ (5,037)	$ (6,371)		$ (11,408)	$ 61,739
8	1915	Office Furniture & Equipment (5 years)				$ -				$ -	$ -
10	1920	Computer Equipment - Hardware	$ 64,440	$ 47,011	$ (603)	$ 110,847	$ (20,660)	$ (19,035)	$ 603	$ (39,091)	$ 71,756
10	1930	Transportation Equipment (8 years)	$ 17,876	$ 1,953		$ 19,829	$ (3,349)	$ (3,471)		$ (6,820)	$ 13,009
10	1930	Transportation Equipment (12 years)				$ -	$ -			$ -	$ -
10	1930	Transportation Equipment (15 years)	$ 22,698	$ 322,252		$ 344,950	$ (1,025)	$ (12,337)		$ (13,362)	$ 331,588
8	1935	Stores Equipment				$ -	$ -			$ -	$ -
8	1940	Tools, Shop & Garage Equipment	$ 66,736	$ 944		$ 67,680	$ (8,746)	$ (7,874)		$ (16,621)	$ 51,059
8	1945	Measurement & Testing Equipment	$ 15,273	$ 2,029		$ 17,302	$ (6,845)	$ (5,279)		$ (12,124)	$ 5,178
8	1950	Power Operated Equipment				$ -				$ -	$ -
8	1955	Communications Equipment		$ 23,913		$ 23,913		$ (1,196)		$ (1,196)	$ 22,717
8	1955	Communication Equipment (Smart Meters)				$ -				$ -	$ -
8	1960	Miscellaneous Equipment				$ -				$ -	$ -
47	1995	Contributions & Grants				$ -				$ -	$ -
47	2440	Deferred Revenue[5]	$ (709,329)	$ (302,965)		$ (1,012,295)	$ 9,205	$ 22,468		$ 31,673	$ (980,622)
						$ -				$ -	$ -
		Sub-Total	**$ 13,937,159**	**$ 1,712,711**	**$ (27,601)**	**$ 15,622,269**	**$ (509,703)**	**$ (608,670)**	**$ 990**	**$ (1,117,383)**	**$ 14,504,886**
		Less Socialized Renewable Energy Generation Investments (input as negative)				$ -				$ -	$ -
		Less Other Non Rate-Regulated Utility Assets (input as negative)				$ -				$ -	$ -
		Total PP&E	**$ 13,937,159**	**$ 1,712,711**	**$ (27,601)**	**$ 15,622,269**	**$ (509,703)**	**$ (608,670)**	**$ 990**	**$ (1,117,383)**	**$ 14,504,886**
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable [6]									
		Total						**$ (608,670)**			

10		Transportation
8		Stores Equipment

Less: *Fully Allocated Depreciation*

Transportation	$ (15,808)
PP&E Deduction	$ (89,217)
Smart Meters	$ 60,682
Net Depreciation	**$ (564,326)**

Table 2-7
Appendix 2-BA
Fixed Asset Continuity Schedule
2013

Accounting Standard MIFRS
Year 2013

			Cost				Accumulated Depreciation				
CCA Class [2]	OEB Account [3]	Description [3]	Opening Balance	Additions [4]	Disposals	Closing Balance	Opening Balance	Additions	Disposals	Closing Balance	Net Book Value
12	1611	Computer Software (Formally known as Account 1925)	$ 458,376	$ 187,400		$ 645,776	$ (155,158)	$ (107,926)		$ (263,083)	$ 382,693
CEC	1612	Land Rights (Formally known as Account 1906)	$ -			$ -	$ -			$ -	$ -
N/A	1805	Land	$ -			$ -	$ -			$ -	$ -
47	1808	Buildings	$ -			$ -	$ -			$ -	$ -
13	1810	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
47	1815	Transformer Station Equipment >50 kV	$ -			$ -	$ -			$ -	$ -
47	1820	Distribution Station Equipment <50 kV	$ -			$ -	$ -			$ -	$ -
47	1825	Storage Battery Equipment	$ -			$ -	$ -			$ -	$ -
47	1830	Poles, Towers & Fixtures	$ 3,625,726	$ 275,750		$ 3,901,476	$ (190,863)	$ (104,827)		$ (295,690)	$ 3,605,786
47	1835	Overhead Conductors & Devices	$ 2,189,779	$ 238,552		$ 2,428,330	$ (68,382)	$ (40,870)		$ (109,252)	$ 2,319,079
47	1840	Underground Conduit	$ 1,872,485	$ 148,242		$ 2,020,727	$ (99,177)	$ (51,488)		$ (150,665)	$ 1,870,062
47	1845	Underground Conductors & Devices	$ 1,202,975	$ 186,874		$ 1,389,849	$ (81,112)	$ (48,190)		$ (129,302)	$ 1,260,547
47	1850	Line Transformers	$ 3,294,253	$ 216,418		$ 3,510,671	$ (198,468)	$ (108,938)		$ (307,405)	$ 3,203,266
47	1855	Services (Overhead)	$ 137,724	$ 32,480		$ 170,204	$ (4,585)	$ (2,712)		$ (7,297)	$ 162,907
47	1855	Services (Underground)	$ 692,999	$ 145,721		$ 838,720	$ (31,464)	$ (22,076)		$ (53,540)	$ 785,180
47	1860	Meters (Smart Meters)	$ 1,606,622	$ 885		$ 1,607,507	$ (157,993)	$ (108,518)		$ (266,511)	$ 1,340,996
47	1860	Meters >50	$ 173,017	$ 39,601		$ 212,619	$ (16,673)	$ (9,291)		$ (25,964)	$ 186,655
47	1860	Meters CT's & PT's	$ 69,770	$ 916		$ 70,686	$ (3,994)	$ (2,246)		$ (6,239)	$ 64,447
N/A	1905	Land	$ 111,556			$ 111,556	$ -			$ -	$ 111,556
47	1908	Buildings & Fixtures (50 years)	$ 311,426			$ 311,426	$ (24,914)	$ (12,457)		$ (37,371)	$ 274,055
47	1908	Buildings & Fixtures (40 years)	$ 29,372			$ 29,372	$ (2,811)	$ (1,406)		$ (4,217)	$ 25,155
47	1908	Buildings & Fixtures (25 years)	$ 200,815	$ 8,883		$ 209,698	$ (12,840)	$ (8,431)		$ (21,271)	$ 188,427
13	1910	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
8	1915	Office Furniture & Equipment (10 years)	$ 73,147	$ 1,397		$ 74,543	$ (11,408)	$ (8,489)		$ (19,897)	$ 54,646
8	1915	Office Furniture & Equipment (5 years)	$ -			$ -	$ -			$ -	$ -
10	1920	Computer Equipment - Hardware	$ 110,847	$ 18,173	$ (1,943)	$ 127,077	$ (39,091)	$ (21,694)	$ 1,201	$ (59,585)	$ 67,492
10	1930	Transportation Equipment (8 years)	$ 19,829			$ 19,829	$ (6,820)	$ (3,593)		$ (10,413)	$ 9,416
10	1930	Transportation Equipment (12 years)	$ -			$ -	$ -			$ -	$ -
10	1930	Transportation Equipment (15 years)	$ 344,950			$ 344,950	$ (13,362)	$ (23,079)		$ (36,441)	$ 308,509
8	1935	Stores Equipment	$ -			$ -	$ -			$ -	$ -
8	1940	Tools, Shop & Garage Equipment	$ 67,680	$ 20,140		$ 87,820	$ (16,621)	$ (8,929)		$ (25,550)	$ 62,270
8	1945	Measurement & Testing Equipment	$ 17,302			$ 17,302	$ (12,124)	$ (2,138)		$ (14,262)	$ 3,040
8	1950	Power Operated Equipment	$ -			$ -	$ -			$ -	$ -
8	1955	Communications Equipment	$ 23,913	$ 42,276		$ 66,189	$ (1,196)	$ (4,505)		$ (5,701)	$ 60,488
8	1955	Communication Equipment (Smart Meters)	$ -			$ -	$ -			$ -	$ -
8	1960	Miscellaneous Equipment	$ -			$ -	$ -			$ -	$ -
47	1995	Contributions & Grants	$ -			$ -	$ -			$ -	$ -
47	2440	Deferred Revenue[5]	$ (1,012,295)	$ (367,923)		$ (1,380,217)	$ 31,673	$ 32,235		$ 63,908	$ (1,316,309)
						$ -				$ -	$ -
		Sub-Total	**$ 15,622,269**	**$ 1,195,784**	**$ (1,943)**	**$ 16,816,110**	**$ (1,117,383)**	**$ (669,566)**	**$ 1,201**	**$ (1,785,747)**	**$ 15,030,362**
		Less Socialized Renewable Energy Generation Investments (input as negative)				$ -				$ -	$ -
		Less Other Non Rate-Regulated Utility Assets (input as negative)				$ -				$ -	$ -
		Total PP&E	**$ 15,622,269**	**$ 1,195,784**	**$ (1,943)**	**$ 16,816,110**	**$ (1,117,383)**	**$ (669,566)**	**$ 1,201**	**$ (1,785,747)**	**$ 15,030,362**
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable [6]									
		Total						**$ (669,566)**			

10		Transportation
8		Stores Equipment

Less: *Fully Allocated Depreciation*

Transportation	$ (26,672)
PP&E Deduction	$ (89,217)
Net Depreciation	**$ (553,677)**

Table 2-8
Appendix 2-BA
Fixed Asset Continuity Schedule
2014

Accounting Standard MIFRS
Year **2014**

CCA Class [2]	OEB Account [3]	Description [3]	Cost: Opening Balance	Cost: Additions [4]	Cost: Disposals	Cost: Closing Balance	Accumulated Depreciation: Opening Balance	Accumulated Depreciation: Additions	Accumulated Depreciation: Disposals	Accumulated Depreciation: Closing Balance	Net Book Value
12	1611	Computer Software (Formally known as Account 1925)	$ 645,776	$ 95,594		$ 741,370	$ (263,083)	(138,460)		$ (401,543)	$ 339,827
CEC	1612	Land Rights (Formally known as Account 1906)	$ -			$ -	$ -			$ -	$ -
N/A	1805	Land	$ -			$ -	$ -			$ -	$ -
47	1808	Buildings	$ -			$ -	$ -			$ -	$ -
13	1810	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
47	1815	Transformer Station Equipment >50 kV	$ -			$ -	$ -			$ -	$ -
47	1820	Distribution Station Equipment <50 kV	$ -			$ -	$ -			$ -	$ -
47	1825	Storage Battery Equipment	$ -			$ -	$ -			$ -	$ -
47	1830	Poles, Towers & Fixtures	$ 3,901,476	$ 194,572		$ 4,096,048	$ (295,690)	(110,053)		$ (405,742)	$ 3,690,306
47	1835	Overhead Conductors & Devices	$ 2,428,330	$ 310,571		$ 2,738,902	$ (109,252)	(45,446)		$ (154,698)	$ 2,584,204
47	1840	Underground Conduit	$ 2,020,727	$ 423,281		$ 2,444,007	$ (150,665)	(57,203)		$ (207,867)	$ 2,236,140
47	1845	Underground Conductors & Devices	$ 1,389,849	$ 444,290		$ 1,834,139	$ (129,302)	(58,710)		$ (188,012)	$ 1,646,128
47	1850	Line Transformers	$ 3,510,671	$ 796,103	$ (24,820)	$ 4,281,955	$ (307,405)	(121,299)	16,082	$ (412,623)	$ 3,869,332
47	1855	Services (Overhead)	$ 170,204	$ 20,877		$ 191,081	$ (7,297)	(3,156)		$ (10,453)	$ 180,628
47	1855	Services (Underground)	$ 838,720	$ 529,419		$ 1,368,139	$ (53,540)	(31,721)		$ (85,261)	$ 1,282,878
47	1860	Meters (Smart Meters)	$ 1,607,507	$ 124,859		$ 1,732,366	$ (266,511)	(112,709)		$ (379,220)	$ 1,353,145
47	1860	Meters >50	$ 212,619	$ 25,691		$ 238,310	$ (25,964)	(10,597)		$ (36,560)	$ 201,750
47	1860	Meters CT's & PT's	$ 70,686	$ 62,036		$ 132,722	$ (6,239)	(3,145)		$ (9,384)	$ 123,338
N/A	1905	Land	$ 111,556			$ 111,556	$ -			$ -	$ 111,556
47	1908	Buildings & Fixtures (50 years)	$ 311,426			$ 311,426	$ (37,371)	(12,457)		$ (49,828)	$ 261,598
47	1908	Buildings & Fixtures (40 years)	$ 29,372			$ 29,372	$ (4,217)	(1,406)		$ (5,622)	$ 23,749
47	1908	Buildings & Fixtures (25 years)	$ 209,698	$ 3,400		$ 213,098	$ (21,271)	(8,459)		$ (29,731)	$ 183,368
13	1910	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
8	1915	Office Furniture & Equipment (10 years)	$ 74,543	$ 7,021	$ (1,069)	$ 80,496	$ (19,897)	(8,910)	1,069	$ (27,739)	$ 52,757
8	1915	Office Furniture & Equipment (5 years)	$ -			$ -	$ -			$ -	$ -
10	1920	Computer Equipment - Hardware	$ 127,077	$ 9,822		$ 136,899	$ (59,585)	(22,236)		$ (81,821)	$ 55,079
10	1930	Transportation Equipment (8 years)	$ 19,829	$ 1,637		$ 21,466	$ (10,413)	(5,088)		$ (15,501)	$ 5,965
10	1930	Transportation Equipment (12 years)	$ -			$ -	$ -			$ -	$ -
10	1930	Transportation Equipment (15 years)	$ 344,950			$ 344,950	$ (36,441)	(23,524)		$ (59,965)	$ 284,985
8	1935	Stores Equipment	$ -			$ -	$ -			$ -	$ -
8	1940	Tools, Shop & Garage Equipment	$ 87,820	$ 23,247	$ (1,355)	$ 109,713	$ (25,550)	(10,737)	676	$ (35,611)	$ 74,102
8	1945	Measurement & Testing Equipment	$ 17,302	$ 19,325		$ 36,627	$ (14,262)	(3,769)		$ (18,031)	$ 18,595
8	1950	Power Operated Equipment	$ -			$ -	$ -			$ -	$ -
8	1955	Communications Equipment	$ 66,189	$ 785	$ (655)	$ 66,319	$ (5,701)	(6,658)	164	$ (12,195)	$ 54,124
8	1955	Communication Equipment (Smart Meters)	$ -			$ -	$ -			$ -	$ -
8	1960	Miscellaneous Equipment	$ -			$ -	$ -			$ -	$ -
47	1970	Load Management Controls Customer Premises	$ -	$ 13,599		$ 13,599	$ -	(680)		$ (680)	$ 12,919
47	1995	Contributions & Grants	$ -			$ -	$ -			$ -	$ -
47	2440	Deferred Revenue[5]	$ (1,380,217)	$ (1,093,243)		$ (2,473,461)	$ 63,908	52,387		$ 116,295	$ (2,357,166)
						$ -				$ -	$ -
		Sub-Total	**$ 16,816,110**	**$ 2,012,887**	**$ (27,898)**	**$ 18,801,099**	**$ (1,785,747)**	**$ (744,036)**	**$ 17,991**	**$ (2,511,792)**	**$ 16,289,307**
		Less Socialized Renewable Energy Generation Investments (input as negative)				$ -				$ -	$ -
		Less Other Non Rate-Regulated Utility Assets (input as negative)				$ -				$ -	$ -
		Total PP&E	**$ 16,816,110**	**$ 2,012,887**	**$ (27,898)**	**$ 18,801,099**	**$ (1,785,747)**	**$ (744,036)**	**$ 17,991**	**$ (2,511,792)**	**$ 16,289,307**
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable [6]									
		Total						**$ (744,036)**			

10		Transportation
8		Stores Equipment

Less: *Fully Allocated Depreciation*

Transportation	$ (28,612)
PP&E Deduction	$ (89,217)
Net Depreciation	**$ (626,207)**

Table 2-9
Appendix 2-BA
Fixed Asset Continuity Schedule
2015 Bridge Year

Accounting Standard MIFRS
Year 2015

			Cost				Accumulated Depreciation				
CCA Class [2]	**OEB Account [3]**	**Description [3]**	**Opening Balance**	**Additions [4]**	**Disposals**	**Closing Balance**	**Opening Balance**	**Additions**	**Disposals**	**Closing Balance**	**Net Book Value**
12	1611	Computer Software (Formally known as Account 1925)	$ 741,370	$ 90,820		$ 832,190	$ (401,543)	$ (128,470)		$ (530,013)	$ 302,177
CEC	1612	Land Rights (Formally known as Account 1906)	$ -			$ -	$ -			$ -	$ -
N/A	1805	Land	$ 149,992			$ 149,992	$ -			$ -	$ 149,992
47	1808	Buildings	$ 1,256,185			$ 1,256,185	$ (271,597)	$ (25,124)		$ (296,721)	$ 959,464
13	1810	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
47	1815	Transformer Station Equipment >50 kV	$ 6,273,798	$ 1,326,736		$ 7,600,534	$ (1,743,837)	$ (173,429)		$ (1,917,266)	$ 5,683,268
47	1820	Distribution Station Equipment <50 kV	$ -			$ -	$ -			$ -	$ -
47	1825	Storage Battery Equipment	$ -			$ -	$ -			$ -	$ -
47	1830	Poles, Towers & Fixtures	$ 4,096,048	$ 90,929		$ 4,186,977	$ (405,742)	$ (113,225)		$ (518,967)	$ 3,668,010
47	1835	Overhead Conductors & Devices	$ 2,738,902	$ 285,843		$ 3,024,745	$ (154,698)	$ (50,416)		$ (205,114)	$ 2,819,631
47	1840	Underground Conduit	$ 2,444,007	$ 202,407		$ 2,646,414	$ (207,867)	$ (63,460)		$ (271,327)	$ 2,375,087
47	1845	Underground Conductors & Devices	$ 1,834,139	$ 374,701		$ 2,208,840	$ (188,012)	$ (72,359)		$ (260,371)	$ 1,948,469
47	1850	Line Transformers	$ 4,281,955	$ 363,528		$ 4,645,483	$ (412,623)	$ (135,469)		$ (548,091)	$ 4,097,391
47	1855	Services (Overhead)	$ 191,081	$ 7,736		$ 198,817	$ (10,453)	$ (3,395)		$ (13,847)	$ 184,969
47	1855	Services (Underground)	$ 1,368,139	$ 285,037		$ 1,653,177	$ (85,261)	$ (43,356)		$ (128,617)	$ 1,524,560
47	1860	Meters (Smart Meters)	$ 1,732,366	$ 85,088		$ 1,817,454	$ (379,220)	$ (119,707)		$ (498,928)	$ 1,318,526
47	1860	Meters >50	$ 238,310	$ 57,968		$ 296,278	$ (36,560)	$ (12,270)		$ (48,830)	$ 247,448
47	1860	Meters CT's & PT's	$ 132,722	$ 1,110		$ 133,833	$ (9,384)	$ (4,047)		$ (13,431)	$ 120,401
N/A	1905	Land	$ 111,556			$ 111,556	$ -			$ -	$ 111,556
47	1908	Buildings & Fixtures (50 years)	$ 311,426			$ 311,426	$ (49,828)	$ (12,457)		$ (62,286)	$ 249,140
47	1908	Buildings & Fixtures (40 years)	$ 29,372			$ 29,372	$ (5,622)	$ (1,406)		$ (7,028)	$ 22,344
47	1908	Buildings & Fixtures (25 years)	$ 213,098	$ 55,350		$ 268,448	$ (29,731)	$ (9,634)		$ (39,365)	$ 229,083
13	1910	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
8	1915	Office Furniture & Equipment (10 years)	$ 80,496	$ 21,349		$ 101,845	$ (27,739)	$ (10,324)		$ (38,063)	$ 63,782
8	1915	Office Furniture & Equipment (5 years)	$ -			$ -	$ -			$ -	$ -
10	1920	Computer Equipment - Hardware	$ 136,899	$ 40,890		$ 177,789	$ (81,821)	$ (25,860)		$ (107,680)	$ 70,109
10	1930	Transportation Equipment (8 years)	$ 21,466			$ 21,466	$ (15,501)	$ (3,536)		$ (19,037)	$ 2,429
10	1930	Transportation Equipment (12 years)	$ -			$ -	$ -			$ -	$ -
10	1930	Transportation Equipment (15 years)	$ 344,950			$ 344,950	$ (59,965)	$ (23,524)		$ (83,490)	$ 261,460
8	1935	Stores Equipment	$ -			$ -	$ -			$ -	$ -
8	1940	Tools, Shop & Garage Equipment	$ 109,713	$ 131,289		$ 241,002	$ (35,611)	$ (17,764)		$ (53,375)	$ 187,627
8	1945	Measurement & Testing Equipment	$ 36,627			$ 36,627	$ (18,031)	$ (4,459)		$ (22,490)	$ 14,136
8	1950	Power Operated Equipment	$ -			$ -	$ -			$ -	$ -
8	1955	Communications Equipment	$ 66,319			$ 66,319	$ (12,195)	$ (6,632)		$ (18,827)	$ 47,492
8	1955	Communication Equipment (Smart Meters)	$ -			$ -	$ -			$ -	$ -
8	1960	Miscellaneous Equipment	$ -			$ -	$ -			$ -	$ -
47	1970	Load Management Controls Customer Premises	$ 13,599			$ 13,599	$ (680)	$ (1,360)		$ (2,040)	$ 11,559
47	1995	Contributions & Grants	$ -			$ -	$ -			$ -	$ -
47	2440	Deferred Revenue[5]	$ (2,473,461)	$ (1,865,822)		$ (4,339,283)	$ 116,295	$ 91,827		$ 208,122	$ (4,131,161)
						$ -				$ -	$ -
		Sub-Total	**$ 26,481,074**	**$ 1,554,958**	**$ -**	**$ 28,036,032**	**$ (4,527,226)**	**$ (969,856)**	**$ -**	**$ (5,497,082)**	**$ 22,538,950**
		Less Socialized Renewable Energy Generation Investments (input as negative)				$ -				$ -	$ -
		Less Other Non Rate-Regulated Utility Assets (input as negative)				$ -				$ -	$ -
		Total PP&E	**$ 26,481,074**	**$ 1,554,958**	**$ -**	**$ 28,036,032**	**$ (4,527,226)**	**$ (969,856)**	**$ -**	**$ (5,497,082)**	**$ 22,538,950**
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable [6]									
		Total						**$ (969,856)**			

10		Transportation
8		Stores Equipment

Less: *Fully Allocated Depreciation*

Transportation	$ (27,061)
PP&E Deduction	$ (89,217)
Net Depreciation	**$ (853,578)**

Table 2-10
Appendix 2-BA
Fixed Asset Continuity Schedule
2016 Test Year

Accounting Standard MIFRS
Year 2016

CCA Class [2]	OEB Account [3]	Description [3]	Cost: Opening Balance	Cost: Additions [4]	Cost: Disposals	Cost: Closing Balance	Accumulated Depreciation: Opening Balance	Accumulated Depreciation: Additions	Accumulated Depreciation: Disposals	Accumulated Depreciation: Closing Balance	Net Book Value
12	1611	Computer Software (Formally known as Account 1925)	$ 832,190	$ 177,000		$ 1,009,190	$ (530,013)	$ (135,385)		$ (665,398)	$ 343,792
CEC	1612	Land Rights (Formally known as Account 1906)	$ -			$ -	$ -			$ -	$ -
N/A	1805	Land	$ 149,992			$ 149,992	$ -			$ -	$ 149,992
47	1808	Buildings	$ 1,256,185			$ 1,256,185	$ (296,721)	$ (25,124)		$ (321,844)	$ 934,341
13	1810	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
47	1815	Transformer Station Equipment >50 kV	$ 7,600,534	$ 45,000		$ 7,645,534	$ (1,917,266)	$ (190,576)		$ (2,107,842)	$ 5,537,692
47	1820	Distribution Station Equipment <50 kV	$ -			$ -	$ -			$ -	$ -
47	1825	Storage Battery Equipment	$ -			$ -	$ -			$ -	$ -
47	1830	Poles, Towers & Fixtures	$ 4,186,977	$ 123,196		$ 4,310,173	$ (518,967)	$ (115,604)		$ (634,572)	$ 3,675,601
47	1835	Overhead Conductors & Devices	$ 3,024,745	$ 173,701		$ 3,198,445	$ (205,114)	$ (54,245)		$ (259,359)	$ 2,939,086
47	1840	Underground Conduit	$ 2,646,414	$ 190,845		$ 2,837,259	$ (271,327)	$ (67,392)		$ (338,719)	$ 2,498,540
47	1845	Underground Conductors & Devices	$ 2,208,840	$ 244,669		$ 2,453,509	$ (260,371)	$ (82,682)		$ (343,053)	$ 2,110,456
47	1850	Line Transformers	$ 4,645,483	$ 354,435		$ 4,999,918	$ (548,091)	$ (144,443)		$ (692,534)	$ 4,307,384
47	1855	Services (Overhead)	$ 198,817	$ 7,297		$ 206,114	$ (13,847)	$ (3,520)		$ (17,367)	$ 188,747
47	1855	Services (Underground)	$ 1,653,177	$ 291,542		$ 1,944,718	$ (128,617)	$ (51,593)		$ (180,210)	$ 1,764,508
47	1860	Meters (Smart Meters)	$ 1,817,454	$ 79,817		$ 1,897,270	$ (498,928)	$ (125,203)		$ (624,131)	$ 1,273,140
47	1860	Meters >50	$ 296,278	$ 48,420		$ 344,697	$ (48,830)	$ (14,397)		$ (63,227)	$ 281,470
47	1860	Meters CT's & PT's	$ 133,833	$ 1,110		$ 134,943	$ (13,431)	$ (4,079)		$ (17,510)	$ 117,433
N/A	1905	Land	$ 111,556			$ 111,556	$ -			$ -	$ 111,556
47	1908	Buildings & Fixtures (50 years)	$ 311,426			$ 311,426	$ (62,286)	$ (12,457)		$ (74,743)	$ 236,683
47	1908	Buildings & Fixtures (40 years)	$ 29,372			$ 29,372	$ (7,028)	$ (1,406)		$ (8,433)	$ 20,938
47	1908	Buildings & Fixtures (25 years)	$ 268,448	$ 132,400		$ 400,848	$ (39,365)	$ (13,389)		$ (52,754)	$ 348,094
13	1910	Leasehold Improvements	$ -			$ -	$ -			$ -	$ -
8	1915	Office Furniture & Equipment (10 years)	$ 101,845	$ 9,000		$ 110,845	$ (38,063)	$ (11,843)		$ (49,906)	$ 60,939
8	1915	Office Furniture & Equipment (5 years)	$ -			$ -	$ -			$ -	$ -
10	1920	Computer Equipment - Hardware	$ 177,789	$ 37,000		$ 214,789	$ (107,680)	$ (33,649)		$ (141,329)	$ 73,460
10	1930	Transportation Equipment (8 years)	$ 21,466			$ 21,466	$ (19,037)	$ (449)		$ (19,486)	$ 1,980
10	1930	Transportation Equipment (12 years)	$ -			$ -	$ -			$ -	$ -
10	1930	Transportation Equipment (15 years)	$ 344,950	$ 356,000		$ 700,950	$ (83,490)	$ (35,391)		$ (118,881)	$ 582,069
8	1935	Stores Equipment	$ -			$ -	$ -			$ -	$ -
8	1940	Tools, Shop & Garage Equipment	$ 241,002			$ 241,002	$ (53,375)	$ (24,330)		$ (77,705)	$ 163,296
8	1945	Measurement & Testing Equipment	$ 36,627			$ 36,627	$ (22,490)	$ (4,271)		$ (26,761)	$ 9,865
8	1950	Power Operated Equipment	$ -			$ -	$ -			$ -	$ -
8	1955	Communications Equipment	$ 66,319			$ 66,319	$ (18,827)	$ (6,632)		$ (25,459)	$ 40,860
8	1955	Communication Equipment (Smart Meters)	$ -			$ -	$ -			$ -	$ -
8	1960	Miscellaneous Equipment	$ -			$ -	$ -			$ -	$ -
47	1970	Load Management Controls Customer Premises	$ 13,599			$ 13,599	$ (2,040)	$ (1,360)		$ (3,400)	$ 10,199
47	1995	Contributions & Grants	$ -			$ -	$ -			$ -	$ -
47	2440	Deferred Revenue[5]	$ (4,339,283)	$ (561,251)		$ (4,900,534)	$ 208,122	$ 122,997		$ 331,119	$ (4,569,415)
						$ -				$ -	$ -
		Sub-Total	**$ 28,036,032**	**$ 1,710,180**	**$ -**	**$ 29,746,212**	**$ (5,497,082)**	**$ (1,036,424)**	**$ -**	**$ (6,533,505)**	**$ 23,212,707**
		Less Socialized Renewable Energy Generation Investments (input as negative)				$ -				$ -	$ -
		Less Other Non Rate-Regulated Utility Assets (input as negative)				$ -				$ -	$ -
		Total PP&E	**$ 28,036,032**	**$ 1,710,180**	**$ -**	**$ 29,746,212**	**$ (5,497,082)**	**$ (1,036,424)**	**$ -**	**$ (6,533,505)**	**$ 23,212,707**
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable [6]									
		Total						**$ (1,036,424)**			

10		Transportation
8		Stores Equipment

Less: *Fully Allocated Depreciation*
Transportation $ (35,840)

Net Depreciation **$ (1,000,584)**

Fixed Asset Continuity Schedule Variance Analysis

December 31 2012 – Fixed Asset Continuity Schedule (See Table 2-6)

Gross capital assets increased by $1,712,711 net of capital contributions and mainly resulted from GPI`s continued investment in its distribution system in the amount of $1,071,577 (Distribution plant investment of $1,374,542 minus deferred revenue of $302,965). Deferred revenue represents the customer's financial contribution to building distribution assets assumed by Grimsby Power. Based on the deemed useful lives of GPI`s assets, the total depreciation value for 2012 was calculated to be $608,670.

December 31 2013 – Fixed Asset Continuity Schedule (See Table 2-7)

Gross capital assets increased by $1,195,784 net of capital contributions and mainly resulted from GPI`s continued investment in its distribution system in the amount of $917,516 (Distribution plant investment of $1,285,439 minus deferred revenue of $367,923). Deferred revenue represents the customer's financial contribution to building distribution assets assumed by Grimsby Power. Based on the deemed useful lives of GPI`s assets, the total depreciation value for 2013 was calculated to be $669,566.

December 31 2014 – Fixed Asset Continuity Schedule (See Table 2-8)

Gross capital assets increased by $2,012,887 net of capital contributions and mainly resulted from GPI`s continued investment in its distribution system in the amount of $1,838,457 (Distribution plant investment of $2,931,701 minus deferred revenue of $1,093,243). Deferred revenue represents the customer's financial contribution to building distribution assets assumed by Grimsby Power. Based on the deemed useful lives of GPI`s assets, the total depreciation value for 2014 was calculated to be $744,036.

December 31 2015 – Fixed Asset Continuity Schedule (See Table 2-9)

Gross capital assets increased by $1,554,958 net of capital contributions and mainly resulted from GPI`s continued investment in its distribution system in the amount of $1,215,260 (Distribution plant investment of $3,081,082 minus deferred revenue of $1,865,822). Deferred revenue represents the customer's financial contribution to building

distribution assets assumed by Grimsby Power. Based on the deemed useful lives of GPI`s assets, the total depreciation value for 2015 was calculated to be $969,856.

December 31 2016 – Fixed Asset Continuity Schedule (See Table 2-10)

Gross capital assets increased by $1,710,180 net of capital contributions and mainly resulted from GPI`s continued investment in its distribution system in the amount of $998,780 (Distribution plant investment of $1,560,031 minus deferred revenue of $561,251). Deferred revenue represents the customer's financial contribution to building distribution assets assumed by Grimsby Power. Based on the deemed useful lives of GPI`s assets, the total depreciation value for 2016 was calculated to be $1,036,424.

Gross Assets – Property, Plant, Equipment and Accumulated Depreciation

Net Book Value has been used as the basis for setting opening rate base values. To establish the continuity of historical costs, the statement of opening value for regulated Net Book Value includes gross capital cost and accumulated depreciation and further breaks out amounts as necessary to support the regulatory accounting requirements.

Grimsby Power adopted MIFRS capitalization accounting for rate settings and regulatory reporting purposes since January 1, 2011.

Customer Contributions Received for PP&E

For rate setting purposes, customer contributions are treated not as deferred revenue, as required under MIFRS, but instead these amounts are included as an offset to rate base, and amortized to income over the life of the asset to which they are related. The amortization for the customer contributions has been treated as an offset against Grimsby Power's depreciation expenses and they are subject to the half year rule for rate-setting purposes.

Grimsby Power confirms that the amortization period of customer contributions is consistent with the useful lives of the asset category to which they relate.

Asset Reclassifications from PP&E to Intangible Assets

For 2015 and 2016 Grimsby Power has included intangible assets (e.g. computer software) in rate base and the associated amortization expenses for determining revenue requirement.

Summary of Incremental Capital Module Adjustment

Grimsby Power did not apply for incremental capital adjustments in the IRM period following the 2012 Cost of Service Application.

Accumulated Depreciation

Grimsby Power does not have a written depreciation policy. However, Grimsby Power's depreciation practice once assets are capitalized is outlined below.

Grimsby Power recognizes depreciation on a straight-line basis over the estimated useful life of an item of property, plant and equipment. Land is not depreciated.

Grimsby Power uses the half year rule for calculating depreciation and the typical useful lives of assets developed by Kinectrics in the March 24, 2010 *Useful Life of Assets* study as included in its 2012 COS Application (EB-2011-0273) and agreed upon in the Board approved Settlement.

Details of Grimsby Power's depreciation by account number is provided in Appendix 2-CB and 2-CF Depreciation and Amortization Expense, by year, in Tables 2-11 to 2-15.

Further information on Grimsby Power's depreciation expenses and continuity schedules are provided in Tables 4-53 to 4-58 in Exhibit 4 Depreciation, Amortization and Depletion.

Reconciliation of Continuity Statements to Calculated Depreciation Expenses

Grimsby Power has determined that there are no material differences (above the materiality threshold of $50,000) between the accumulated depreciation in the fixed asset continuity schedules (Appendix 2-BA) and the depreciation expense calculated in Appendices 2-CB through 2-CF.

Table 2-11
Appendix 2-CB
Depreciation and Amortization Expense
2012 MIFRS

Account	Description	Opening NBV as at Jan 1, 2012 [5] (a)	Additions (d)	Average Remaining Life of Opening NBV [4] (i)	Years (new additions only) [3] (f)	Depreciation Rate on New Additions (g) = 1 / (f)	Depreciation Expense on Opening NBV (j) = (a) / (i)	Depreciation Expense on Additions [1] (h)=((d)*0.5)/(f)	2012 Depreciation Expense (k) = (j) + (h)	2012 Depreciation Expense per Appendix 2-BA Fixed Assets, Column J (l)	Variance [2] (m) = (k) - (l)	Depreciation Expense on 2012 Full Year Additions (n) = (d)/(f)	Less Depreciation Expense on Assets Fully Depreciated during the year (o)	2012 Full Year Depreciation [6] (p) = (j) + (n) - (o)
1611	Computer Software (Formally known as Account 1925)	$ 222,592	$ 169,010	3.00	5.00	20.00%	$ 74,197	$ 16,901	$ 91,098	$ 88,383	$ 2,715	$ 33,802	$ 16,099	$ 91,900
1612	Land Rights (Formally known as Account 1906)	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1805	Land	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1808	Buildings	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1810	Leasehold Improvements	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1820	Distribution Station Equipment <50 kV	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1825	Storage Battery Equipment	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures	$ 3,244,726	$ 289,356	33.00	45.00	2.22%	$ 98,325	$ 3,215	$ 101,540	$ 98,555	$ 2,985	$ 6,430		$ 104,755
1835	Overhead Conductors & Devices	$ 1,865,843	$ 310,666	54.50	60.00	1.67%	$ 34,236	$ 2,589	$ 36,825	$ 36,449	$ 376	$ 5,178		$ 39,413
1840	Underground Conduit	$ 1,804,447	$ 18,680	34.73	50.00	2.00%	$ 51,956	$ 187	$ 52,143	$ 49,818	$ 2,325	$ 374		$ 52,330
1845	Underground Conductors & Devices	$ 1,020,226	$ 147,279	25.30	30.00	3.33%	$ 40,325	$ 2,455	$ 42,780	$ 42,670	$ 110	$ 4,909		$ 45,234
1850	Line Transformers	$ 2,882,696	$ 318,468	29.23	40.00	2.50%	$ 98,621	$ 3,981	$ 102,602	$ 102,290	$ 312	$ 7,962		$ 106,583
1855	Services (Overhead)	$ 132,282	$ 3,270	54.73	60.00	1.67%	$ 2,417	$ 27	$ 2,444	$ 2,414	$ 31	$ 55		$ 2,472
1855	Services (Underground)	$ 490,969	$ 187,877	31.00	35.00	2.86%	$ 15,838	$ 2,684	$ 18,522	$ 17,310	$ 1,211	$ 5,368		$ 21,206
1860	Meters	$ 1,467,358	$ 86,864	13.80	15.00	6.67%	$ 106,330	$ 2,895	$ 109,226	$ 105,593	$ 3,633	$ 5,791		$ 112,121
1860	Meters >50	$ 154,449	$ 10,190	19.06	25.00	4.00%	$ 8,103	$ 204	$ 8,307	$ 8,295	$ 12	$ 408		$ 8,511
1860	Meters CT's & PT's	$ 67,326	$ 1,893	30.60	35.00	2.86%	$ 2,200	$ 27	$ 2,227	$ 2,218	$ 10	$ 54		$ 2,254
1905	Land	$ 111,556	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures (50 years)	$ 298,969	$ -	24.00	50.00	2.00%	$ 12,457	$ -	$ 12,457	$ 12,457	$ 0	$ -		$ 12,457
1908	Buildings & Fixtures (40 years)	$ 27,966	$ -	19.75	40.00	2.50%	$ 1,416	$ -	$ 1,416	$ 1,406	$ 10	$ -		$ 1,416
1908	Buildings & Fixtures (25 years)	$ 168,903	$ 26,790	23.33	25.00	4.00%	$ 7,240	$ 536	$ 7,776	$ 7,717	$ 58	$ 1,072		$ 8,311
1910	Leasehold Improvements	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)	$ 20,877	$ 47,232	5.67	10.00	10.00%	$ 3,682	$ 2,362	$ 6,044	$ 6,371	$ 327	$ 4,723		$ 8,405
1915	Office Furniture & Equipment (5 years)	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware	$ 43,780	$ 47,011	3.00	5.00	20.00%	$ 14,593	$ 4,701	$ 19,294	$ 19,035	$ 260	$ 9,402	$ 3,345	$ 20,650
1920	Computer Equip.-Hardware(Post Mar. 22/04)	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (8 years)	$ 14,527	$ 1,953	4.50	8.00	12.50%	$ 3,228	$ 122	$ 3,350	$ 3,471	$ 121	$ 244		$ 3,472
1930	Transportation Equipment (12 years)	$ -	$ -		12.00	8.33%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (15 years)	$ 21,673	$ 322,252	13.67	15.00	6.67%	$ 1,585	$ 10,742	$ 12,327	$ 12,337	$ 10	$ 21,483		$ 23,069
1935	Stores Equipment	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment	$ 57,990	$ 944	6.71	10.00	10.00%	$ 8,642	$ 47	$ 8,689	$ 7,874	$ 815	$ 94		$ 8,737
1945	Measurement & Testing Equipment	$ 8,428	$ 2,029	1.50	5.00	20.00%	$ 5,619	$ 203	$ 5,821	$ 5,279	$ 543	$ 406	$ 3,800	$ 2,224
1950	Power Operated Equipment	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1955	Communications Equipment	$ -	$ 23,913		10.00	10.00%	$ -	$ 1,196	$ 1,196	$ 1,196	$ 0	$ 2,391		$ 2,391
1955	Communication Equipment (Smart Meters)	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1970	Load Management Controls Customer Premises	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1975	Load Management Controls Utility Premises	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1980	System Supervisor Equipment	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1985	Miscellaneous Fixed Assets	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
1995	Contributions & Grants	$ -	$ -			0.00%	$ -	$ -	$ -	$ -	$ -	$ -		$ -
2440	Deferred Revenue	$ (700,124)	$ (302,965)	32.95	37.16	2.69%	$ (21,249)	$ (4,077)	$ (25,325)	$ (22,468)	$ (2,857)	$ (8,153)		$ (29,402)
	Total	**$13,427,456**	**$1,712,711**				**$ 569,763**	**$ 50,996**	**$ 620,759**	**$ 608,670**	**$ 12,089**	**$ 101,993**	**$ 23,244**	**$ 648,512**

Table 2-12
Appendix 2-CC
Depreciation and Amortization Expense
2013 MIFRS

Account	Description	Additions (d)	Years (new additions only) (f)	Depreciation Rate on New Additions (g) = 1 / (f)	2013 Depreciation Expense [1] (h)=2012 Full Year Deprecation + ((d)*0.5)/(f)	2013 Depreciation Expense per Apppendix 2-BA Fixed Assets, Column J (l)	Variance [2] (m) = (h) - (l)	Depreciation Expense on 2013 Full Year Additions (n)=((d))/(f)	Less Depreciation Expense on Assets Fully Depreciated during the year (o)	2013 Full Year Depreciation [3] (p) = 2012 Full Year Depreciation + (n) - (o)
1611	Computer Software (Formally known as Account 1925)	$ 187,400	5.00	20.00%	$ 110,640	$ 107,926	$ 2,715	$ 37,480		$ 129,380
1612	Land Rights (Formally known as Account 1906)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1805	Land	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1810	Leasehold Improvements	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1820	Distribution Station Equipment <50 kV	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1825	Storage Battery Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures	$ 275,750	45.00	2.22%	$ 107,819	$ 104,827	$ 2,992	$ 6,128		$ 110,883
1835	Overhead Conductors & Devices	$ 238,552	60.00	1.67%	$ 41,401	$ 40,870	$ 532	$ 3,976		$ 43,389
1840	Underground Conduit	$ 148,242	50.00	2.00%	$ 53,812	$ 51,488	$ 2,325	$ 2,965		$ 55,295
1845	Underground Conductors & Devices	$ 186,874	30.00	3.33%	$ 48,349	$ 48,190	$ 159	$ 6,229		$ 51,464
1850	Line Transformers	$ 216,418	40.00	2.50%	$ 109,288	$ 108,938	$ 350	$ 5,410		$ 111,993
1855	Services (Overhead)	$ 32,480	60.00	1.67%	$ 2,742	$ 2,712	$ 31	$ 541		$ 3,013
1855	Services (Underground)	$ 145,721	35.00	2.86%	$ 23,287	$ 22,076	$ 1,211	$ 4,163		$ 25,369
1860	Meters	$ 885	15.00	6.67%	$ 112,151	$ 108,518	$ 3,633	$ 59		$ 112,180
1860	Meters >50	$ 39,601	25.00	4.00%	$ 9,303	$ 9,291	$ 12	$ 1,584		$ 10,095
1860	Meters CT's & PT's	$ 916	35.00	2.86%	$ 2,267	$ 2,246	$ 22	$ 26		$ 2,280
1905	Land	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures (50 years)	$ -	50.00	2.00%	$ 12,457	$ 12,457	-$ 0	$ -		$ 12,457
1908	Buildings & Fixtures (40 years)	$ -	40.00	2.50%	$ 1,416	$ 1,406	$ 10	$ -		$ 1,416
1908	Buildings & Fixtures (25 years)	$ 8,883	25.00	4.00%	$ 8,489	$ 8,431	$ 58	$ 355		$ 8,667
1910	Leasehold Improvements	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)	$ 1,397	10.00	10.00%	$ 8,475	$ 8,489	-$ 14	$ 140		$ 8,545
1915	Office Furniture & Equipment (5 years)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware	$ 18,173	5.00	20.00%	$ 22,468	$ 21,694	$ 773	$ 3,635		$ 24,285
1920	Computer Equip.-Hardware(Post Mar. 22/04)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (8 years)	$ -	8.00	12.50%	$ 3,472	$ 3,593	-$ 121	$ -		$ 3,472
1930	Transportation Equipment (12 years)	$ -	12.00	8.33%	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (15 years)	$ -	15.00	6.67%	$ 23,069	$ 23,079	-$ 10	$ -		$ 23,069
1935	Stores Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment	$ 20,140	10.00	10.00%	$ 9,744	$ 8,929	$ 815	$ 2,014		$ 10,751
1945	Measurement & Testing Equipment	$ -	5.00	20.00%	$ 2,224	$ 2,138	$ 86	$ -		$ 2,224
1950	Power Operated Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1955	Communications Equipment	$ 42,276	10.00	10.00%	$ 4,505	$ 4,505	$ 0	$ 4,228		$ 6,619
1955	Communication Equipment (Smart Meters)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1970	Load Management Controls Customer Premises	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1975	Load Management Controls Utility Premises	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1980	System Supervisor Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1985	Miscellaneous Fixed Assets	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1995	Contributions & Grants	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
2440	Deferred Revenue	$ (367,923)	37.45	2.67%	$ (34,314)	$ (32,235)	$ (2,079)	$ (9,824)		$ (39,226)
	Total	**$ 1,195,784**			**$ 683,066**	**$ 669,566**	**$ 13,501**	**$ 69,109**	**$ -**	**$ 717,621**

Table 2-13
Appendix 2-CD
Depreciation and Amortization Expense
2014 MIFRS

Account	Description	Additions (d)	Years (new additions only) (f)	Depreciation Rate on New Additions (g) = 1 / (f)	2014 Depreciation Expense [1] (h)=2013 Full Year Deprecation + ((d)*0.5)/(f)	2014 Depreciation Expense per Apppendix 2-BA Fixed Assets, Column J (l)	Variance [2] (m) = (h) - (l)	Depreciation Expense on 2014 Full Year Additions (n)=((d))/(f)	Less Depreciation Expense on Assets Fully Depreciated during the year (o)	2014 Full Year Depreciation [3] (p) = 2013 Full Year Depreciation + (n) - (o)
1611	Computer Software (Formally known as Account 1925)	$ 95,594	5.00	20.00%	$ 138,940	$ 138,460	$ 480	$ 19,119	$ 28,631	$ 119,868
1612	Land Rights (Formally known as Account 1906)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1805	Land	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1810	Leasehold Improvements	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1820	Distribution Station Equipment <50 kV	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1825	Storage Battery Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures	$ 194,572	45.00	2.22%	$ 113,045	$ 110,053	$ 2,992	$ 4,324		$ 115,207
1835	Overhead Conductors & Devices	$ 310,571	60.00	1.67%	$ 45,977	$ 45,446	$ 531	$ 5,176		$ 48,565
1840	Underground Conduit	$ 423,281	50.00	2.00%	$ 59,528	$ 57,203	$ 2,325	$ 8,466		$ 63,760
1845	Underground Conductors & Devices	$ 444,290	30.00	3.33%	$ 58,868	$ 58,710	$ 159	$ 14,810		$ 66,273
1850	Line Transformers	$ 796,103	40.00	2.50%	$ 121,945	$ 121,299	$ 645	$ 19,903		$ 131,896
1855	Services (Overhead)	$ 20,877	60.00	1.67%	$ 3,187	$ 3,156	$ 31	$ 348		$ 3,361
1855	Services (Underground)	$ 529,419	35.00	2.86%	$ 32,932	$ 31,721	$ 1,211	$ 15,126		$ 40,495
1860	Meters	$ 124,859	15.00	6.67%	$ 116,342	$ 112,709	$ 3,633	$ 8,324		$ 120,504
1860	Meters >50	$ 25,691	25.00	4.00%	$ 10,609	$ 10,597	$ 12	$ 1,028		$ 11,123
1860	Meters CT's & PT's	$ 62,036	35.00	2.86%	$ 3,167	$ 3,145	$ 22	$ 1,772		$ 4,053
1905	Land	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures (50 years)	$ -	50.00	2.00%	$ 12,457	$ 12,457	-$ 0	$ -		$ 12,457
1908	Buildings & Fixtures (40 years)	$ -	40.00	2.50%	$ 1,416	$ 1,406	$ 10	$ -		$ 1,416
1908	Buildings & Fixtures (25 years)	$ 3,400	25.00	4.00%	$ 8,735	$ 8,459	$ 275	$ 136		$ 8,803
1910	Leasehold Improvements	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)	$ 7,021	10.00	10.00%	$ 8,896	$ 8,910	-$ 14	$ 702		$ 9,247
1915	Office Furniture & Equipment (5 years)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware	$ 9,822	5.00	20.00%	$ 25,267	$ 22,236	$ 3,031	$ 1,964	$ 3,013	$ 23,236
1920	Computer Equip.-Hardware(Post Mar. 22/04)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (8 years)	$ 1,637	8.00	12.50%	$ 3,575	$ 5,088	-$ 1,513	$ 205	$ 2,905	$ 772
1930	Transportation Equipment (12 years)	$ -	12.00	8.33%	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (15 years)	$ -	15.00	6.67%	$ 23,069	$ 23,524	-$ 456	$ -		$ 23,069
1935	Stores Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment	$ 23,247	10.00	10.00%	$ 11,913	$ 10,737	$ 1,176	$ 2,325	$ 1,872	$ 11,203
1945	Measurement & Testing Equipment	$ 19,325	5.00	20.00%	$ 4,157	$ 3,769	$ 387	$ 3,865	$ 1,815	$ 4,274
1950	Power Operated Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1955	Communications Equipment	$ 785	10.00	10.00%	$ 6,658	$ 6,658	-$ 0	$ 78		$ 6,697
1955	Communication Equipment (Smart Meters)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1970	Load Management Controls Customer Premises	$ 13,599	10.00	10.00%	$ 680	$ 680	-$ 0	$ 1,360		$ 1,360
1975	Load Management Controls Utility Premises	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1980	System Supervisor Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1985	Miscellaneous Fixed Assets	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1995	Contributions & Grants	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
2440	Deferred Revenue	$ (1,093,243)	34.81	2.87%	$ (54,929)	$ (52,387)	$ (2,542)	$ (31,406)		$ (70,632)
	Total	**$ 2,012,887**			**$ 756,433**	**$ 744,036**	**$ 12,397**	**$ 77,624**	**$ 38,236**	**$ 757,009**

Table 2-14
Appendix 2-CE
Depreciation and Amortization Expense
2015 Bridge Year MIFRS

Account	Description	Additions (d)	Years (new additions only) (f)	Depreciation Rate on New Additions (g) = 1 / (f)	2015 Depreciation Expense [1] (h)=2014 Full Year Depreciation + ((d)*0.5)/(f)	2015 Depreciation Expense per Appendix 2-BA Fixed Assets, Column J (l)	Variance [2] (m) = (h) - (l)	Depreciation Expense on 2015 Full Year Additions (n)=((d))/(f)	Less Depreciation Expense on Assets Fully Depreciated during the year (o)	2015 Full Year Depreciation [3] (p) = 2014 Full Year Depreciation + (n) - (o)
1611	Computer Software (Formally known as Account 1925)	$ 90,820	5.00	20.00%	$ 128,950	$ 128,470	$ 480	$ 18,164	$ 19,867	$ 118,165
1612	Land Rights (Formally known as Account 1906)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1805	Land	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings	$ -	-	0.00%	$ 25,124	$ 25,124	$ -	$ -		$ -
1810	Leasehold Improvements	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV	$ 1,326,736	40.00	2.50%	$ 173,429	$ 173,429	$ 0	$ 33,168		$ 190,013
1820	Distribution Station Equipment <50 kV	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1825	Storage Battery Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures	$ 90,929	45.00	2.22%	$ 116,217	$ 113,225	$ 2,992	$ 2,021		$ 117,227
1835	Overhead Conductors & Devices	$ 285,843	60.00	1.67%	$ 50,947	$ 50,416	$ 532	$ 4,764		$ 53,329
1840	Underground Conduit	$ 202,407	50.00	2.00%	$ 65,785	$ 63,460	$ 2,325	$ 4,048		$ 67,809
1845	Underground Conductors & Devices	$ 374,701	30.00	3.33%	$ 72,518	$ 72,359	$ 159	$ 12,490		$ 78,763
1850	Line Transformers	$ 363,528	40.00	2.50%	$ 136,440	$ 135,469	$ 971	$ 9,088		$ 140,984
1855	Services (Overhead)	$ 7,736	60.00	1.67%	$ 3,425	$ 3,395	$ 31	$ 129		$ 3,490
1855	Services (Underground)	$ 285,037	35.00	2.86%	$ 44,567	$ 43,356	$ 1,211	$ 8,144		$ 48,639
1860	Meters	$ 85,088	15.00	6.67%	$ 123,340	$ 119,707	$ 3,633	$ 5,673		$ 126,177
1860	Meters >50	$ 57,968	25.00	4.00%	$ 12,282	$ 12,270	$ 12	$ 2,319		$ 13,441
1860	Meters CT's & PT's	$ 1,110	35.00	2.86%	$ 4,069	$ 4,047	$ 22	$ 32		$ 4,085
1905	Land	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures (50 years)	$ -	50.00	2.00%	$ 12,457	$ 12,457	-$ 0	$ -		$ 37,581
1908	Buildings & Fixtures (40 years)	$ -	40.00	2.50%	$ 1,416	$ 1,406	$ 10	$ -		$ 1,416
1908	Buildings & Fixtures (25 years)	$ 55,350	25.00	4.00%	$ 9,910	$ 9,634	$ 275	$ 2,214		$ 11,017
1910	Leasehold Improvements	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)	$ 21,349	10.00	10.00%	$ 10,315	$ 10,324	-$ 10	$ 2,135		$ 11,382
1915	Office Furniture & Equipment (5 years)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware	$ 40,890	5.00	20.00%	$ 27,325	$ 25,860	$ 1,466	$ 8,178	$ 1,447	$ 29,967
1920	Computer Equip.-Hardware(Post Mar. 22/04)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (8 years)	$ -	8.00	12.50%	$ 772	$ 3,536	-$ 2,764	$ -		$ 772
1930	Transportation Equipment (12 years)	$ -	12.00	8.33%	$ -	$ -	$ -	$ -		$ -
1930	Transportation Equipment (15 years)	$ -	15.00	6.67%	$ 23,069	$ 23,524	-$ 456	$ -		$ 23,069
1935	Stores Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment	$ 131,289	10.00	10.00%	$ 17,768	$ 17,764	$ 4	$ 13,129		$ 24,332
1945	Measurement & Testing Equipment	$ -	5.00	20.00%	$ 4,274	$ 4,459	-$ 185	$ -		$ 4,274
1950	Power Operated Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1955	Communications Equipment	$ -	10.00	10.00%	$ 6,697	$ 6,632	$ 65	$ -		$ 6,697
1955	Communication Equipment (Smart Meters)	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1970	Load Management Controls Customer Premises	$ -	10.00	10.00%	$ 1,360	$ 1,360	-$ 0	$ -		$ 1,360
1975	Load Management Controls Utility Premises	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1980	System Supervisor Equipment	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1985	Miscellaneous Fixed Assets	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
1995	Contributions & Grants	$ -	-	0.00%	$ -	$ -	$ -	$ -		$ -
2440	Deferred Revenue	$ (1,865,822)	39.30	2.54%	$ (94,370)	$ (91,827)	$ (2,543)	$ (47,476)		$ (118,109)
	Total	**$ 1,554,958**			**$ 978,087**	**$ 969,856**	**$ 8,231**	**$ 78,219**	**$ 21,314**	**$ 995,882**

Table 2-15
Appendix 2-CF
Depreciation and Amortization Expense
2016 Test Year MIFRS

Account	Description	Additions (d)	Years (new additions only) (f)	Depreciation Rate on New Additions (g) = 1 / (f)	2016 Depreciation Expense [1] (h)=2015 Full Year Depreciation + ((d)*0.5)/(f)	2016 Depreciation Expense per Appendix 2-BA Fixed Assets, Column J (l)	Variance [2] (m) = (h) - (l)
1611	Computer Software (Formally known as Account 1925)	$ 177,000	5.00	20.00%	**$ 135,865**	$ 135,385	**$ 480**
1612	Land Rights (Formally known as Account 1906)	$ -	-	0.00%	**$ -**	$ -	**$ -**
1805	Land	$ -	-	0.00%	**$ -**	$ -	**$ -**
1808	Buildings	$ -	-	0.00%	**$ 25,124**	$ 25,124	**$ -**
1810	Leasehold Improvements	$ -	-	0.00%	**$ -**	$ -	**$ -**
1815	Transformer Station Equipment >50 kV	$ 45,000	40.00	2.50%	**$ 190,576**	$ 190,576	**$ 0**
1820	Distribution Station Equipment <50 kV	$ -	-	0.00%	**$ -**	$ -	**$ -**
1825	Storage Battery Equipment	$ -	-	0.00%	**$ -**	$ -	**$ -**
1830	Poles, Towers & Fixtures	$ 123,196	45.00	2.22%	**$ 118,596**	$ 115,604	**$ 2,992**
1835	Overhead Conductors & Devices	$ 173,701	60.00	1.67%	**$ 54,777**	$ 54,245	**$ 532**
1840	Underground Conduit	$ 190,845	50.00	2.00%	**$ 69,717**	$ 67,392	**$ 2,325**
1845	Underground Conductors & Devices	$ 244,669	30.00	3.33%	**$ 82,841**	$ 82,682	**$ 159**
1850	Line Transformers	$ 354,435	40.00	2.50%	**$ 145,415**	$ 144,443	**$ 971**
1855	Services (Overhead)	$ 7,297	60.00	1.67%	**$ 3,551**	$ 3,520	**$ 31**
1855	Services (Underground)	$ 291,542	35.00	2.86%	**$ 52,804**	$ 51,593	**$ 1,211**
1860	Meters	$ 79,817	15.00	6.67%	**$ 128,837**	$ 125,203	**$ 3,634**
1860	Meters >50	$ 48,420	25.00	4.00%	**$ 14,410**	$ 14,397	**$ 12**
1860	Meters CT's & PT's	$ 1,110	35.00	2.86%	**$ 4,101**	$ 4,079	**$ 22**
1905	Land	$ -	-	0.00%	**$ -**	$ -	**$ -**
1908	Buildings & Fixtures (50 years)	$ -	50.00	2.00%	**$ 12,457**	$ 12,457	**-$ 0**
1908	Buildings & Fixtures (40 years)	$ -	40.00	2.50%	**$ 1,416**	$ 1,406	**$ 10**
1908	Buildings & Fixtures (25 years)	$ 132,400	25.00	4.00%	**$ 13,665**	$ 13,389	**$ 275**
1910	Leasehold Improvements	$ -	-	0.00%	**$ -**	$ -	**$ -**
1915	Office Furniture & Equipment (10 years)	$ 9,000	10.00	10.00%	**$ 11,832**	$ 11,843	**-$ 11**
1915	Office Furniture & Equipment (5 years)	$ -	-	0.00%	**$ -**	$ -	**$ -**
1920	Computer Equipment - Hardware	$ 37,000	5.00	20.00%	**$ 33,667**	$ 33,649	**$ 19**
1920	Computer Equip.-Hardware(Post Mar. 22/04)	$ -	-	0.00%	**$ -**	$ -	**$ -**
1920	Computer Equip.-Hardware(Post Mar. 19/07)	$ -	-	0.00%	**$ -**	$ -	**$ -**
1930	Transportation Equipment (8 years)	$ -	8.00	12.50%	**$ 772**	$ 449	**$ 323**
1930	Transportation Equipment (12 years)	$ -	12.00	8.33%	**$ -**	$ -	**$ -**
1930	Transportation Equipment (15 years)	$ 356,000	15.00	6.67%	**$ 34,936**	$ 35,391	**-$ 456**
1935	Stores Equipment	$ -	-	0.00%	**$ -**	$ -	**$ -**
1940	Tools, Shop & Garage Equipment	$ -	10.00	10.00%	**$ 24,332**	$ 24,330	**$ 2**
1945	Measurement & Testing Equipment	$ -	5.00	20.00%	**$ 4,274**	$ 4,271	**$ 4**
1950	Power Operated Equipment	$ -	-	0.00%	**$ -**	$ -	**$ -**
1955	Communications Equipment	$ -	10.00	10.00%	**$ 6,697**	$ 6,632	**$ 65**
1955	Communication Equipment (Smart Meters)	$ -	-	0.00%	**$ -**	$ -	**$ -**
1960	Miscellaneous Equipment	$ -	-	0.00%	**$ -**	$ -	**$ -**
1970	Load Management Controls Customer Premises	$ -	10.00	10.00%	**$ 1,360**	$ 1,360	**-$ 0**
1975	Load Management Controls Utility Premises	$ -	-	0.00%	**$ -**	$ -	**$ -**
1980	System Supervisor Equipment	$ -	-	0.00%	**$ -**	$ -	**$ -**
1985	Miscellaneous Fixed Assets	$ -	-	0.00%	**$ -**	$ -	**$ -**
1990	Other Tangible Property	$ -	-	0.00%	**$ -**	$ -	**$ -**
1995	Contributions & Grants	$ -	-	0.00%	**$ -**	$ -	**$ -**
2440	Deferred Revenue	$ (561,251)	37.76	2.65%	**$ (125,540)**	$ (122,997)	**$ (2,544)**
	Total	**$ 1,710,180**			**$ 1,046,481**	**$ 1,036,424**	**$ 10,058**

Working Capital Calculation

Overview

As outlined in the Filing Requirements, in its letter dated June 3, 2015 the Board provided an update to electricity distributors and transmitters respecting the options established in the June 22, 2011 Cost of Service Filling Requirements for the calculation of the allowance for working capital. For rates effective January 1, 2016 the distributors may use 7.5% default value to calculate their Working Capital Allowance rather than file a lead-lag study as part of their application.

Grimsby Power has elected to utilize the 7.5% default value for the Working Capital Allowance percentage. Grimsby Power's Working Capital Allowance is forecast to be $ 2,083,689.

In calculating the Working Capital Allowance for 2012 to 2014 actual and for the 2015 Bridge Year, Grimsby Power used the Board's historical 15% Allowance Approach.

A summary Working Capital is presented in Table 2-16 below:

Table 2-16
Summary of Working Capital
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	2013 Actual	2014 Actual	2015 Bridge Year	2016 Test Year
Cost of Power	17,978,475	16,695,325	17,959,981	19,160,748	23,074,964	23,845,118
Operations	453,574	411,623	522,827	594,775	831,285	885,613
Maintenance	431,965	726,934	519,679	436,218	593,216	757,383
Billing & Collecting	507,013	517,463	512,576	534,276	559,426	686,380
Community Relations	12,500	471	6,250	500	-	2,044
Admin & General Expense	1,002,111	1,279,082	1,119,954	1,213,975	1,249,574	1,593,943
Donations - LEAP	4,117	4,662	4,662	4,662	4,662	7,528
Property Taxes	27,540	24,915	25,586	25,780	27,000	27,594
Less: Adjustments to Fully Allocated Depreciation		(10,120)	(18,740)	(12,750)	(13,593)	(23,081)
Working Capital	**20,417,296**	**19,650,354**	**20,652,775**	**21,958,185**	**26,326,533**	**27,782,522**

Grimsby Power has provided its calculations by account for each of 2012 Actual, 2013 Actual, 2014 Actual, the 2015 Bridge Year and the 2016 Test Year in able 2-21 on the following pages:

Table 2-17
Working Capital Allowance Calculation by Account
2012 Actual to 2016 Test Year

Expense Description	2012 Actual	Allowance for Working Capital	2013 Actual	Allowance for Working Capital	2014 Actual	Allowance for Working Capital	2015 Bridge Year	Allowance for Working Capital	2016 Test Year	Allowance for Working Capital
Rate used for Working Capital Allowance:		**15%**		**15%**		**15%**		**15%**		**7.50%**
OPERATION										
5005 - Operation Supervision and Engineering	77,580	11,637	126,189	18,928	164,569	24,685	234,254	35,138	189,298	14,197
5010 - Load Dispatching	-	-	-	-	-	-	70,128	10,519	71,671	5,375
5012 - Station Buildings and Fixtures	4,715	707	-	-	-	-	20,935	3,140	21,396	1,605
5015 - Transformer Station Equipment - Operation Supplies and Expenses	-	-	-	-	-	-	58,504	8,776	59,036	4,428
5016 - Distribution Station Equipment - Operation Labour	-	-	1,273	191	-	-	-	-	-	-
5017 - Distribution Station Equipment - Operation Supplies and Expenses	-	-	4,719	708	11,827	1,774	4,100	615	4,190	314
5020 - Overhead Distribution Lines and Feeders - Operation Labour	19,803	2,971	35,318	5,298	22,381	3,357	56,394	8,459	73,149	5,486
5025 - Overhead Distribution Lines and Feeders - Operation Supplies and Expenses	11,943	1,791	12,664	1,900	4,351	653	22,827	3,424	24,965	1,872
5035 - Overhead Distribution Transformers - Operation	-	-	3,179	477	4,140	621	2,878	432	2,371	178
5040 - Underground Distribution Lines and Feeders - Operation Labour	26,299	3,945	46,290	6,944	71,937	10,791	6,658	999	6,749	506
5045 - Underground Distribution Lines and Feeders - Operation Supplies and Expenses	-	-	101	15	-	-	92,828	13,924	94,871	7,115
5055 - Underground Distribution Transformers - Operation	87	13	193	29	498	75	-	-	-	-
5065 - Meter Expense	113,252	16,988	135,691	20,354	162,422	24,363	151,475	22,721	160,556	12,042
5070 - Customer Premises - Operation	5,587	838	12,177	1,827	28,139	4,221	13,833	2,075	17,771	1,333
5075 - Customer Premises - Materials and Expenses	-	-	27,433	4,115	14,678	2,202	4,714	707	4,818	361
5085 - Miscellaneous Distribution Expense	124,924	18,739	83,243	12,486	75,670	11,350	61,456	9,218	123,805	9,285
5095 - Overhead Distribution Lines and Feeders - Rental Paid	27,432	4,115	34,358	5,154	34,164	5,125	30,300	4,545	30,967	2,322
Sub-Total	**411,623**	**61,743**	**522,827**	**78,424**	**594,775**	**89,216**	**831,285**	**124,693**	**885,613**	**66,421**
MAINTENANCE										
5105 - Maintenance Supervision and Engineering	153,935	23,090	212,657	31,899	185,171	27,776	261,208	39,181	307,068	23,030
5112 - Maintenance of Transformer Station Equipment	-	-	-	-	-	-	17,177	2,576	45,690	3,427
5114 - Mtaint Dist Stn Equip	2,232	335	1,736	260	3,204	481	-	-	-	-
5120 - Maintenance of Poles, Towers and Fixtures	52,069	7,810	26,846	4,027	48,127	7,219	25,489	3,823	30,658	2,299
5125 - Maintenance of Overhead Conductors and Devices	86,681	13,002	64,012	9,602	56,717	8,508	101,670	15,250	143,203	10,740
5130 - Maintenance of Overhead Services	48,068	7,210	45,142	6,771	22,319	3,348	26,017	3,902	37,762	2,832
5135 - Overhead Distribution Lines and Feeders - Right of Way	38,893	5,834	48,095	7,214	48,371	7,256	59,768	8,965	66,137	4,960
5145 - Maintenance of Underground	2,451	368	-	-	381	57	-	-	-	-
5150 - Maintenance of Underground Conductors and Devices	18,078	2,712	20,224	3,034	3,716	557	11,076	1,661	15,853	1,189
5155 - Maintenance of Underground	34,380	5,157	25,694	3,854	25,322	3,798	21,586	3,238	30,940	2,321
5160 - Maintenance of Line Transformers	115,283	17,293	43,156	6,473	42,890	6,433	69,225	10,384	80,072	6,005
5175 - Maintenance of Meters	174,863	26,229	32,118	4,818	-	-	-	-	-	-
Sub-Total	**726,934**	**109,040**	**519,679**	**77,952**	**436,218**	**65,433**	**593,216**	**88,982**	**757,383**	**56,804**
BILLING & COLLECTING										
5305 - Supervision	8,813	1,322	37,952	5,693	35,563	5,334	38,130	5,720	50,734	3,805
5310 - Meter Reading Expense	42,676	6,401	43,529	6,529	50,498	7,575	47,315	7,097	68,144	5,111
5315 - Customer Billing	437,662	65,649	386,472	57,971	414,702	62,205	429,461	64,419	523,725	39,279
5320 - Collecting	18,103	2,715	24,108	3,616	28,540	4,281	22,020	3,303	20,781	1,559
5325 - Collecting - Cash Over and Short	-	-	-	-	(2)	(0)	-	-	-	-
5330 - Collection Charges	-	-	1,576	236	625	94	1,000	150	1,022	77
5335 - Bad Debt Expense	10,208	1,531	18,939	2,841	4,351	653	21,500	3,225	21,973	1,648
Sub-Total	**517,463**	**77,619**	**512,576**	**76,886**	**534,276**	**80,141**	**559,426**	**83,914**	**686,380**	**51,479**

Expense Description	2012 Actual	Allowance for Working Capital	2013 Actual	Allowance for Working Capital	2014 Actual	Allowance for Working Capital	2015 Bridge Year	Allowance for Working Capital	2016 Test Year	Allowance for Working Capital
Rate used for Working Capital Allowance:		**15%**		**15%**		**15%**		**15%**		**7.50%**
ADMINISTRATIVE AND GENERAL EXPENSES										
5605 - Executive Salaries and Expenses	183,193	27,479	174,745	26,212	185,725	27,859	208,740	31,311	212,365	15,927
5610 - Management Salaries and Expenses	261,391	39,209	281,238	42,186	309,934	46,490	314,052	47,108	471,036	35,328
5615 - General Administrative Salaries and Expenses	270,363	40,555	293,235	43,985	313,921	47,088	319,202	47,880	411,782	30,884
5620 - Office Supplies and Expenses	44,005	6,601	42,199	6,330	43,058	6,459	46,727	7,009	48,460	3,634
5630 - Outside Services Employed	218,325	32,749	42,534	6,380	85,987	12,898	42,159	6,324	64,521	4,839
5635 - Property Insurance	16,282	2,442	27,970	4,196	30,823	4,623	29,645	4,447	30,297	2,272
5640 - Injuries and Damages	-	-	-	-	-	-	-	-	-	-
5645 - Employee Pensions and Benefits	8,829	1,324	8,122	1,218	5,605	841	7,020	1,053	7,174	538
5650 - Franchise Requirements	-	-	-	-	-	-	-	-	-	-
5655 - Regulatory Expenses	71,270	10,691	24,686	3,703	28,767	4,315	34,400	5,160	95,922	7,194
5660 - General Advertising Expenses	10,608	1,591	15,042	2,256	8,283	1,243	10,600	1,590	12,877	966
5665 - Miscellaneous Expenses	82,957	12,444	84,504	12,676	83,442	12,516	100,300	15,045	102,507	7,688
5670 - Rent	-	-	-	-	-	-	-	-	-	-
5675 - Maintenance of General Plant	107,473	16,121	131,929	19,789	118,929	17,839	136,729	20,509	139,043	10,428
5680 - Electrical Safety Authority Fees	4,854	728	-	-	-	-	-	-	-	-
Sub-Total	**1,279,553**	**191,933**	**1,126,204**	**168,931**	**1,214,475**	**182,171**	**1,249,574**	**187,436**	**1,595,987**	**119,699**
OTHER DEDUCTIONS										
6205 - Donations - LEAP	4,662	699	4,662	699	4,662	699	4,662	699	7,528	565
Sub-Total	**4,662**	**699**	**4,662**	**699**	**4,662**	**699**	**4,662**	**699**	**7,528**	**565**
TAXES OTHER THAN INCOME TAXES										
6105 - Taxes Other Than Income Taxes	24,915	3,737	25,586	3,838	25,780	3,867	27,000	4,050	27,594	2,070
Sub-Total	**24,915**	**3,737**	**25,586**	**3,838**	**25,780**	**3,867**	**27,000**	**4,050**	**27,594**	**2,070**
COST OF POWER										
4705 - Power Purchased	10,030,020	1,504,503	10,861,045	1,629,157	12,570,051	1,885,508	14,579,033	2,186,855	15,129,377	1,134,703
4707 - Charges - Global Adjustment	3,502,374	525,356	3,811,721	571,758	3,320,645	498,097	4,633,564	695,035	4,808,476	360,636
4708 - WMS	964,337	144,651	964,881	144,732	877,016	131,552	1,122,821	168,423	1,187,256	89,044
4714 - NW	1,182,811	177,422	1,221,255	183,188	1,272,289	190,843	1,420,558	213,084	1,742,327	130,675
4716 - CN	921,372	138,206	914,201	137,130	900,675	135,101	1,039,649	155,947	696,637	52,248
4751 - Smart Meter Entity Charges	-	-	64,392	9,659	97,760	14,664	103,152	15,473	104,858	7,864
4750 - LV Charges	94,410	14,162	122,485	18,373	122,313	18,347	176,186	26,428	176,186	13,214
Sub-Total	**16,695,325**	**2,504,299**	**17,959,981**	**2,693,997**	**19,160,748**	**2,874,112**	**23,074,964**	**3,461,245**	**23,845,118**	**1,788,384**
ALLOCATED DEPRECIATION										
Allocated Depreciation	(10,120)	(1,518)	(18,740)	(2,811)	(12,750)	(1,912)	(13,593)	(2,039)	- 23,081	(1,731)
Sub-Total	**(10,120)**	**(1,518)**	**(18,740)**	**(2,811)**	**(12,750)**	**(1,912)**	**(13,593)**	**(2,039)**	- **23,081**	**(1,731)**
TOTAL WORKING CAPITAL ALLOWANCE	**19,650,354**	**2,947,553**	**20,652,775**	**3,097,916**	**21,958,185**	**3,293,728**	**26,326,533**	**3,948,980**	**27,782,522**	**2,083,689**

Cost of Power Calculations

Grimsby Power has calculated the cost of Power for the 2016 Test Year based upon the 2016 load forecast, adjusted for the impact of Conservation and Demand Management activities and in accordance with the Board's filing requirements. A summary of the total cost of power expenses is provided in Table 2-18.

Table 2-18
Summary of Total Cost of Power Expenses
2012 OEB Approved to 2016 Test Year

Description	2012 OEB Approved	2012 Actual	2013 Actual	2014 Actual	2015 Bridge Year	2016 Test Year
Cost of Power Expenses						
Power Purchased	14,316,251	13,532,394	14,672,766	15,890,695	19,212,597	19,937,853
Wholesale Market Service Charges	1,266,481	964,337	964,881	877,016	1,122,821	1,187,256
Rural Rate Assistance Charges						
Network Charges	1,261,033	1,182,811	1,221,255	1,272,289	1,420,558	1,742,327
Connection Charges	1,004,710	921,372	914,201	900,675	1,039,649	696,637
Low Voltage Charges	130,000	94,410	122,485	122,313	176,186	176,186
Smart Meter Entity Charges			64,392	97,760	103,152	104,858
Total COP Expenses	**17,978,475**	**16,695,325**	**17,959,981**	**19,160,748**	**23,074,964**	**23,845,118**

Commodity Prices

In accordance with the Filing Requirements, the commodity price estimate used to calculate COP was determined in a way that bases the split between Regulated Price Plan ("RPP") and non-RPP customers on actual data and uses the most current RPP price.

The RPP and non-RPP price was obtained from the Regulated Price Plan Price Report for the period of November 1, 2015 through October 31, 2016 published by the Board October 15, 2015. For the purposes of calculating the 2016 Test Year, Grimsby Power has used an estimate of $0.10728 per kWh for RPP customers. For non-RPP customers, Grimsby Power has used $0.10674 per kWh which includes $0.01882 per kWh for the Wholesale Electricity Price and $0.08792 per kWh for Global Adjustment charges.

Grimsby Power understands that the commodity charge will be updated to reflect any changes to commodity prices that may become available prior to the approval of its Application.

Network and Connection Charges

Grimsby Power incurs Network and Connection charges from both the IESO and Hydro One. For the purposes of determining the cost of each for the 2016 Test Year, Grimsby Power determined the kW billed by both the IESO and Hydro One for 2014 actual Network and

Connection costs. The 2014 kW was then utilized to estimate the monthly Network and Connection costs for the 2016 Test Year by applying the forecasted kW by the January 1, 2015 Uniform Transmission Rates (UTR) as approved by the Board (EB-2014-0357) and Hydro One's 2015 approved rates as invoiced. Grimsby Power understands that the transmission costs will be updated to reflect any new rates that may become available prior to the approval of its application.

Regulatory Charges – Wholesale Market

On November 19, 2015 the Board issued a Decision and Rate Order (EB-2015-0294) establishing regulatory charges effective January 1, 2016. Within the Rate Order the Wholesale Market Service ("WMS") Charge was set at $.0033. To determine the Wholesale Market Service cost for the 2016 Test Year the rate of $.0033 was applied to the forecast power purchases for the 2016 Test Year.

Regulatory Charges – Wholesale Market - CBDR

Grimsby Power estimated the demand response charges to be $70,000 in the 2016 Test Year. The estimation is based on the average charges from the IESO from May 2015 – September 2015.

Regulatory Charges – Ontario Electricity Support Program (OESP)

The Board's Decision and Rate Order (EB-2015-0294) established a new charge for the Ontario Electricity Support Program (OESP). According to the rate order the OESP rate shall be $0.0011 per kWh effective January 1, 2016. The charge of $.0011 was then applied to the forecasted power purchases for the 2016 Test Year to achieve the 2016 Test Year OESP cost.

Regulatory Charges – Rural Rate Assistance

For the purposes of calculating the Rural Rate Assistance (RRA) cost, Grimsby Power again used the rate set out in EB 2015-0294. Grimsby Power based the RRA cost on rate of $.0013/kWh, effective January 1, 2016, applied to the forecasted power purchase for the 2016 Test Year.

Low Voltage Charges

Grimsby Power incurs low voltage charges from Hydro One and the 2016 Test Year costs were estimated using the actual 2014 charges from Hydro One.

Smart Meter Entity Charges

The Smart Meter Entity costs are calculated based on the rate of $0.788 per month for each Residential and General Service < 50 kW customer approved by the Board on March 28, 2014. The 2013 customer count from the 2013 Yearbook of Electricity Distributors has been utilized for the 2016 Test Year calculation.

Table 2-19 provides a summary of the COP calculation for the 2016 Test Year.

Table 2-19
Cost of Power Calculation
2016

Electricity - Commodity RPP					
Class per Load Forecast RPP	**2016 Forecasted Metered kWhs**	**2016 Proposed Loss Factor**	**2016**		
Residential	87,821,931	1.0457	91,835,393	$0.10728	9,852,100.95
General Service < 50 kW	15,226,415	1.0457	15,922,262	$0.10728	1,708,140.29
General Service > 50 kW	6,133,560	1.0457	6,413,864	$0.10728	688,079.29
Street Lights	0	1.0457	0	$0.10728	-
Unmetered Loads	372,184	1.0457	389,193	$0.10728	41,752.58
TOTAL	**109,554,089**		**114,560,711**		**12,290,073.10**
Electricity - Commodity Non-RPP					
Class per Load Forecast	**2016 Forecasted Metered kWhs**	**2016 Proposed Loss Factor**	**2016**		
Residential	4,784,537	1.0457	5,003,190	$0.10674	534,040.51
General Service < 50 kW	3,588,112	1.0457	3,752,089	$0.10674	400,497.98
General Service > 50 kW	58,997,739	1.0457	61,693,936	$0.10674	6,585,210.71
Street Lights	1,145,878	1.0457	1,198,245	$0.10674	127,900.66
Unmetered Loads	1,165	1.0457	1,218	$0.10674	130.03
TOTAL	**68,517,431**		**71,648,678**		**7,647,779.89**
Transmission - Network					
Class per Load Forecast		**Volume Metric**	**2016**		
Residential		kWh	96,838,583	$0.0068	656,738.64
General Service < 50 kW		kWh	19,674,351	$0.0063	124,649.14
General Service > 50 kW		kW	186,573	$2.5501	475,781.01
Street Lights		kW	3,429	$1.8990	6,511.11
Unmetered Loads		kWh	1,218	$0.0063	7.72
Embeded Distribuitor		kW	126,624	$3.7800	478,639.63
TOTAL					**1,742,327.26**
Transmission - Connection					
Class per Load Forecast		**Volume Metric**	**2016**		
Residential		kWh	96,838,583	$0.0032	309,883.47
General Service < 50 kW		kWh	19,674,351	$0.0028	55,088.18
General Service > 50 kW		kW	186,573	$1.1781	219,802.21
Street Lights		kW	3,429	$0.8640	2,962.42
Unmetered Loads		kWh	1,218	$0.0028	3.41
Embeded Distribuitor		kW	126,624	$0.8600	108,896.85
TOTAL					**696,636.53**

Wholesale Market Service					
Class per Load Forecast		**Volume Metric**	**2016**		
Residential		kWh	96,838,583	$0.0036	348,618.90
General Service < 50 kW		kWh	19,674,351	$0.0036	70,827.66
General Service > 50 kW		kWh	68,107,799	$0.0036	245,188.08
Street Lights		kWh	1,198,245	$0.0036	4,313.68
Unmetered Loads		kWh	390,411	$0.0036	1,405.48
TOTAL			**186,209,389**		**670,353.80**
Wholesale Market Service - CBDR					
Class per Load Forecast		**Volume Metric**	**2016**		
Residential		kWh	96,838,583		36,403.65
General Service < 50 kW		kWh	19,674,351		7,396.00
General Service > 50 kW		kWh	68,107,799		25,603.14
Street Lights		kWh	1,198,245		450.45
Unmetered Loads		kWh	390,411		146.76
TOTAL			**186,209,389**		**70,000.00**
Ontario Electricity Support Program					
Class per Load Forecast		**Volume Metric**	**2016**		
Residential		kWh	96,838,583	$0.0011	106,522.44
General Service < 50 kW		kWh	19,674,351	$0.0011	21,641.79
General Service > 50 kW		kWh	68,107,799	$0.0011	74,918.58
Street Lights		kWh	1,198,245	$0.0011	1,318.07
Unmetered Loads		kWh	390,411	$0.0011	429.45
TOTAL			**186,209,389**		**204,830.33**
Rural Rate Assistance					
Class per Load Forecast		**Volume Metric**	**2016**		
Residential		kWh	96,838,583	$0.0013	125,890.16
General Service < 50 kW		kWh	19,674,351	$0.0013	25,576.66
General Service > 50 kW		kWh	68,107,799	$0.0013	88,540.14
Street Lights		kWh	1,198,245	$0.0013	1,557.72
Unmetered Loads		kWh	390,411	$0.0013	507.53
TOTAL			**186,209,389**		**242,072.21**

	2016
4705-Power Purchased	19,937,852.99
4708-Charges-WMS	670,353.80
4708-Charges-WMS CBDR	70,000.00
4708-Charges-OESP	204,830.33
4714-Charges-NW	1,742,327.26
4716-Charges-CN	696,636.53
4730-Rural Rate Assistance	242,072.21
4750-Low Voltage	176,186.42
4751-Smart Meter Entity Charge	104,858.28
TOTAL	**23,845,117.81**

CAPITAL EXPENDITURES

Planning Overview

In accordance with the Filing Requirements, GPI is filing its consolidated DSP as a stand-alone document which includes all elements of the DSP as Appendix 2-A of this Exhibit. This exhibit includes the following sections:

1) Planning;

2) Required Information;

3) Capitalization Policy;

4) Capitalization of Overhead;

5) Costs of Eligible Investments for Distributors;

6) New Policy Options for the Funding of Capital;

7) Addition of ICM Assets to Rate Base; and

8) Service Quality Performance.

Planning

All categories of system investments, including system renewal, system access, system service, and general plant have been addressed and consolidated in GPI's capital expenditure plan. GPI has provided historical spending by material capital projects in the specified categories for 2011 Actual, 2012 Actual, 2013 Actual, 2014 Actual, 2015 Bridge Year and 2016 Test Year. GPI has assigned all historical and future construction projects to the new categories as required by the Board. The DSP provides the suggested spending level, as determined by the methodologies outlined in Grimsby Power`s DSP for 2016 through 2020. GPI has leveled the plan, as best as possible, to address pacing and affordability.

Regional Planning

For Regional planning purposes GPI belongs to the "Niagara Region" for which HONI is the lead transmitter. An annual planning process with HONI was started on Nov 4, 2015 and these plans basically involve outage planning for the next two years. The annual planning process is not expected to have material impacts on GPI's DSP. In addition to this there are no transmission capacity constraints within Grimsby Power`s service territory to deter new connections.

Planning Horizon

The RRFE Report indicated that a planning horizon of five years is required to support integrated planning and better align distributor planning cycles with rate-setting cycles. Grimsby Power has taken an integrated approach for investment planning on Grimsby Power's distribution system. All investments pertaining to the following categories have been planned and optimized together:

- System renewal and expansion;
- Renewable generation connections;
- Customer connections and regulatory requirements;
- System growth and planning criteria;
- General plant in support of daily operations;
- Smart grid development and implementation; and
- Regionally planned infrastructure.

This allows Grimsby Power to develop a DSP that allocates its resources in an optimal way to achieve cost-effective planning over the planning horizon. The DSP covers a planning horizon of five years starting in the 2016 Test Year and ending in 2020.

Employing this longer term approach requires Grimsby Power to consider future customer needs and any required changes to its distribution system in advance, thereby enhancing Grimsby Power's ability to plan ahead and respond to the evolving needs of customers in a timely manner, while managing and leveling the impacts of these expenditures on consumer rates to maintain the affordability of its service.

Based on an evaluation of Grimsby Power's distribution system to accept distributed generation connections GPI is not proposing any capital investments for capacity upgrades to accommodate applications for the connection of renewable energy generation (REG) plant over the next five years (2016 to 2020) as no constraints have been identified in the system preventing the connection of such installations. GPI is currently researching potential upgrades to its SCADA and protection & control systems to make REG connections easier but nothing has been finalized at this time.

GPI assets fall into two broad categories. Distribution plant, which includes assets such as, overhead wires, underground cable, transformers, switches, meters and a substation. General plant is the second category which includes assets, such as buildings, computer hardware and software, mobile equipment (fleet), office furniture and tools & equipment. For internal budgeting purposes, GPI has categorized all spending to align with the new DSP categories of system renewal, system access, system service and general plant.

Required Information

Grimsby Power has completed Appendix 2-AB Capital Expenditure Summary presenting four historical years, the 2015 Bridge Year, the 2016 Test Year and an additional four planned years of capital expenditures (2011 to 2020). This is the first year for which Grimsby Power has filed a DSP, therefore historical "Plan" amounts and variance analysis are not required. Grimsby Power has made its best efforts to categorize historical projects into the DSP categories (System Access, System Renewal, System Service, and General Plant).

Table 2-20
Appendix 2-AB
Capital Expenditure Summary
2011-2020

CATEGORY	Historical Period (previous plan[1] & actual)															Forecast Period (planned)				
	2011			2012			2013			2014			2015			2016	2017	2018	2019	2020
	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual[2]	Var					
	$ '000		%	$ '000		%	$ '000		%	$ '000		%	$ '000		%	$ '000				
System Access	N/A	726	--	N/A	2,044	--	N/A	594	--	N/A	1,816	--	N/A	971	--	1,110	995	967	906	839
System Renewal	N/A	899	--	N/A	810	--	N/A	691	--	N/A	716	--	N/A	505	--	273	918	976	1,062	1,067
System Service	N/A	16	--	N/A		--	N/A		--	N/A	400	--	N/A	1,605	--	178	399	409	421	428
General Plant	N/A	140	--	N/A	704	--	N/A	278	--	N/A	174	--	N/A	340	--	711	202	170	173	177
Contributed Capital		(709)			(303)			(368)			(1,093)			(1,866)		(561)	(572)	(554)	(518)	(482)
TOTAL EXPENDITURE	-	1,072	--	-	3,255	--	-	1,196	--	-	2,013	--	-	1,555	--	1,710	1,943	1,968	2,044	2,029
System O&M			--		$ 1,139	--		$ 1,043	--		$ 1,031	--		$ 1,425	--	$ 1,643	$ 1,709	$ 1,777	$ 1,848	$ 1,922

Figure 2-1
Cumulative Gross Capital Expenditures by %
2011 – 2015

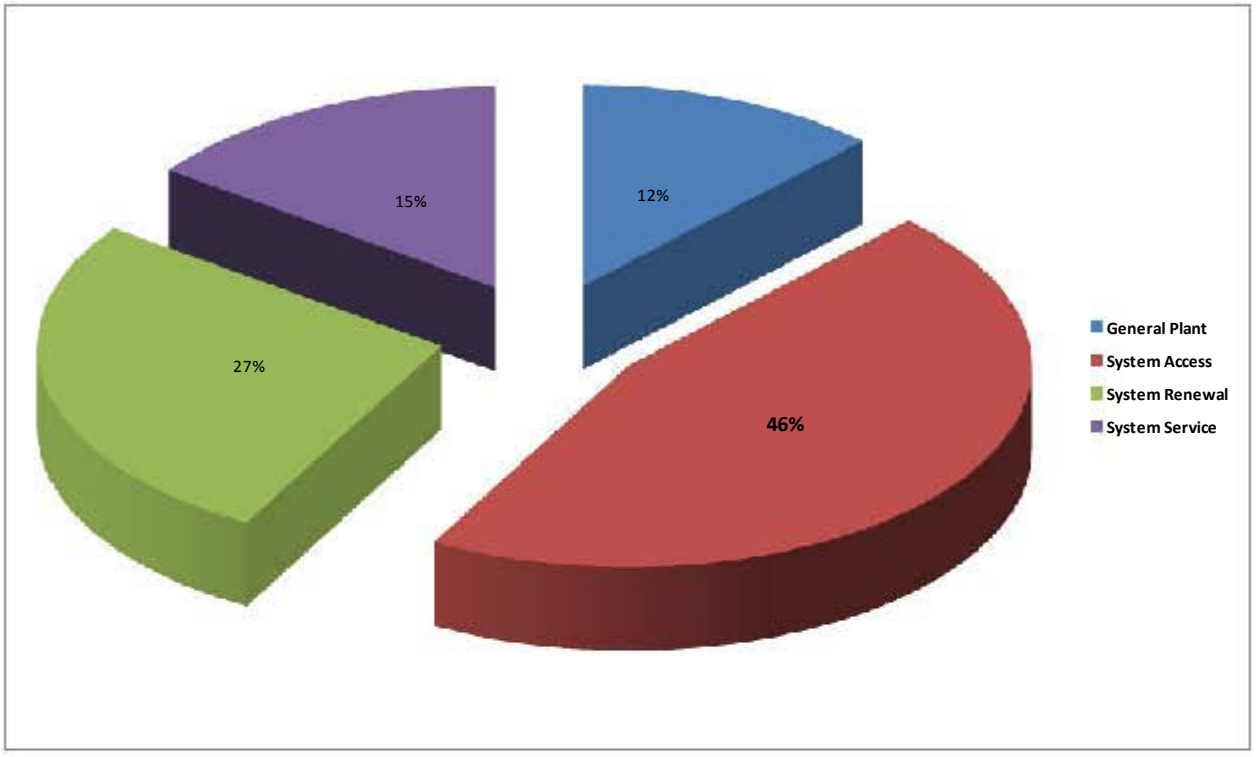
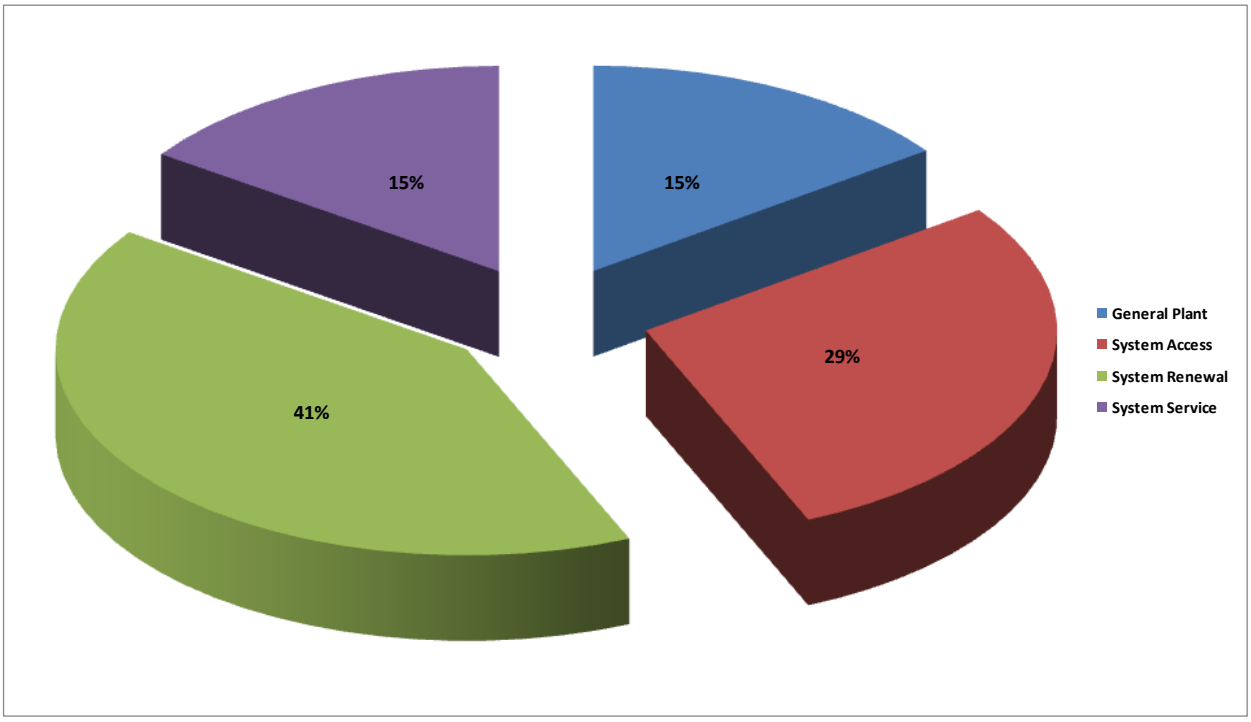


Figure 2-2
Cumulative Gross Capital Expenditures by %
2016 - 2020



As shown in the above table and figures, GPI's main infrastructure focus has been on system access. System access makes up 46% of the overall historical period. From 2016 – 2020 the focus of GPI will change slightly to 41 % system renewal and 29% and system access. The change is due to a focus on aging infrastructure on the CNR line and back yard projects.

Capital spending by category is designed to meet both defined customer preferences and distribution system requirements. As per OEB guidelines the spending categories are described below. The planning methodologies are also included in the description.

System Access

A significant portion of System Access is assumed plant or expansions to the distribution system as a result of residential subdivision development. The value of the assumed plant is based on an average of historical costs to service individual customers multiplied by the

estimated new customer connections the next five years. Grimsby Power has made its best attempt at estimating the new connections over the planning horizon but this is inevitably linked to the economy and the developers who are making the investments. Therefore, the number of new connections in any given year may be different than forecast. In conjunction with assumed plant there is an offset called contributed capital which is essentially the capital that the customer paid. The value of this contributed capital is deducted from the value of the assumed assets. GPI will need to ensure that the infrastructure is in place to accommodate this growth. See Table 2-27 Forecast Capital Trending Analysis for forecast values.

System Renewal

System renewal investments are driven by asset condition to derive replacement programs. Plans for replacements are based on consideration of the number, type, age and condition of assets. The proactive replacement of system components prior to failure will reduce costs associated with outage response and reactive replacement. It also allows Grimsby Power to manage the level of spend in any given year to avoid highs and lows that may occur due to the age distribution of the assets.

System Service

System service spending is focused on system reliability improvement projects, which are based on outage considerations, system impact, smart grid upgrade scenarios and customer preferences. These projects are assessed against corporate business objectives including customers stated preferences. Voltage conversion work which has taken place through all of the historical years and into the forecast period has been included in this category. Voltage conversion work has a positive impact on the reduction of line losses.

General Plant

The General plant category includes all assets that are not distribution assets. Investments in general plant are planned on an annual basis based on need. Some investments such as building renovations and office furniture replacement are made over the longer term as not to create any highs or lows in capital spend. In the short term the general plant category is focused on ensuring that adequate tools, such as Outage Management Software/System

(OMS), are in place to support the day-to-day operations, and to improve customer communications in contingency scenarios of unplanned outages.

Variance of Year over Year Category Spending

An analysis of year over year variances for historical costs within the DSP categories is as follows:

2011 Actual vs. 2012 Actual

Table 2-21
Variance Analysis of Capital Expenditures
2011 Actual vs. 2012 Actual

Description	2011 Actual	2012 Actual	Variance from 2011 Actual
System Access	726,138	2,044,046	1,317,908
System Renewal	899,218	809,660	(89,558)
System Service	16,188		(16,188)
General Plant	140,018	704,405	564,387
Total Capital Expenditure	1,781,562	3,558,111	1,776,549

System Access

The System Access variance was $1,317,908. The largest contributor to this variance was the recognition of all of the smart meter investments made in the previous year's which were held in a variance account until disposed as approved in Grimsby Power's 2012 cost of service application. were not recognized as capital. $1,479,164 was recognized as capital in 2012.

System Renewal

The System Renewal variance of $89,558 was due to shifting spending patterns to other areas of the business.

System Service

System Service variance does not meet the materiality threshold.

General Plant

The most significant difference was the purchase of a bucket truck in 2012 at a value of $310,506. Large vehicle purchases at Grimsby Power occur on an infrequent basis as the fleet is not large enough to require this magnitude of spend on an annual basis. Other contributors were office renovations to the engineering and operations department of $38,000 and the initial payment for the new ERP software system of $112,322.

2012 Board Approved vs. 2012 Actual

Table 2-22
Variance Analysis of Capital Expenditures
2012 Board Approved vs. 2012 Actual

Description	2012 OEB Approved	2012 Actual	2012 Variance
System Access	19,529	2,044,046	2,024,517
System Renewal	798,308	809,660	11,352
System Service	39,333	-	(39,333)
General Plant	449,670	704,405	254,735
Total Capital Expenditure	1,306,840	3,558,111	2,251,271

System Access

The largest System Access variance was $1,479,164 which was the smart meter project. This was not included in the 2012 Board Approved values. A full description is included above in the analysis of 2011 Actual to 2012 Actual. In addition to this there was no provisions for residential subdivision development capital in the 2012 Board Approved values. However, $487,698 of assets were assumed in 2002 for new connections within residential subdivision development.

System Renewal

System Renewal variance does not meet the materiality threshold.

System Service

System Service variance does not meet the materiality threshold.

General Plant

General Plant variance was influence by several factors. Smart meter capital in the form of computer hardware and software totaling $63,272 was not included in the 2012 Board approved capital. GPI also made the initial payment for the new ERP software system in the amount of $112,322 which was not in the 2012 Board Approved capital. Other investments in computer software related to Grimsby Power's CIS and GIS systems which were not anticipated amounted to $52,313.

2012 Actual vs. 2013 Actual

Table 2-23
Variance Analysis of Capital Expenditures
2012 Actual vs. 2013 Actual

Description	2012 Actual	2013 Actual	Variance from 2012 Actual
System Access	2,044,046	594,368	(1,449,679)
System Renewal	809,660	691,071	(118,589)
System Service	-	-	-
General Plant	704,405	278,269	(426,136)
Total Capital Expenditure	3,558,111	1,563,707	(1,994,404)

System Access

The System Access variance is due to the elimination of the smart meter capital addition described above.

System Renewal

The System Renewal category was reduced mainly due to a reduction in voltage conversion work in the amount of $132,095. The focus was turned to pole and meter replacements.

System Service

There were no system service projects in 2012 or 2013.

General Plant

General Plant was reduced due to the elimination of the smart meter recognition noted above and the elimination of the spend for the bucket truck in the amount of $310,506.

2013 Actual vs. 2014 Actual

Table 2-24
Variance Analysis of Capital Expenditures
2013 Actual vs. 2014 Actual

Description	2013 Actual	2014 Actual	Variance from 2013 Actual
System Access	594,368	1,816,309	1,221,941
System Renewal	691,071	715,505	24,434
System Service		399,887	399,887
General Plant	278,269	174,430	(103,839)
Total Capital Expenditure	1,563,708	3,106,131	1,542,423

System Access

System Access variances are as follows; residential expansion projects added $1,231,074 to this category as compared with 2013. GPI experienced a record number of customers connected in 2014.

System Renewal

System Renewal variance does not meet the materiality threshold and therefore deemed immaterial.

System Service

There were no system service projects in 2013. Therefore, the variance includes these types of projects in 2014.

General Plant

In 2014 planned expenditures with computer software was less than in 2013. GPI was still implementing an ERP system and total costs were less than 2013.

2014 Actual vs. 2015 Bridge Year

Table 2-25
Variance Analysis of Capital Expenditures
2014 Actual vs. 2015 Bridge Year

Description	2014 Actual	2015 Bridge	Variance from 2014 Actual
System Access	1,816,309	970,570	(845,738)
System Renewal	715,505	505,458	(210,047)
System Service	399,887	1,605,054	1,205,167
General Plant	174,430	339,698	165,268
Total Capital Expenditure	3,106,131	3,420,781	314,650

System Access

System access variance was due to the large growth that GPI had in 2014. With a record of new customers in 2014 of 444. Growth in 2015 is forecasted to be less by $816,690.

System Renewal

System Renewal in 2014 was heavily influenced by Grimsby Power's voltage conversion project. A reduction in spend on voltage conversion was partially offset by an increase in spend on sustainment programs. This resulted in an overall reduction of $210,047.

System Service

System Service variance in 2015 was significantly influenced by the recognition of an upgrade to the Niagara West MTS in the amount of $1,311,736. This upgrade was required to enable renewable energy connections and in particular the connection of a 9MW wind farm in Niagara Peninsula Energy Inc.'s service territory.

General Plant

General Plant increases in 2015 over 2014 are a result of increases in spending on building fixtures ($51,950), and a concentration on hand tools and safety equipment for the line staff of $108,042.

2015 Bridge Year vs. 2016 Test Year

Table 2-26
Variance Analysis of Capital Expenditures
2015 Bridge Year vs. 2016 Test Year

Description	2015 Bridge	2016 Test	Variance from 2015 Bridge
System Access	970,570	1,109,539	138,968
System Renewal	505,458	272,613	(232,845)
System Service	1,605,054	177,879	(1,427,175)
General Plant	339,698	711,400	371,702
Total Capital Expenditure	3,420,781	2,271,431	(1,149,350)

System Access

In 2016, Grimsby Power has forecasted an increase (over 2015) in new customer connection activity mostly with its residential customer base due to current construction activity.

System Renewal

System Renewal created a large variance between 2015 and 2016. GPI's overall assets are in good condition and with other priorities Grimsby Power has elected to reduce its spending on system renewal for 2016.

GPI is taking 2016 to focus on what the customer survey stated clearly, an outage management system and better communications with our customers. Also Grimsby Power is focusing on a replacement and upgrade of a bucket truck to service our 27kV infrastructure.

System Service

The elimination of the upgrade cost at the Niagara West MTS reduces spend by $1.3 million. GPI's overall assets are in good condition and with other priorities Grimsby Power has elected to reduce its spending on system service by $115,439 for 2016.

General Plant

The General Plant variance includes one bucket truck to be replaced in 2016 for an increase in fleet spending of $365,000. IT related activities of $110,000 in 2016 to purchase and implement an OMS system to support customer needs by providing better emergency response and possibly outage avoidance on the Distribution System.

2016 – 2020 Trending

The investment levels in capital for System Access (New Connections and Expansions) and System Renewal (Capital Programs) are required to meet regulatory requirements, to sustain existing in-service assets, and to support day-to-day business and operational activities. Future plans in the System Service (Capital Projects) and General Plant categories relate to increases in the automation of the distribution system, system reliability

and customer preferences. Customer preferences include enhancements to the way Grimsby Power responds to outages and on how it communicates with customers. Grimsby Power's capital forecast is shown in the table below.

Table 2-27
Forecast Capital Trending Analysis
2016 – 2020

	2016				2017				2018				2019				2020				Total	Average
	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total		
System Access	173	817	120	1,110	74	835	86	995	71	805	91	967	66	744	96	906	60	683	97	839	4,818	964
System Renewal	153		120	273	831		86	918	885		91	976	965		96	1,062	970		97	1,067	4,294	859
System Service	58		120	178	313		86	399	319		91	409	325		96	421	331		97	428	1,835	367
General Plant	711			711	202			202	170			170	173			173	177			177	1,434	287
Contributed Capital		(561)		(561)		(572)		(572)		(554)		(554)		(518)		(518)		(482)		(482)	(2,688)	(538)
TOTAL EXPENDITURE	**1,095**	**256**	**359**	**1,710**	**1,420**	**263**	**259**	**1,943**	**1,445**	**251**	**272**	**1,968**	**1,529**	**226**	**289**	**2,044**	**1,538**	**201**	**290**	**2,029**	**9,693**	**1,939**

The graph above describes 2016 – 2020 in the same categories as the other tables. However, it also includes GPI assumed plant and allocations. Assumed plant refers to residential subdivision development or expansion of the distribution system that is partially paid for by the owner or developer but becomes a distribution asset. The portion of the asset paid by the owner or developer is offset by contributed capital.

In terms of allocation a portion of some overhead expenses are allocated to both OM&A and capital. In any given year the percentage of allocation that is capitalized is dependent on where Grimsby Power's Line staff spends there working hours – either on capital work or OM&A work. The allocation percentage for Lineman Expenses (capital vs. OM&A) is calculated by taking the sum total of hours for the Lines staff booked to capital and OM&A and deriving the percentage split between the two. Allocated expenses are then split between OM&A and capital accounts.

System Access

System Access investments are forecasted based on the forecasted connections over the 5 year horizon. These connections are due to the influx of new subdivisions being built on the Lake side of the Town of Grimsby over the next 3-4 years. Grimsby Power will accommodate all requests for new load connections and for service upgrades. New connections are expected to be mixed usage with residential and commercial customers.

System Renewal

System Renewal investments are based on the requirements of the asset replacement, mainly driven by assets that have exceeded their TUL. The proactive replacement of system components prior to failure will reduce costs associated with outage response and reactive replacement. Adjustments to the programs will be completed with gathering more detailed asset condition information and records. In 2016, however, GPI's short-term intent/goal includes investment in general assets to support the services requested by customers, relating to OMS, outage reporting systems, social media, etc. Because the current distribution system is sufficient to meet GPI's needs, GPI will delay distribution infrastructure investments in 2016. However, in consideration of long-term goals, GPI will maintain almost level investments in distribution assets to balance infrastructure spending and to avoid peaks and valleys. GPI does expect fluctuations year over year in this category, however, the total envelope of dollars is anticipated to be within an acceptable tolerance range for accuracy. Substations have been eliminated and the majority of poor assets will be replaced by the end of the forecast period between 2016 and 2020. This leveled spend increases due to the underground replacement renewal projects and backyard replacements.

System Service

System Service spending is focused on system reliability improvement projects, which are based on outage considerations, system impact, smart grid upgrade scenarios, electrical loss reduction and customer preferences. The integration of smart grid technologies allowing more automation (e.g., self-healing HV switches) and intelligence into the system (e.g., electronic reclosers) is a primary goal embedded in Grimsby Power`s capital investment strategy. The installation of these devices has been integrated into the plan for the next 5 year period smoothing costs year to year. These devices will have a significant impact on the reduction in outage rate and duration. Over the last period (2012 to 2014) GPI had some restrictions on the connection of distributed generation due to constraints on the transmission system – Beamsville TS (Hydro One) and Niagara West MTS (Niagara West Transformation Corporation). However, both of these restrictions have been rectified and going forward Grimsby Power does not expect any major issues with the connection of renewable generation (MicroFIT and FIT projects) within the current five-year plan.

General Plant

General Plant is focused on ensuring that adequate tools, such as OMS, are in place to support the day-to-day operations, and to improve customer communications in contingency scenarios of unplanned outages. GPI has incorporated the customer preferences obtained through targeted customer research and customer engagement process. The short-term plan is to divert funding towards customer-identified priorities, namely, a modern Outage Management System (OMS), with social media capability and website access to enhance customer communications. An OMS will also support the distribution system planning activities related to improving reliability by providing important outage statistics. Fleet and IT expenditures going forward will continue to follow a replacement strategy informed by the Fleet Assessment and GPI's knowledge of its assets which will cause changes year to year. All other general plant expenditures will remain fairly consistent throughout the filing period.

Capital Project Summary

Table 2-28 provides a summary of all capital projects for the years 2011 through 2014, the 2015 Bridge Year and the 2016 Test Year. All projects above GPI's materiality threshold of $50,000 have been listed individually within the DSP categories and all individual projects below the threshold have been grouped together as miscellaneous within the applicable category. GPI's DSP, found in Appendix 2-A, provides capital project summaries with a full description and justification of all individual material projects listed in the table for the 2016 Test Year. These summaries are found in Table 2-28 (the Board's Appendix 2-AA), Capital Projects Table and, when contributed capital is removed, reconciles to Table 2-27 above (for the 2016 Test Year).

Table 2-28
Appendix 2-AA
Capital Projects Table
2011 – 2016 Test Year

Projects	2011	2012	2013	2014	2015 Bridge Year	2016 Test Year
Reporting Basis	**CGAAP**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
System Access						
Residential Expansions	614,601	189,534	432,702	1,663,776	847,093	927,126
Modifications to Existing Customer Connection	28,136	77,185	50,115	77,564	46,785	52,672
Mandate Service Obligations					35,314	41,112
New Customers Connections	83,400	298,163	111,550	74,968	41,379	88,629
Smart Meter Project		1,479,164				
Sub-Total	**726,138**	**2,044,046**	**594,368**	**1,816,309**	**970,570**	**1,109,539**
System Renewal						
1) Conversion:						
Voltage Conversion	704,551	556,344	370,972	459,821	74,131	
Delta to Wye Conversion					9,127	
Overhead to Underground Conversion		7,270	60,547			
2) Sustainment:						
Primary Cable Silicon Injection	89,101	107,878	84,388	87,151	132,911	
Replace Sectionalizing Terminal						10,273
Primary Cable Installation for Non-injectable Segments					91,761	79,824
Replace Pad Mounted Transformers	44,755	55,768	49,820	51,813	69,432	87,336
Replace Defective Poles	16,938	20,800	39,992	18,679	38,574	68,169
Replace Meters (includig primary metering units and components)			77,521	74,301	51,810	
Replace Overhead Switches (including Gang Opreated Load Break Switches) & other equipment (OH Ttransformers)	43,872		6,532	23,740	20,085	27,012
Third Parties (Cogeco, Bell, etc.) Make Ready Work		5,054	1,299			
Replace Secondary Bus		8,557				
Line Extensions		47,990				
Transformer Station - Third party contractor costs to examine future capital expenditures					17,628	
Sub-Total	**899,218**	**809,660**	**691,071**	**715,505**	**505,458**	**272,613**
System Service:						
1) Replacements						
Replace >50KW form Meters with Smart Meters					40,985	
2) Automation						
Automate Primary 3 Phase Switches - Install Reclosures				64,968	82,608	88,952
Bucket Truck Rental						27,362
3) Upgrades						
Park Road between Sobie Rd and Main St E. - Conductor Upgrade				258,427	81,587	
Relocate Wholesale PME on 18M4 to GPI Service Boundary				56,484		
Convert Wholesale Meter Points to Wireless Communication				5,815		
Install Gang Operated Load Break Switch	16,188			14,193		
Transformer Station - Modifications to Support Renewable Generation						61,565
CNR railway					88,138	
Half Wind Project					1,311,736	
Sub-Total	**16,188**	**0**	**0**	**399,887**	**1,605,054**	**177,879**
Total Distribution Plant	**1,641,544**	**2,853,706**	**1,285,439**	**2,931,701**	**3,081,082**	**1,560,031**

Projects	2011	2012	2013	2014	2015 Bridge Year	2016 Test Year
Reporting Basis	**CGAAP**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
General Plant						
1) Computer Software						
Smart Meter Project		35,054				
Software Licenses - Adobe, Microsoft Office, Unforeseen Software	3,954	2,504	1,373	998	2,000	29,000
TOU Web Presentment Tool for Customers		1,872				
ERP Software System - Implementation and Modifications to the Software		112,322	135,180	79,096	30,000	30,000
MDMR/TOU SAP CIS System Upgrades		36,813				
ESRI Enterprise Licensing Agreement		15,500	15,500	15,500		
SpidaCal Software For Non Linear Pole Loading Calculations			3,562			
Software for SBS Server Standard Edition 30 User Licenses			3,260			
ADP Payroll System - One time set up fee			762			
Configuration of Web Server By ESRI To Display Mapping on Iphone			5,109			
SAP Configuration for DocuLink Interface			450			
Niagara Region Group Solution Ortho-Photo Project			15,000			
ION Enterprise, Interogation software for ION Meters			7,204			
Asset Management Planning & Systems Integration Software					40,000	110,000
Auto CAD 2015 - Upgrade to newest version					3,000	
DESS 7 software upgrade for simulation					4,500	
GIS integration with JOMAR (ERP)					3,000	
Inventory Software with scanners					5,000	5,000
Software for the Server Disaster Recovery					2,670	3,000
Software for USB FMT tuning and troubleshooting communication with meters					650	
Sub-Total	**3,954**	**204,064**	**187,400**	**95,594**	**90,820**	**177,000**
2) Buildings and Fixtures						
Outside Gate (2010 Project)	22,966					
Lighting Retrofit Roberts Road	4,949					
Upgrade Men's Locker Room and Washroom	31,156					
Replace Existing Heating, Ventilating, and Air Conditioning Systems	43,865					
Windows - Ledge Replacement & Sealing			3,250	3,400		
Repair Bay Door			5,633			
Lighting - Upgrade in Bay 1 and Bay 2					13,000	
New office space - renovation (Engineering, Regulatory, Lobby)		26,790			5,950	96,000
Racking System - in the storeroom (gated area)					26,400	26,400
Replace solid glass windows with solid plus window opening section					10,000	10,000
Sub-Total	**102,936**	**26,790**	**8,883**	**3,400**	**55,350**	**132,400**
3) Office Furniture						
Office Chairs	840	489	420	839	1,000	
Flat Panel TV - Boardroom		2,155				
Board Room Furniture		4,974		6,182		
Drawing Clamps			977			
New print room - storage cabinets					2,162	
Office Renovation and Replacement furniture (Engineering, Regulatory, Billing, Exec)		39,614			18,187	9,000
Sub-Total	**840**	**47,232**	**1,397**	**7,021**	**21,349**	**9,000**
4) Computer Hardware						
Sonicwall Total Secure	1,100					
Network Storage for Back up	1,540					
Laptops	689		1,490	1,817	5,000	5,000
Computer Workstations, Hardrives, Monitors	5,775	5,523	6,415	3,300	6,800	6,800
Mobile Computing - Lines		8,570				
Servers (ESRI GIS, ERP Mac W for Ipad & Iphone, Small Business, Disaster Recovery, Outages)		32,918	7,700		27,490	25,200
Smart Meter Project		24,808				
600 GB SAS 10 K 2.5" HDD for IBM 3650 M3 (Harddrives for GIS Server)			2,220			
Large External Hardrives For Backup			348			
Engineering Laser Printer				3,930		
Lexmark M1145 Printer				775		
I Pads for Lineman					1,600	
Sub-Total	**9,104**	**71,818**	**18,173**	**9,822**	**40,890**	**37,000**

Projects	2011	2012	2013	2014	2015 Bridge Year	2016 Test Year
Reporting Basis	**CGAAP**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
5) Tools						
Labour for Tool Repair PATCUT 129-18V LT120405 New Blades	953					
Hastings #11-006 Live Line Cutter	600					
Two Hastings #5041 Conductor Supports/One Truck Mount Guy Steel Holder	1,640					
Ten Truck Mats 4ft wide by 8ft long - Black With Cleat	1,989					
RCC Electronics - HIOKI Clamp-On Power Hitester Serial # 110310781	890					
Smart Meter Project		3,410				
Insulated Stick Mounted Chain Saw		640				
Gas Powered Chain Saw		304				
2 Sets of Overhead Grounds			1,935	1,707		
12 Ton Compression Tool (for crimping lugs and splices)			4,705			
Traffic Signs, Stands, Cones			2,906		2,000	
Sensus Meter Installation Tool, Command Link and Trimble Nomad Handheld Computer Model 900			4,781			
Spare USB Optical Probe for Meter Communication			490			
Gas Powered Chain Saw			1,070			
Defibrillator - PAD500P - Line Trucks			3,319			
Analog Superbeast Combo			934			
Superbeast - Secondary Service Conductor Tester				1,132		
Travelers for Stringing Conductors				11,060		
Cable Locate Tool				6,380		
Dillion Dynamometer				1,123		
Coffing/Little Mule Hoist - to install 266MCM Triplex				1,845		
3 Ton Chain Hoist (Chance)					3,000	
3 Ton Web Hoist					6,089	
Battery Press					4,200	
Hydraulic Impact Guns					6,000	
Miscellaneous Tools					108,000	
Rapid Roll Fence					2,000	
Sub-Total	**6,073**	**4,354**	**20,140**	**23,247**	**131,289**	**0**
6) Vehicles						
Pole Trailer	17,111					
Shelving for Van #12		1,953		1,637		
Multi-Purpose Equipment Trailer		11,746				
55ft Aerial Device - Chassis Only		310,506				
46ft Aerial Device and Fiberglass Body						356,000
Sub-Total	**17,111**	**324,205**	**0**	**1,637**	**0**	**356,000**
7) Communication Equipment						
Mobile Phone Signal Enhancer - Lower Level Offices		5,727				
Office Phone System		13,777	2,440			
Cell Phones - Engineering & Operations		4,409		785		
Full Mobile Radio System For Vehicles			39,836			
Sub-Total	**0**	**23,913**	**42,276**	**785**	**0**	**0**
Measuring						
Sensorlink		1,450				
Disto D5 Laser Level		579				
Candura - PQPro analyser with meter installation verification				19,325		
Sub-Total	**0**	**2,029**	**0**	**19,325**	**0**	**0**
Load Management Controls						
Load Management Device				13,599		
Sub-Total	**0**	**0**	**0**	**13,599**	**0**	**0**
Total General Plant	**140,018**	**704,405**	**278,269**	**174,430**	**339,698**	**711,400**
Miscellaneous						
Total	**1,781,562**	**3,558,111**	**1,563,707**	**3,106,131**	**3,420,781**	**2,271,431**
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets ***(input as negative)***						
Total	**1,781,562**	**3,558,111**	**1,563,707**	**3,106,131**	**3,420,781**	**2,271,431**
Deferred Revenue (Capital Contribution)	**$ (709,329)**	**$ (302,965)**	**$ (367,923)**	**$ (1,093,243)**	**$ (1,865,822)**	**$ (561,251)**
Total	**1,072,233**	**3,255,146**	**1,195,784**	**2,012,887**	**1,554,958**	**1,710,180**
Smart Meter Project		**$ (1,542,435)**				
Grand Total	**1,072,233**	**1,712,711**	**1,195,784**	**2,012,887**	**1,554,958**	**1,710,180**

Capital Project Variance – 2012 Board Approved vs. 2012 Actual

Table 2-29 provides a summary, by material capital project, of 2012 actual project costs compared to 2012 Board-Approved projects. The variances from the 2012 Board Approved expenditures to 2012 Actual expenditures are explained above in the variance analysis of capital expenditures.

Table 2-29
Capital Project Variance Table
2012 Board Approved vs. 2012 Actual

Projects	2012 OEB Test Year	2012	Variance
Reporting Basis	**MIFRS**	**MIFRS**	**MIFRS**
System Access			
Residential Expansions		189,534	
Modifications to Existing Customer Connection		77,185	
New Customers Connections		298,163	
Smart Meter Project	19,529	1,479,164	
Sub-Total	**19,529**	**2,044,046**	**2,024,517**
System Renewal			
1) Conversion:			
Voltage Conversion	451,802	556,344	
Overhead to Underground Conversion	26,066	7,270	
2) Sustainment:			
Primary Cable Silicon Injection	116,638	107,878	
Replace Pad Mounted Transformers	83,659	55,768	
Replace Defective Poles	32,966	20,800	
Replace Meters (includig primary metering units and components)	13,910		
Replace Overhead Switches (including Gang Opreated Load Break Switches) and other equipment (OH Ttransformers)	43,889		
Third Parties (Cogeco, Bell, etc.) Make Ready Work		5,054	
Replace Secondary Bus		8,557	
Line Extensions		47,990	
Transformer Station - Third party contractor costs to examine future capital expenditures	29,378		
Sub-Total	**798,308**	**809,660**	**11,352**
System Service:			
3) Upgrades			
Miscellaneous Jobs	39,333		
Sub-Total	**39,333**	**0**	
Total Distribution Plant	**857,170**	**2,853,706**	**1,996,536**

1

Projects	2012 OEB Test Year	2012	Variance
General Plant			
1) Computer Software			
Smart Meter Project		35,054	
Software Licenses - Adobe, Microsoft Office, Unforeseen Software		2,504	
TOU Web Presentment Tool for Customers		1,872	
ERP Software System - Implementation and Modifications to the Software		112,322	
MDMR/TOU SAP CIS System Upgrades		36,813	
ESRI Enterprise Licensing Agreement		15,500	
Sub-Total	**0**	**204,064**	**204,064**
2) Buildings and Fixtures			
New office space - renovation (Engineering, Regulatory, Lobby)	0	26,790	
Sub-Total	**0**	**26,790**	**26,790**
3) Office Furniture			
Office Chairs		489	
Flat Panel TV - Boardroom		2,155	
Board Room Furniture		4,974	
Office Renovation and Replacement furniture (Engineering, Regulatory, Billing, Exec)	82,570	39,614	
Sub-Total	**82,570**	**47,232**	**-35,338**
4) Computer Hardware			
Computer Workstations, Hardrives, Monitors	17,850	5,523	
Mobile Computing - Lines		8,570	
Servers (ESRI GIS, ERP Mac W for Ipad & Iphone, Disaster Recovery, Outages)	24,950	32,918	
Smart Meter Project		24,808	
Sub-Total	**42,800**	**71,818**	**29,018**
5) Tools			
Smart Meter Project		3,410	
Insulated Stick Mounted Chain Saw	1,000	640	
Gas Powered Chain Saw	600	304	
Sub-Total	**1,600**	**4,354**	**2,754**
6) Vehicles			
Shelving for Van #12		1,953	
Multi-Purpose Equipment Trailer	24,000	11,746	
55ft Aerial Device - Chassis Only	275,000	310,506	
Sub-Total	**299,000**	**324,205**	**25,205**
7) Communication Equipment			
Mobile Phone Signal Enhancer - Lower Level Offices		5,727	
Office Phone System	23,700	13,777	
Cell Phones - Engineering & Operations		4,409	
Sub-Total	**23,700**	**23,913**	**213**
Measuring			
Sensorlink		1,450	
Disto D5 Laser Level		579	
Sub-Total	**0**	**2,029**	**2,029**
Total General Plant	**449,670**	**704,405**	**254,735**
Miscellaneous			
Total	**1,306,840**	**3,558,111**	**2,251,271**

Summary

Table 2-30
Capital Investments over the Forecast Period
2016 Test Year to 2020

	2016	2017	2018	2019	2020	Total	Average
	$ '000						
System Access	1,110	995	967	906	839	4,818	964
System Renewal	273	918	976	1,062	1,067	4,294	859
System Service	178	399	409	421	428	1,835	367
General Plant	711	202	170	173	177	1,434	287
Contributed Capital	(561)	(572)	(554)	(518)	(482)	(2,688)	(538)
TOTAL EXPENDITURE	**1,710**	**1,943**	**1,968**	**2,044**	**2,029**	**9,693**	**1,939**
Percent Change from Previous Year		13.6%	1.3%	3.9%	-0.7%		4.5%
Percent Change Not Including 2016			1.3%	3.9%	-0.7%		1.5%

Moving forward from 2017 – 2020 GPI shows a very slight increase of 1.5% on average with its major focus on System Renewal. However, in 2016 GPI is focusing on technology to help its customers with better communications and launch more advanced systems to perform some self healing within the distribution system. GPI's focus is more technology for better customer service and a quicker response time to distribution system issues.

Treatment of Cost of Funds

GPI's accounting policy is to expense borrowing costs. It does not capitalize interest on capital projects.

Components of Other Capital Expenditures

GPI does not have other capital expenditures, such as non-distribution activities, for which it needs to provide components.

Capitalization Policy

Changes to Capitalization Policy

Grimsby Power has not changed its capitalization policy since the last rebasing for 2012 rates (EB-2011-0273).

Capitalization Policy Overview

Effective January 1, 2011 Grimsby Power adopted accounting policies that are compliant with Modified International Financial Reporting Standards (MIFRS). With respect to capitalization of certain expenses, Grimsby Power follows the guidance provided by IAS 16, whereby capital cost includes the following:

- Purchase price, including duties and non-refundable taxes and excluding trade discounts and rebates
- All expenditures attributable to bringing the asset to a working condition for its "intended use"
    - Directly attributable need to be incremental or external
    - Capable of being operated in the manner intended by management
- Cost of obligation of its dismantlement, removal or restoration
- PP&E include expenditures that directly attributable to the acquisition of the asset. The cost of self-constructed assets include the cost of material, direct labour, third party subcontracting and other costs directly attributable to bringing the asset to a working condition for its intended use.
- Expenditures that create a physical betterment or improvement of an asset will be capitalized

Capital Assets include property, plant and equipment that are held for use in the production or supply of goods and services and provide benefit lasting beyond one year. Capital expenditures also include the improvement or "betterment" of existing assets. Intangible

assets are also considered capital assets and are defined as assets that lack physical substance. They include computer software.

Changes to Capitalization Policy

Grimsby Power has not changed its capitalization policy since the last rebasing for 2012 rates (EB-2011-0273).

Guidelines for Capitalization

Betterment is a cost which enhances the service potential of a capital asset and/or increases its value and therefore capitalized. Betterment includes expenditures which increase the capacity of the asset, lower associated operating costs of the asset, improve quality of output or extend the asset's useful life. Betterment does not include general maintenance-related actions that seek to sustain an asset's current value.

Repairs – a "repair" is a cost incurred to maintain the service potential of a capital asset. Expenditures for repairs are expensed to the current operating period. Expenditures for repairs and/or maintenance designed to maintain an asset in its original state are not capital expenditures and are charged to a maintenance account.

Depreciation - Depreciation is recognized on a straight-line basis over the estimated useful life of each significant identifiable item of property, plant and equipment. Land is not depreciated.

Grimsby Power has used the Typical Useful Life provided in the Kinectrics Report as its basis for assigning the estimated service life of assets. As required under MIFRS, Grimsby Power reviews the useful lives assigned to each assets category on an ongoing base. Depreciation of an asset begins in the year when it is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended. In the first year of service, depreciation is calculated using the ½ year rule. Depreciation of an asset ceases when the asset is retired from active use, sold or is fully depreciated.

Overhead Policy

Grimsby Power's overhead policy was reviewed by its external auditors during its transition period back in 2011 and during each yearend audit since the transition to ensure that Grimsby Power's policy remains to be MIFRS compliant.

In 2012 Grimsby Power reviewed and changed its overhead policy. Grimsby Power does not capitalize general administrative costs related to Administration, HR, Regulatory Affairs, Information System Technology, Billing and Collections and Finance.

In addition to Grimsby Power's direct labour costs are those costs that are generally considered labour burden. In this category Grimsby Power includes vacation, statutory holidays, health and safety, training costs, personal protective equipment costs, sick time, CPP, EI, OMERS contribution, health care and other benefits paid by the employer on behalf of the employees. These costs are related to the power line staff only. Through the time sheet process, the power line staff track their hours by work order which designates whether the work is expensed or capitalized. The labour burden is calculated and allocated to the capital or expense, based on the number of direct labour hours worked.

The overhead policy also addresses what Grimsby Power considers a cost that directly impacts its capital projects, the equipment costs.

Equipment Costs – these costs include the costs associated with maintaining Grimsby Power's fleet of pick-up trucks, bucket trucks with aerial devices, and trailers. These costs include fuel, repairs, insurance, depreciation and all other items of expense necessary to keep the fleet in service. Based on the hours of use, these costs are expensed or capitalized directly to the specific project through the timesheet process by work order.

As part of transition to MIFRS, Grimsby Power took position that costs related to both Inventory and Purchasing as well as facility costs were not going to be part of the capitalization process through its burden allocation. As a result, any costs related to these functions have been treated as OM&A costs and expensed annually.

Capitalization of Overhead

Grimsby Power has completed Appendix 2-D Overhead Expense showing a breakdown of OM&A before capitalization and capitalized OM&A.

Please see Appendix 2-D below in Table 2-31

Table 2-31
Appendix 2-D
Summary of OM&A Before Capitalization
2012 to 2016 Test Year

OM&A Before Capitalization	2012 Historical Year	2013 Historical Year	2014 Historical Year	2015 Bridge Year	2016 Test Year
Lineman's Expenses	$ 105,167	$ 178,866	$ 196,219	$ 169,257	$ 244,475
Truck Expenses	$ 53,719	$ 82,648	$ 99,510	$ 93,526	$ 95,791
Total OM&A Before Capitalization (B)	$ 158,886	$ 261,514	$ 295,729	$ 262,783	$ 340,266

Table 2-32
Appendix 2-D
Summary of Capitalized OM&A
2012 to 2016 Test Year

Capitalized OM&A	2012 Historical Year	2013 Historical Year	2014 Historical Year	2015 Bridge Year	2016 Test Year	Directly Attributable? (Y/N)
Labour	$ 45,092	$ 68,252	$ 109,032	$ 90,923	$ 136,191	Y
Truck	$ 19,331	$ 24,582	$ 54,589	$ 46,549	$ 34,102	Y
Total Capitalized OM&A (A)	$ 64,422	$ 92,834	$ 163,621	$ 137,471	$ 170,292	
% of Capitalized OM&A (=A/B)	41%	35%	55%	52%	50%	

Costs of Eligible Investments for the Connection of Qualifying Generation Facilities

Section 2.5.2.5 of the Filing Requirements contemplates that a distributor will file for provincial rate protection associated with any costs incurred to make eligible investments, as described in section 79.1 of the *Ontario Energy Board Act, 1998 (the "Act")* and Regulation 330/09 (O.Reg.330/09) made under act.

Costs incurred by a distributor, in accordance with cost responsibility rules in the OEB's Distribution System Code for the purpose of connecting or enabling the connection of a

Renewable Energy Generation facility to its distribution system are considered to be eligible investments for the purpose of provincial rate recovery under s.79.1 of the Act.

As of December 31, 2014, Grimsby Power has connected 23 renewable generation projects with a nameplate capacity of 537.19 kW.

Grimsby Power does not expect any capital expenditures related to the renewable energy generation in its distribution system plan. There are no additional OM&A costs related to renewable generation as Grimsby Power is able to processes both microFIT and FIT applications utilizing existing employees. Therefore Grimsby Power does not require recovering costs incurred to make eligible investments as described in section 79.1 of the Act or O.Reg.330/09 under the Act.

Because Grimsby Power does not expect any capital expenditures related to renewable energy generation, Grimsby Power has not filed Appendix 2-FA to 2-FC.

New Policy Options for the Funding Capital

On September 18, 2015, the Board released *Report of the Board New Policy Options for the Funding of Capital Investments: The Advanced Capital Module* and in it the Board has established the following mechanism to assist distributors in aligning capital expenditure timing and prioritization with rate predictability and smoothing:

> The review and approval of business cases for incremental capital requests that are subject to the criteria of materiality, need and prudence are advanced to coincide with the distributor's cost of service application. To distinguish this from the Incremental Capital Module ("ICM"), this new mechanism will be named the Advanced Capital Module (or "ACM").
>
> Advancing the reviews of eligible discrete capital projects, included as part of a distributor's Distribution System Plan and scheduled to go into service during the IR term, is expected to facilitate enhanced pacing and smoothing of rate impacts, as the distributor, the Board and other stakeholders will be examining the capital projects over the five-year horizon of the DSP.

GPI does not have any discrete capital projects within the five-year horizon that it believes would require this new policy option. The capital investment required by GPI from 2016 through 2020 is relatively flat and GPI believes it can be managed through the rates proposed within this application.

Additions of ICM Assets to Rate Base

Grimsby Power did not apply for an ICM in the IRM period following its 2012 Cost of Service. Therefore Grimsby Power is not requesting ICM capital asset amounts to be incorporated into its rate base.

Service Quality and Reliability Performance

GPI follows the Board's Reporting and Record Keeping Requirements Guideline to report its service quality indicators annually. In accordance with the Filing Requirements Board Appendix 2-G - Service Reliability Indicators 2010 – 2014 is shown below.

GPI's performance results over the 2010 to 2014 period meet or exceed the Board's approved standards. PI's performance is within the range of acceptable performance over the previous five years and no corrective action is required. With respect to SAIDI and SAIFI, GPI has provisions in its capital budget to implement an OMS system which will aid in the tracking of the reliability metrics, including the analysis of worst performing feeder information which is not currently being monitored.

Table 2-33
Appendix 2-G
Service Quality and Reliability Performance
2010 - 2014

Index	Including outages caused by loss of supply					Excluding outages caused by loss of supply				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
SAIDI	3.000	2.090	1.230	2.380	0.730	3.000	2.090	1.230	2.380	0.730
SAIFI	1.060	1.240	1.730	1.700	0.520	1.060	1.240	1.730	1.700	0.520

5 Year Historical Average					
SAIDI			1.886		1.886
SAIFI			1.250		1.250

Table 2-34
Appendix 2-G
Service Quality Indicators
2010 - 2014

Indicator	OEB Minimum Standard	2010	2011	2012	2013	2014
Low Voltage Connections	90.0%	100.0%	100.0%	100.0%	100.0%	100.0%
High Voltage Connections	90.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Telephone Accessibility	65.0%	72.4%	77.8%	85.5%	87.0%	69.3%
Appointments Met	90.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Written Response to Enquires	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Emergency Urban Response	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Emergency Rural Response	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Telephone Call Abandon Rate	10.0%	0.0%	0.0%	0.0%	5.4%	5.6%
Appointment Scheduling	90.0%	99.1%	100.0%	100.0%	100.0%	100.0%
Rescheduling a Missed Appointment	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Reconnection Performance Standard	85.0%		100.0%	100.0%	100.0%	100.0%

APPENDIX 2-A - DISTRIBUTION SYSTEM PLAN

2015

Consolidated Five Year Distribution System Plan

BURMAN ENERGY CONSULTANTS GROUP INC

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3/25/2015

Revised 9/28/2015

CONFIDENTIAL AND PROPRIETARY

Disclaimer: The information in this document has been prepared in good faith and represents Grimsby Power's Inc. (GPI) intentions and opinions at the date of issue. GPI, however, operates in a dynamic environment affected by the changing requirements of customers, changes in asset condition and the impact of severe weather events. The information and statements made in this document are based on the assumptions, projections, and forecasts made by GPI, and represents GPI's intentions and opinions at the date of preparation. The plans are constantly evolving to reflect the most current information and circumstances. As a result, GPI does not give any assurance, either expressed or implied, about the accuracy of the information, or whether the company will fully implement the plan or undertake the work mentioned in the document. GPI, its directors, officers, shareholders or representatives do not accept any liability whatsoever by reason of, or in connection with, any information in this document or any actual or purported reliance on it by any person. GPI may change any information in this document at any time.

Contents

INTRODUCTION

PURPOSE OF FILING A DISTRIBUTION SYSTEM PLAN (5.0, 5.0.1)

This Distribution System Plan (DSP) serves to outline how Grimsby Power Incorporated (GPI) will develop, manage, and maintain its distribution system equipment to provide a safe, reliable, efficient, and cost effective distribution system.

Chapter 5 requirements for the OEB are referenced by sections and subsections. Within this DSP GPI has followed the outline of the OEB regulation in numerical order by section number.

The DSP identifies the major initiatives and projects to be undertaken over the planning period, to meet customer and stakeholder requirements. Preparation of the DSP in this format is intended to supplement GPI's rate application for 2016 distribution rates to the Ontario Energy Board (OEB).

The intent of GPI is to meet the filing requirements set out by the OEB in Chapter 5 (Consolidated Distribution System Plan), and to provide the information required by the Board under the Renewed Regulatory Framework for Electricity (RRFE) to facilitate assessment of GPI's application, in the areas involving planned expenditures on the distribution system and other infrastructure. For the purposes of the filing, the DSP has consolidated documentation of GPI's asset management process and capital expenditure plan.

The DSP is consistent with Board expectations for distributors to optimize investments with present and future customers in mind. This Plan is focused on delivering good value for money and aligns the interests of GPI with those of its customers; it also supports the achievement of public policy objectives and sustaining financial viability. GPI wants to ensure that the performance outcomes, as established by the OEB for electricity distributors, are being achieved in a planned manner.

The DSP consolidates documentation of GPI's Asset Management Process and the Capital Expenditure Plan to maximize overall value to stakeholders in areas like service quality, customer satisfaction, safety, asset renewal and financial performance.

ABOUT GRIMSBY POWER INCORPORATED

COMPANY OVERVIEW

Grimsby Power Incorporated (GPI) is a licensed, rate regulated electricity distribution utility, operating in the Town of Grimsby, Ontario. GPI was formed in 2000. The Town of Grimsby and FortisOntario are the shareholders.

Grimsby Power owns, maintains and operates the distribution system, which consists of 169 km of overhead lines and 74 km of underground lines all carrying a voltage of less than or equal to 27.6kV and a 230kV to 27.6kV Dual Element Spot Network (DESN) transformer station.

Grimsby Power receives its power from two locations: Beamsville Transformer Station (owned by Hydro One), and Niagara West Transformer Station (On October 1, 2015 amalgamated into GPI and classified as a distribution asset), both fed from the Hydro One transmission system. The service territory for GPI is the municipal boundary of the Town of Grimsby, as shown on the maps in Appendix A.

VISION/ MISSION/TACTICS

Grimsby Power's Mission Statement is as follows: *"Grimsby Power Incorporated is committed to provide the customers of Grimsby with a safe and reliable electricity supply while operating effectively and efficiently at an equitable cost; Grimsby Power Incorporated will grow the business and increase shareholder value."*

GPI defines as its Vision, to be recognized for its ability to be adaptable in the way it delivers its services, while remaining a locally owned business entity. GPI will continue to provide safe, reliable, and economic electrical service, with a focus on customer needs, infrastructure enhancement, responsible growth and resource management. GPI will strive to be efficient in any new operations, and will partner with others to drive economies of scale and scope. GPI will require the principles of cost-effectiveness and continuous quality improvement be applied to all programs, functions, projects and initiatives undertaken by GPI. GPI will ensure that all services provided by GPI meet or exceed the customers' standards for quality and safety.

Grimsby Power Inc.'s Vision is to:

- Be adaptable;
- Continue to provide economical efficient energy;
- Be in business for our customers;
- Be a locally owned business;

- Strive to be efficient in any new operation to meet our customers' needs; and
- Partner with others to drive economies of scale and scope.

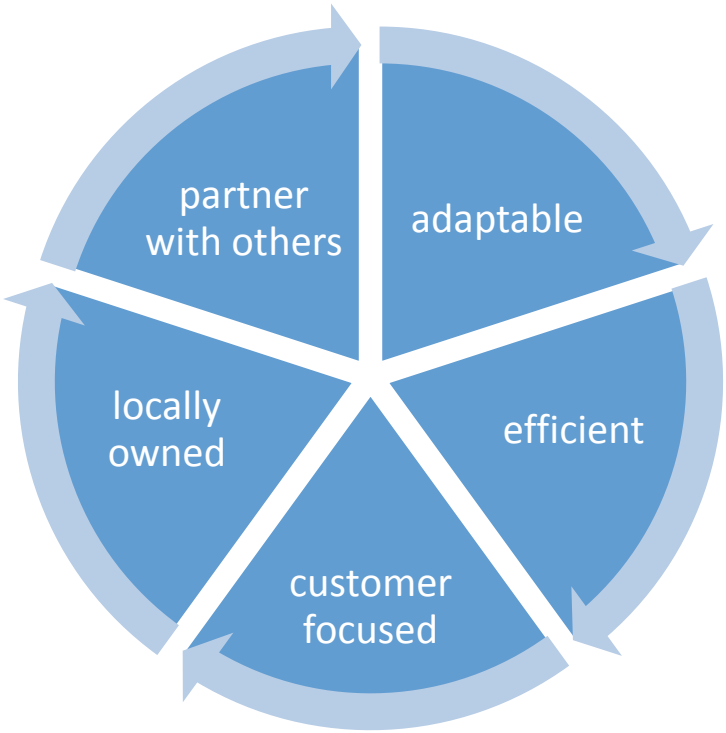


Figure 1

GPI recognizes the importance employees play in the delivery of its mission and vision principles. Thus, GPI fosters an environment of employee involvement and empowerment, which encourages and nurtures the skill sets of all employees in their respective disciplines through provision of professional experiences and skill-specific development and training. GPI provides the environment in which employees, with enhanced skills development, work as a team to continuously improve systems and processes. GPI deploys mature technology, which further enhances current functionality, while ensuring future potential data collection for internal staff and external customer use. GPI creates business efficiencies, utilizing technology to capture business data, for conversion into business information, to improve and create seamless end-to-end business processes. GPI searches out new processes, technologies, and cost efficiencies to provide improved delivery of services to its customers. GPI values

sustainable operations, within its technology framework, and is working towards a paperless environment and deployment of mobile solutions for internal (staff) and external (customers) use.

GOVERNANCE

Shown below is the corporate structure of Niagara Power Inc.

Corporate Structure of Niagara Power Inc.

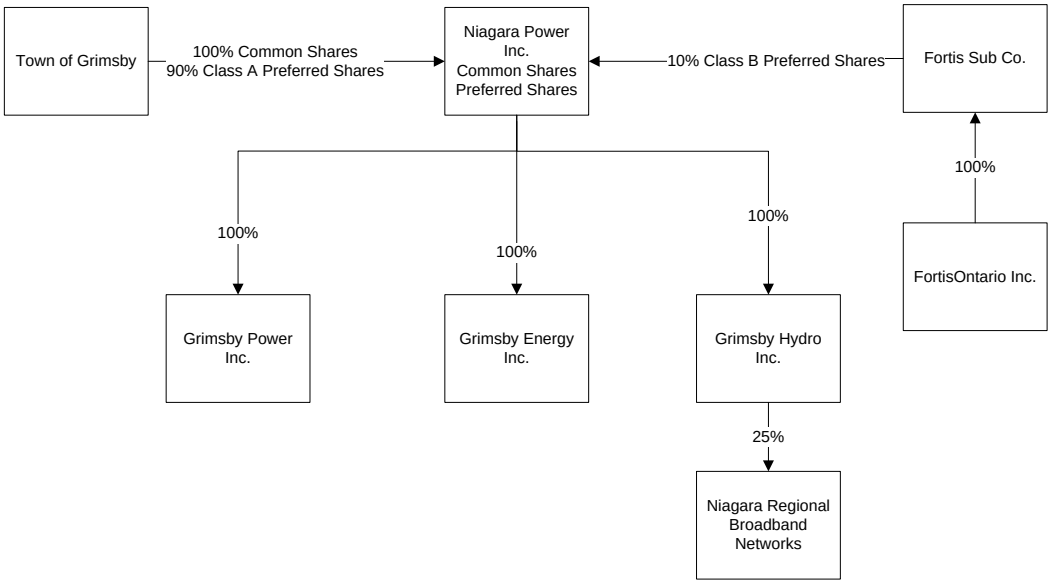

Town of Grimsby
100% Common Shares
90% Class A Preferred Shares
Niagara Power Inc.
Common Shares
Preferred Shares
10% Class B Preferred Shares
Fortis Sub Co.
100%
FortisOntario Inc.
100%
100%
100%
Grimsby Power Inc.
Grimsby Energy Inc.
Grimsby Hydro Inc.
25%
Niagara Regional Broadband Networks

Figure 2

Niagara Power Incorporated

Niagara Power Inc. is the holding company for Grimsby Power Inc., where the Town of Grimsby owns 90% and FortisOntario owns 10%. A second company, Holding Co 2, is 100% owned by The Town of Grimsby and has two subsidiaries, Grimsby Energy Inc., and Grimsby Hydro Inc.

Grimsby Power Incorporated

Grimsby Power Incorporated is a Local Distribution Company (LDC) whose function is to distribute electrical energy to its customers. This regulated company is responsible for all capital and maintenance work on the distribution plant (poles, wires, transformers both overhead and underground, transformer station), as well as customer billing, and services related to the distribution of electricity.

Grimsby Energy Incorporated

Grimsby Energy Incorporated is a services company, which is responsible for exploring green energy and other business opportunities. Holding Co 2 holds their assets.

Grimsby Hydro Incorporated

Grimsby Hydro Incorporated is the deregulated company that was set up as a retail affiliate. Originally, it was in the business of fibre optic telecommunications and related activities. Later, the fibre optic assets were sold for shares in a region-wide telecommunication business known as Niagara Regional Broadband Networks. Grimsby Hydro, along with three other utility partners, maintains a 25% equity ownership in this company.

ABOUT THE TOWN OF GRIMSBY

Grimsby is geographically located, halfway between downtown Hamilton and Niagara Falls, between Lake Ontario and Lake Erie, and is within one hours' drive of Toronto and the USA border. With the Niagara Escarpment running through its heart, Grimsby's advantageous location, astride the Queen Elizabeth Way, provides businesses and industries with easy access to the major urban markets of Ontario and the Northeastern United States. The Town of Grimsby is one of 12 municipalities in the Regional Municipality of Niagara. The Town has infrastructure assets valued at more than 240 million dollars, including building and facilities assets in excess of 35 million dollars. The table below provides geographic information from the 2014 Town of Grimsby profile published at www.town.grimsby.on.ca.

Distance to surrounding city centres

City Centre	Kilometres	Miles	Estimated Travel Time
Hamilton	26	16	24 Min.
St. Catharines	29	18	21 Min.
Buffalo	81	50	52 Min.
Toronto	84	52	1 Hr. 5 Min.
Kitchener-Waterloo	97	60	1 Hr. 20 Min.
Ottawa	531	330	5 Hr. 33 Min.
Montreal	625	388	6 Hr. 33 Min.
New York	707	439	7 Hr. 5 Min.

Figure 3

The Town of Grimsby is one of the fastest growing municipalities in the Niagara Region. The most recent data[1] indicates that Grimsby's population growth increased by 18% between 2001 and 2006. The population of Grimsby is expected to steadily increase in the next decade, but at a slower pace. These population growth trends form the future projections of load growth in the area.

GPI CUSTOMER BASE SUMMARY

Over 90% of GPI customers are residential, whereas 8% are small business or industrial based. Appendix B provides detailed information about customer base. The graphics below shows customer growth, in total numbers, from 2006 to 2014, and projected growth in number of customers and percentage from 2015 to 2020. The percentage increase is based upon the Town of Grimsby's forecast of current and future building projects and land that is still available.

[1] 2014 Town of Grimsby profile published at www.town.grimsby.on.ca .

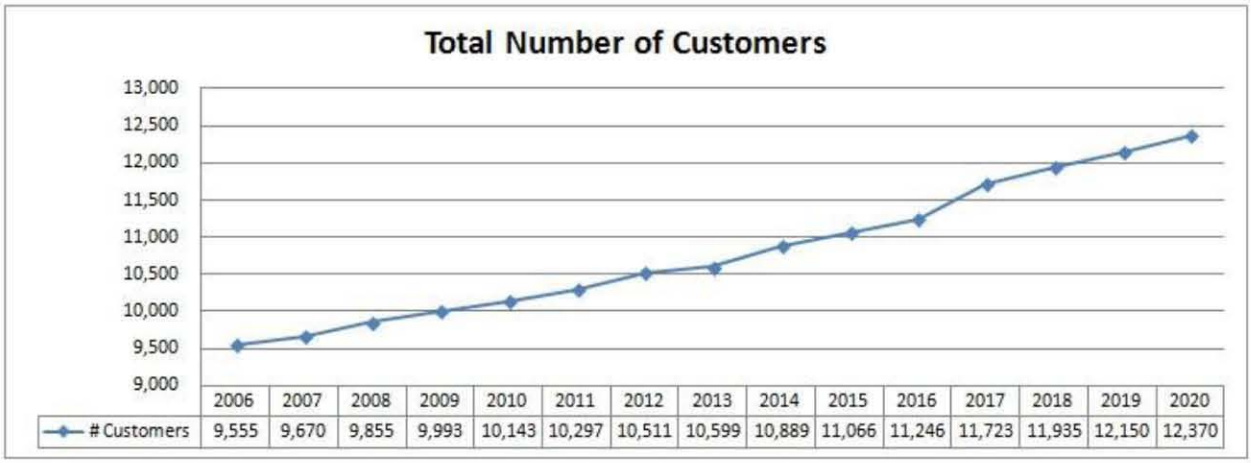


Figure 4

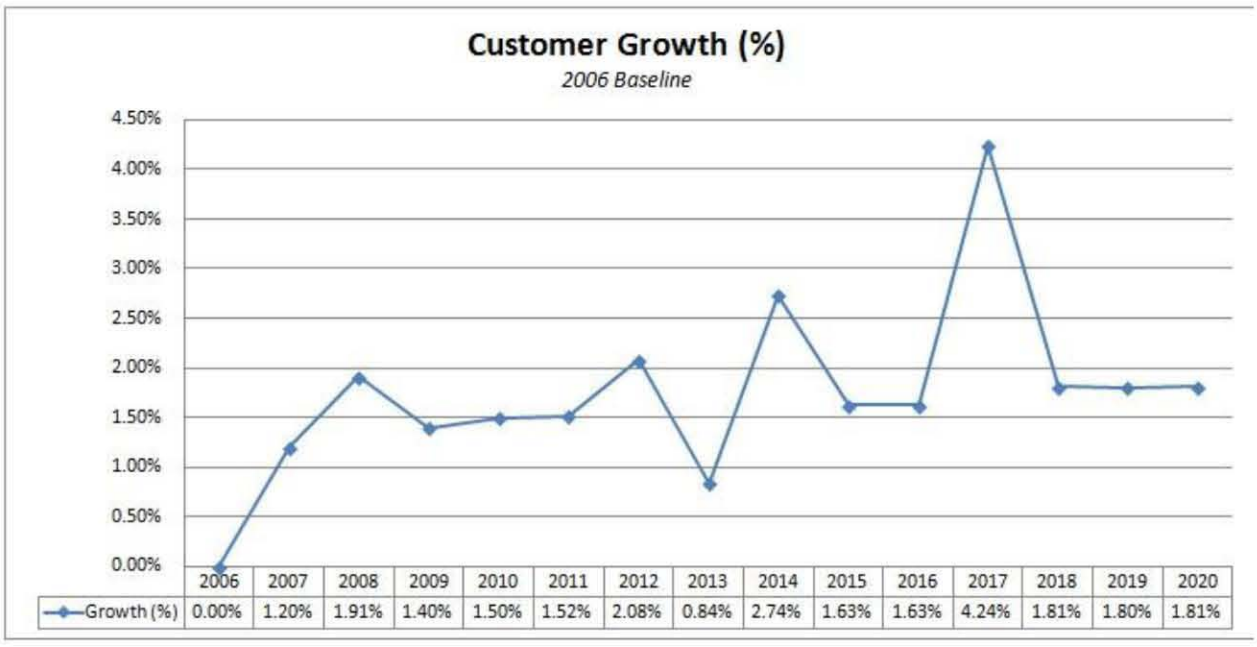


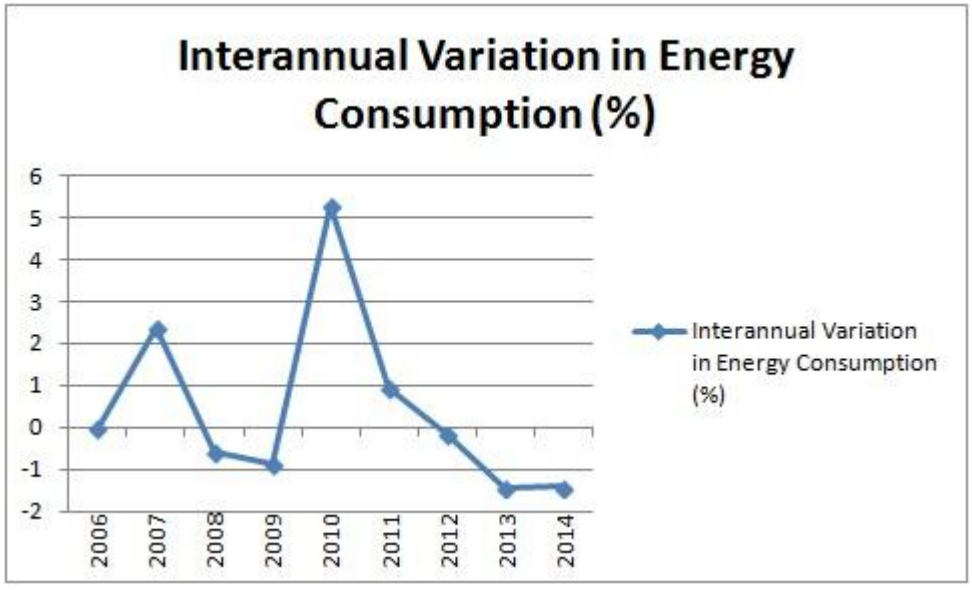
Figure 5

MONTHLY RATES & CHARGES

Appendix C shows a detailed breakdown of the *Monthly Rates for 2015.*

SUMMARY OF ENERGY USAGE

The graph below summarizes GPI's energy usage in terms of annual billed kW/kWh for 2006 to 2014.



Focusing on 2010 to 2014 there has been a dramatic reduction in the consumption of energy. This is attributed to GPI's CDM program that started in 2011. GPI was 137% to the CDM target.

	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual
Customers	9,555	9,670	9,855	9,993	10,143	10,297	10,511	10,599	10,889
kWh (Residential, GS<50, GS>50, Streetlight, USL)	169,025,475	173,068,981	172,075,839	170,620,093	180,067,443	181,291,509	184,156,613	182,585,172	179,890,867
kW from applicable classes (GS>50 and Streetlight)	179,846	180,838	177,224	176,379	178,705	184,805	187,690	190,557	184,395

Figure 6

Refer to Appendix D – Total Billed kW/kWh per Customer Class for a detailed breakdown by customer type.

SERVICE AREA MAP

Refer to Appendix A for a map of GPI's Service Area.

DISTRIBUTION SYSTEM PLAN FRAMEWORK (5.0.3)

INTEGRATED PLANNING (5.0.3.1)

The intention underlying DS Planning at GPI encourages a process of "continuous improvement." The Plan Do Check Act (PDCA) cycle represents the Asset Management Process and DS Planning methodology. The following diagram shows the steps that have been adapted through the planning process:

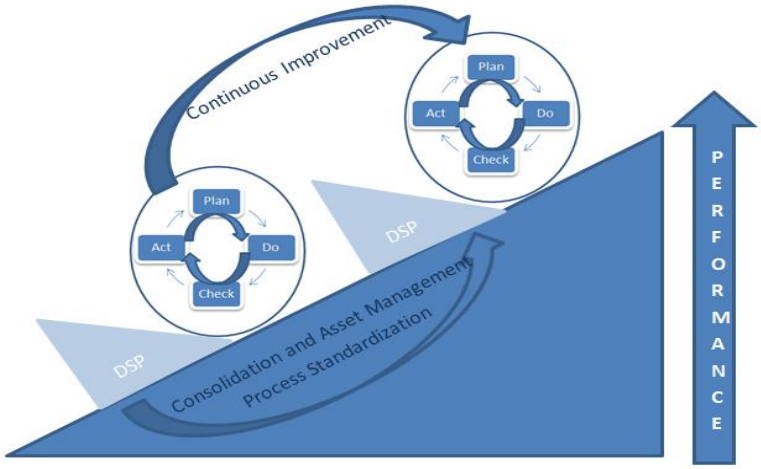


Figure 7

PLAN

Establish the objectives and processes necessary to deliver results in accordance with the expected outcomes. Start, on a small scale, to test possible effects and financial feasibility. Develop a DS Plan, prioritizing budgets, resources, and timelines.

DO

Implement the Plan and collect data for analysis in the following "CHECK" and "ACT" steps. Develop projects' design and execution, preparing status reports, and implementing planned activities.

CHECK

Study the actual results (measured and collected in "DO" above) and compare against the expected results (targets or goals from the "PLAN") to ascertain any differences. Evaluate any deviations in implementation from the Plan, and evaluate the appropriateness and completeness of the Plan to enable the execution, i.e., "Do". This Plan elaborates on GPI's Performance Outcomes in the later sections of the document. GPI's Performance Monitoring Scorecard (Appendix F) represents an approach to managing utility performance through specific measurable key performance indicators.

ACT

Recommend improvements and adjustments to the initial plan; determine the course of corrections and modifications to the plan.

In this DS Plan, GPI also describes the areas where it has been determined that the asset management process, systems and data need to be improved. GPI's DS network provides an essential service to the community and needs to be reliable and sustainable. The electricity distribution infrastructure assets are capital-intensive and have long life. GPI will continue to monitor and optimize the network performance, further refine effective investment strategies and refocus activities, as needed, to meet established targets.

The table below illustrates GPI's Distribution System Planning Process inputs, outputs and planning elements within the scope of asset-management-driven business operations.

GPI Asset Management Process Inputs and Outputs

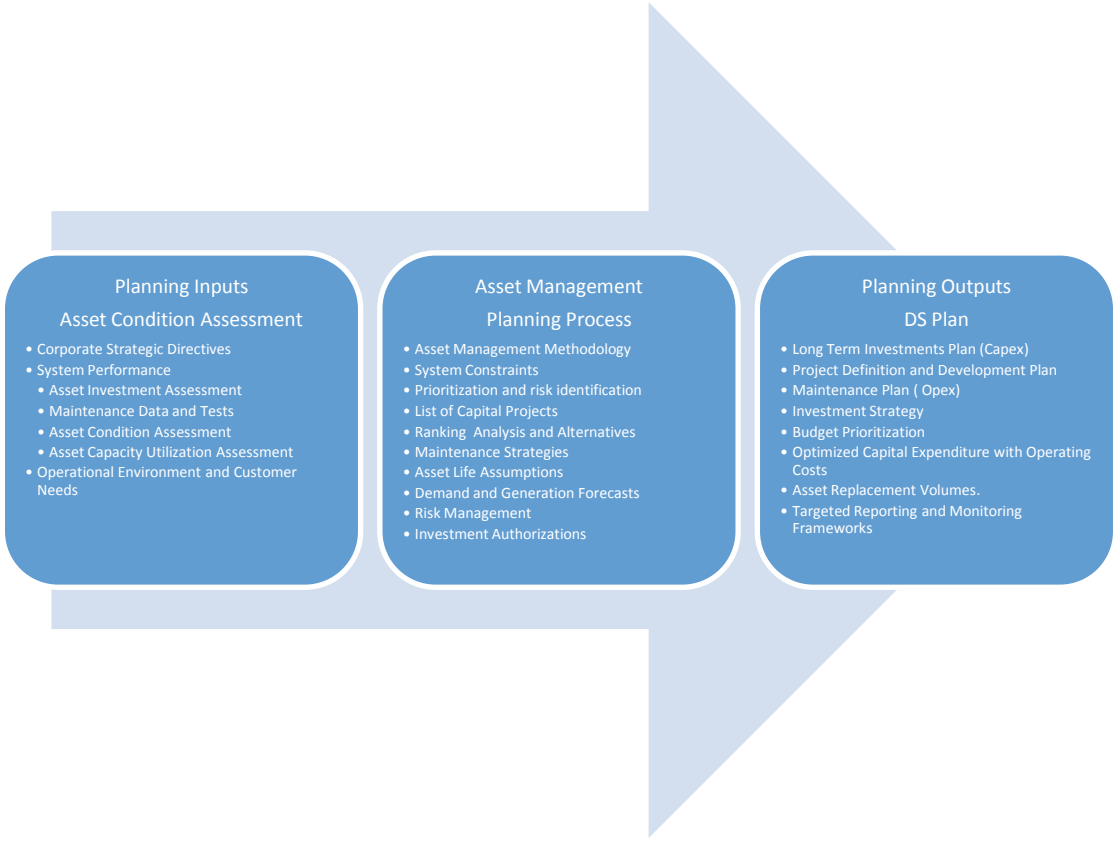


Figure 8

To facilitate better planning, prioritization and pacing of capital expenditures, GPI is using an integrated approach to planning. This means GPI's capital expenditure plan consolidates all categories of system investments, including investments to renew and expand the distribution system. The DSP will be amended, as required, with information about investments that will be identified during the regional planning process, and will include investments to accommodate the connection of renewable generation or to implement a smart grid.

This is the first effort of GPI to use an integrated framework approach. GPI first developed a long term Distribution Asset Management Plan (DAMP) in 2011. The current plan, however, consolidates information that includes data about renewable generation (REG), smart grid and other components compliant with the requirements of Chapter 5.

ASSET MANAGEMENT TOOLS

Asset management tools used by GPI include inspection and maintenance databases, paper records of inspection and maintenance activities, reliability database, asset attribute databases, a graphics information system (GIS – ESRI Platform), and distribution engineering simulation software (DESS Software).

GPI's strategy, with respect to asset management, is to build the information system for assets around the ESRI GIS platform. Connectivity to other systems, such as the Customer Information System (CIS – SAP Platform), and databases enhance the sophistication of the entire asset management product. The first GIS platform (CableCad) was initiated in 1996 and was fully functional with land base representation, circuit representation, asset location, and connectivity to asset records. In 2009, GPI migrated to the ESRI platform for its GIS. The DESS software was purchased in 2007, and is fully operational. GPI has a SCADA system, but this is currently only applicable to the operation of the Niagara West Transformer Station.

LONGER-TERM PLANNING HORIZON (5.0.3.2)

This DSP encompasses projections and forecasts for the 2015 - 2020 timeframe. It is intended that the DSP will be reviewed on a periodic basis, and amended with new information as it becomes available.

The planning horizon extends to a five (5) year period, (in terms of rate setting 2015 is a bridge year, 2016 is a test year, and 2017 - 2020 represent forecasted years – 2016 to 2020 represents the 5 year forecast), based on Chapter 5 requirements for Consolidated Distribution System Planning. Under the renewed regulatory framework, a planning horizon of five (5) years is required to support integrated planning and better alignment of GPI's planning cycles with rate-setting cycles. A longer-term approach enhances the predictability necessary to facilitate planning

and decision-making by customers and distributors. This also facilitates the cost-effective and efficient implementation of the DSP and meeting of OEB expectations in the areas of performance outcomes.

The asset assessments are also based on a five (5) year planning period. It is very likely that new developments, not currently identified here, will arise at any given time, and will be amended into the plan.

In order to support integrated planning and better align the distributor planning cycles with rate-setting cycles, the approach to longer-term planning (a minimum of five years) has incorporated the following elements into the plan.

LONGER-TERM PLANNING ELEMENT	APPROACH
Enhance the predictability necessary to facilitate planning – including regional planning – and decision-making by customers and distributors	▪ Heighten the emphasis on regionally-planned infrastructure ▪ Complete system renewal and expansion – refresh assets in totality, as per assets' lifecycle using a longer-term bottom-up approach ▪ Assess the available capacity for renewable energy generation efforts and community growth
Facilitate the cost-effective and efficient implementation of distributor DS Plans and, thereby, the achievement of customer service and cost performance outcomes	▪ Continue Smart Grid development and implementation ▪ Initiate study and assessment for enhancement of customer communication and implementation of Outage Management System ▪ Improve customer communication
Manage consumer rate impacts	▪ Develop detailed implementation plans ▪ Enhance Conservation Demand Management (CDM) Program and REG to help manage rate impacts ▪ Consider system impacts of CDM results

	▪ Assess capital investment scenarios in terms of risk mitigation and longer-term smoothing of customer rate impacts

Figure 9

REGIONAL CONSIDERATIONS (5.0.3.3)

Regional planning is conducted through the Integrated Regional Resource Planning (IRRP) process, where local stakeholders collaborate in the development of integrated solutions for maintaining a reliable supply of electricity to Ontario communities. The map below shows Ontario's 21 electricity regions.

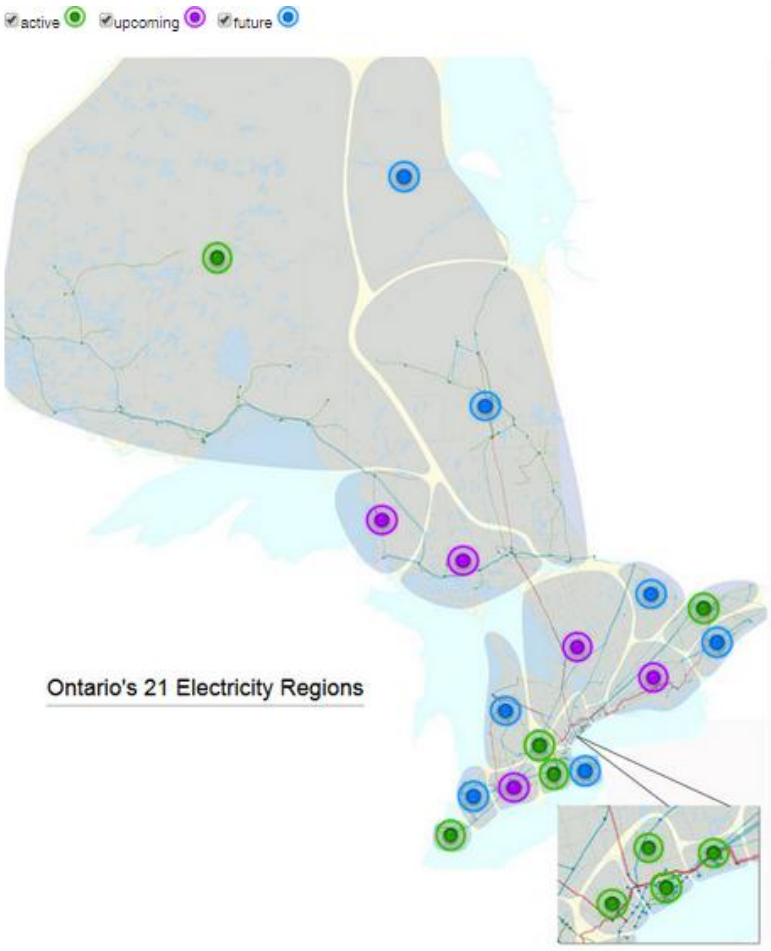


Figure 10

Regions

Group 1	Group 2	Group 3
Burlington to Nanticoke	East Lake Superior	Chatham/Lambton/Sarnia
Greater Ottawa	London area	Greater Bruce/Huron
GTA North	Peterborough to Kingston	Niagara
GTA East	South Georgian Bay/Muskoka	North of Moosonee
GTA West	Sudbury/Algoma	North/East of Sudbury
Kitchener-Waterloo-Cambridge-Guelph		Renfrew
Toronto		St. Lawrence
Northwest Ontario		
Windsor-Essex		

Figure 11

The objective of the IRRP process is to develop long-term electricity plans that thoughtfully integrate all relevant resource options, such as conservation and demand management, distributed generation, large-scale generation, transmission and distribution.

As per Hydro One's regional planning initiative the province is divided into three planning groups:

- Group 1 & Group 2 – Active Plans
- Group 3 – Upcoming Plans

At this time, neither a Regional Infrastructure Plan, nor an Integrated Regional Resource Plan has been completed for GPI's service territory.

GPI is included in "Group 3", which is the final group in Hydro One's regional planning process. As per Hydro One's "Regional Planning Process Annual Status Report" dated November 1, 2014 as filed with the OEB, Regional Planning for the Niagara Region and began November 4th 2015 with its first meeting. As a result, GPI plans will be revisited and revised, as required, to align with a Regional Infrastructure Plan.

SMART GRID DEVELOPMENT AND IMPLEMENTATION (5.0.3.4)

SMART GRID OBJECTIVES

CUSTOMER CONTROL

GPI's goal is to provide the customer with information and tools to promote conservation of electricity, and to expand on opportunities for demand response, price information and load control.

GPI has undergone extensive customer research (Appendix L) to define customer preferences and identify services that will provide customers with the ability to take action in regard to their energy use. Customers have expressed specific interest in enhanced communications and information tools.

Customer Education

GPI intends to provide information and education to its customers regarding the potential benefits of smart grid. Customers will be empowered with tools that will enable them to take advantage of the new services and data access. GPI seeks to increase customer awareness of data availability, and is developing new service offerings in the areas of conservation and demand management. Future service offerings such as microGeneration and energy storage are also being monitored at a high level to determine viability.

Data Access

GPI aims to facilitate data access, and is exploring opportunities to enhance the use of electronic data.

GPI intends to deploy mature technology, which enhances today's functionality and provides for future potential in the areas of availability of data for internal (staff) and external (customers) use. GPI also plans to create business efficiencies by utilizing technology to: capture business data; create seamless end-to-end business processes; and convert the data into business information.

Within the technology framework, GPI will work towards a paperless environment and deployment of mobile solutions for internal (staff) and external (customers) use.

GPI is engaging customers through promotion of data initiatives (e.g. e-Billing Contest), encouraging initiatives which are environmentally friendly, and which shape the future of the community.

Power System Flexibility and Adaptive Infrastructure

GPI's goal is to accommodate the use of emerging, innovative and energy saving technologies and system control applications.

In the short–term, GPI intends to lower the investment in distribution infrastructure, and to concentrate more on investing in general assets that support the type of services customers have been requesting (e.g., Outage Management System - OMS, outage reporting, social media, etc.). GPI's longer-term plans include increasing system reliability by building more automation (e.g. self-healing HV switches) and using technology to build in system intelligence (e.g., electronic reclosers with intelligent automatic switching capabilities).

The following table provides Smart Grid development and implementation information:

LONG TERM PLANNING ELEMENT	APPROACH
The activities a distributor has undertaken in order to understand their customers' preferences (e.g., data access and visibility, participating in distributed generation, and load management) and how they have addressed those preferences	• GPI has surveyed its customers and also receives additional informal information via customer meetings and through its call center • An emerging theme is for GPI to provide better information related to customer outages and to improve reliability • GPI has considered this information and included plans to deliver
The options a distributor has considered for facilitating customer access to consumption data in an electronic format. *The mechanisms that facilitate "real-time" data access and "behind the meter" services and applications that a distributor has considered for the purpose of providing customers with the ability to make decisions affecting their electricity costs*	• Consumption data for customers with smart meters is available through GPI's "MyHydroEye" web portal. For customers with interval meters, electronic data can be provided upon request. • GPI also wants to improve customer communications, and is assessing opportunities for implementation of various project initiatives (e.g. OMS with customer applications, social media, etc.) that will meet customer preferences.
The consideration a distributor has given	• GPI has performed a system study to define the impacts of various distributed generation types and sizes. This study

to the investments necessary to facilitate the integration of distributed generation and more complex loads (e.g., customers with self-generation and/or storage capability)	concluded that based on the demand there are currently no restrictions on distribution assets. The Niagara West Transformer Station has also been recently upgraded to accept additional distributed generation. • GPI has determined system adequacy for supply, generation and self-generation.
The technology-enabling opportunities a distributor has considered regarding operational efficiencies and improved asset management; and	• A GIS network model has been generated to facilitate improved efficiencies to establish a basis of support for existing and future investments. • Investments have been earmarked in the plan and developed using businesses cases to deliver an outage management system and reclosers as a first step towards distribution automation (both investment areas targeted at customer needs)
The distributor's awareness and adoption of innovative processes, services, business models, and technologies.	• Asset Management is in a second stage of development at GPI (following the development of the DAMP in 2011) and with time, will develop and adopt innovative processes, services, business models, and technologies. • As part of this DSP, GPI has a business model and asset management framework, where it looks at bottom-up asset needs (projects related to meeting capacity requirements and programs related to asset End of Life - EOL - replacement) and tempers these investments via a top-down Investment Strategy constraints model that looks at, among other things, customers preferences and long term rate impacts. This holistic approach provides an effective means of balancing the needs of assets, customers and shareholders.

Figure 12

ASSET RELATED PERFORMANCE OBJECTIVES & FACTORS (5.0.4) (5.2.3) (5.1.5)

GPI has utilized the OEB's Renewed Regulatory Framework to develop a standardized and comprehensive performance-based approach to asset management. This approach promotes the achievement of four performance outcomes to the benefit of existing and future customers: customer focus, operational effectiveness, public policy responsiveness, and financial performance. GPI aims to align with customer interests, to consistently support the achievement of important public policy objectives, and deliver long-term value for money.

GPI's short-term intent/goal includes investment in general assets to support the services requested by customers, relating to OMS, outage reporting systems, social media, etc. Because the current distribution system is sufficient to meet GPI's needs, GPI will delay distribution infrastructure investments in the short-term. However, in consideration of long-term goals, GPI will maintain level investments in distribution assets to balance infrastructure spending and to avoid peaks and valleys this area. Following the achievement of this goal, future objectives include building more automation (potentially self-healing HV switches) and intelligence into the existing system (e.g., electronic reclosers).

GPI seeks to achieve the results of optimized cost effective lifecycle Asset Management with focus in maintaining a high level of customer satisfaction. GPI believes in delivering quality services to customers, at a cost that represents good value for money.

GPI practices highly ethical business standards, and aims to provide economically sound business opportunities for its shareholders. Ultimately, GPI's objective is to operate with a focus on profitability, and maximizing shareholder value, while maintaining appropriate commitments to:

- Distribution system reliability
- Customer satisfaction
- Respect and protection of the environment
- Distribution of high quality power, that is safe for its customers
- Meeting changing needs and desires of consumers/customers

GPI seeks to maximize a rate of return on rate base, with a debt-to-equity ratio close to 60:40 split. The objective is to maintain dividends of up to and not to exceed 50% of net income, while ensuring sufficient cash flow to sustain capital investments and OM&A.

GPI recently developed an Investment Strategy model designed to assess the above-stated goals – the model provides a long-term view of customer rates, returns to shareholder and financial viability under a number of planning scenarios (project prioritization and programs levels).

PERFORMANCE MEASUREMENT AND PERFORMANCE REPORTING (5.1.5) (5.2.3)

GPI is using the Scorecard approach to effectively translate four performance outcomes into a coherent set of measures. This approach organizes the performance information in a manner that facilitates evaluations and meaningful comparisons. The Scorecard (Appendix F) is designed to track and show GPI's performance results over time, and helps to clearly benchmark performance/improvement against other utilities and best practices.

Each measure included on the Scorecard has an expected established minimum level of performance to be achieved (referenced as OEB Target). Each year GPI reports on Scorecard performance results to the OEB.

CURRENT STATE (PERFORMANCE)

GPI's Scorecard presents the Scorecard performance results for 2013 and 2014 as published by OEB. This new format measures how well Ontario's electricity distributors are performing each year. The Scorecard helps GPI to operate effectively, while continually seeking ways to improve productivity and focus on improvements that GPI's customer's value. The performance results are subject to annual reports and are available to the public.

The Scorecard includes traditional metrics for assessing services, such as frequency of power outages, financial performance, and costs per customer. In addition, future performance results will include a number of new metrics that directly reflect the customer experience, such as how well GPI resolves a customer's concern on the first contact, the accuracy of customers' bills, public safety and more.

The following section summarizes GPI's comments related to performance-based business trends, as published by the OEB in a performance Scorecard (Appendix F).

The purpose of the former DAMP and now the DSP is to outline how GPI will develop, manage and maintain its distribution system equipment to provide a safe, reliable, efficient and cost effective distribution system. GPI is continually trying to improve on its performance. GPI constantly monitors its costs in stock, labor, expenses and response time, to not only ensure our customers the best of all attributes, but also the lowest cost possible. GPI

focuses on reducing stock and eliminating parts through new technology and parts being offered. Expenses are controlled by multiple quotes and negotiation with suppliers for best prices. Labor is reviewed and new practices are explored along with new parts to try and minimize the install or emergency time needed to make repairs. Response time is looked at to see how the outage could have been avoided or what GPI could have done to complete the repair in a more expedient manner.

PERFORMANCE OUTCOME #1: CUSTOMER FOCUS

SERVICE QUALITY

Grimsby Power makes it a priority to provide superior customer service, and, to date, maintains a good record in connecting residential and small business services and in meeting scheduled appointments on time. Telephone customer service is, likewise, very important, and Grimsby Power has steadily improved its interpersonal relations with customers and its telephone technology.

In July 31 2015, the Ontario Energy Board released the 2014 Yearbook data for all electricity distributors in the Province. Grimsby Power was one of just over thirty utilities to report 100% in 'New Residential/Small Business Services Connected on Time', and for 'Scheduled Appointments Met on Time'. In the 2014 scorecard results GPI, once again reported 100% in 'New Residential/Small Business Services Connected on Time', and for 'Scheduled Appointments Met on Time' filed in the RRR for 2014 statistics.

The Yearbook indicates that in 2014 Grimsby Power ranked 67th (out of 72) in answering telephone calls on time, where 'on time' is within 30 seconds of the first ring. The score of 69.3% meets and slightly exceeds the industry average. In 2014 GPI's score was down from the previous year. The reason for the decrease is the fact that calls were up due to a significant increase in new connections and total number of customer moves almost doubled from the previous year's within Grimsby. GPI is looking at increasing coverage by adding another Customer Service Representative and cross training other departments to enhance the coverage to accommodate the volume of calls.

The following table shows industry minimum, maximum and average values for the Service Quality Scorecard measures for 2014:

Service Quality Measure Performance for Ontario Electricity Distributors – 2014

Min.	Max.	Avg.

New Residential/Small Business Services Connected On Time	90.70%	100.00%	97.92%
Schedule Appointments Met On Time	83.90%	100.00%	98.95%
Telephone Calls Answered On Time	64.30%	100.00%	84.93%

Figure 13

** data excludes one utility who did not report on these measures

CUSTOMER SATISFACTION

These customer satisfaction measures are currently being implemented at Grimsby Power, and will be available in future reporting periods. GPI is collecting data concerning First Contact Resolution and Billing Accuracy. Customers are also participating in the Utility Pulse annual electric utility customer satisfaction and targeted surveys. According to GPI's 2014 Utility Pulse Customer Satisfaction Survey, 92% of the electricity bill payers are "very or fairly" satisfied with the service of GPI, whereas the Ontario average is 83%. Fully 89% of the respondents indicate that the utility handles outages and restores power quickly.

Grimsby Power retained Burman Energy Consultants Group Inc. and CGC Educational Communications Inc. to develop and execute tailored consumer research concentrated in the following areas:

- Experience of GPI's customers in terms of the impacts of service interruptions, and
- Attitudes of GPI's customers regarding the value of electricity to consumers, and
- Identification of customer preferences with respect to service offerings and plans for new investments

The focus of the research analysis was to identify business areas that have the strongest influence on a customer's perception of value. Various tools and techniques helped identify what matters most to customers, and what makes GPI stand out in the customer's view. The method chosen for this customer research effort was to conduct targeted customer interviews. The goal of these interviews was to deliver the most effective customer feedback, combined with providing basic customer education about business trends, plans and renewables.

The engagement process took the form of a survey, where a representative sampling of various customer bases allowed for the posing of specifically targeted questions. The Customer Survey also shared an educational

introduction with the customer. GPI was able to identify key value drivers for future distribution system planning and investment decisions.

The survey was conducted through telephone interviews, based on a customer list provided by Grimsby Power. Fifteen percent (15%) of the respondents were business customers. The telephone survey provided opportunities for customers to relay comments providing input and insights beyond the actual survey questions themselves. Customer engagement experts, well versed in their approach to use every opportunity to educate, as well as, encourage customer participation, delivered the interviews.

GPI targeted questions to canvass customer satisfaction in the following key areas:

- power quality and reliability
- price and bill impact
- communications
- and the customer service experience

The following summarizes customer survey results and information about customer preferences:

Customer Satisfaction

There is a high degree of satisfaction with GPI services. This reflects the high degree of trust customers place in GPI's ability to restore power under most circumstances. Many residents were very proud that Grimsby had "gotten off lightly" during the ice storm that affected so many southern Ontario residents last winter (2013/2014).

Price Sensitivity

There is definite price sensitivity which has a significant influence on opinions about investments and modernization, such as the adoption of energy conservation, renewables and EV infrastructure. However, there is a strong undercurrent in the customer base for Grimsby to stay "modern", so these efforts need to progress with a steady evolution. GPI is planning to address the need to stay "modern" by maintaining closer communication to the customer base.

Reliability

Long-term reliability and reducing the time needed to restore power ranked among the most important issues. Customers also recognize the benefits of a predictive outage management system. Most customers ranked this

highly. All the business respondents wanted more communication on outages. They saw an outage management system as an economic necessity in order for the town, and their businesses, to grow and prosper. Continuous, reliable power was, not surprisingly, the most important item for respondents, so further hardening of the system is certainly warranted. The prediction of outage duration was the second most important concern.

Energy Conservation, Smart Grid and Renewables

Energy conservation was generally supported, with some customers requesting a special conservation education website as part of Grimsby Power. However, many customers felt that, in reality, they cannot change their daily habits substantially enough to make a difference. Customers ask for new initiatives to help businesses and residents save energy and thus, to see it reflected in their consumption, and hence, their power costs.

Customers were divided in their support for renewables. A large number have researched what they determined to be the detrimental effects of wind power to a remarkably detailed degree. Solar power was determined as more popular. However, customers felt that the installation costs for renewables are too high.

There was interest in simple tools and applications that would help customers learn more about their consumption. Customers felt that they really need new conservation tools to turn smart meters' information into new efficiencies that would lower their bills. Many customers checked their energy consumption on their bills.

There was little indication of customer interest in installing renewables or buying EVs. However, there was a general feeling that Grimsby Power should support "green" community initiatives.

Communication

A key recommendation from the majority of respondents was for GPI to improve its communication on all levels. Outage management came first, but it was indicative of the need to be more transparent, open and accountable to the customer. There is tremendous goodwill for Grimsby Power, but the customers would like to see more ongoing engagement and communication.

The benefits of an outage management system were evident in the ranking of investment priorities with enhanced phone services, outage duration prediction and a range of communications about these being the priorities. Customers said they would view GPI's website on their smart phones, so the site should be mobile-ready with real time data during an outage. Customers also liked the idea of cellular notifications during outages. The full suite of cellular support should be phased in, based on the list of ranked priorities.

PERFORMANCE OUTCOME #2: OPERATIONAL EFFECTIVENESS

SAFETY

This is a new measure to be reported by utilities in the Province under the RRFE program; however, no measurement standard has been defined by the OEB.

Grimsby Power is fully engaged in public safety. Grimsby Power sponsored the Electricity Safety and Conservation Association in 2012 and 2013 to make presentations in local Grimsby public schools, highlighting the importance of electrical safety & conservation. Grimsby Power is audited annually as part of Regulation 22/04 – Electrical Distribution Safety and its audit results indicate a full level of compliance. GPI is always on time with the response to any "needs improvement" responses and considers every audit to be a session to learn and make GPI better.

SYSTEM RELIABILITY

The reliability of supply is primarily measured by three internationally accepted indices called SAIDI, SAIFI and CAIDI. Definitions follow:

SAIDI – *System Average Interruption Duration Index* – the length of outage customers experience in the year on average – expressed as hours per customer per year.

SAIFI – *System Average Interruption Frequency Index* – the average numbers of interruptions each customer experiences – expressed as # interruptions per year per customer.

CAIDI - Customer Average Interruption Duration Index – is a measure of duration that provides the average amount of time a customer is without power per interruption.

GPI's indices 2006-2014 history and forecast for 2015 to 2020 are shown in the table below:

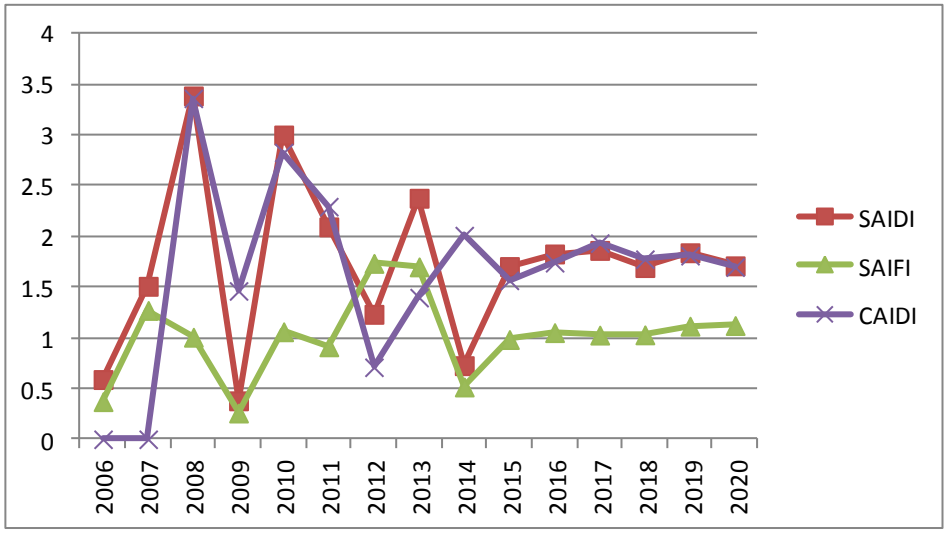


Figure 14

The ongoing construction of distribution circuits to convert the existing 8.32kV circuits to the new standard of 27.6kV level is close to completion within this planning period. The reliability of supply is affected by GPI's sustainability programs (for existing assets), discretionary capital projects, operating processes, and factors, which are not under the control of GPI, such as weather disturbances and motor vehicle accidents.

GPI plans to implement an outage management system to consistently track power outages and manage outage information in a proactive manner, in order to deliver better customer service.

GPI is prepared to quickly respond and resolve power interruption issues. There is a broad range in values reported[2] among utilities for both scorecard measures of System Reliability. While some utilities reported less than one hour of power loss per customer ("SAIDI") in 2013, others reported over 26 hours per customer. While some utilities reported less than one power outage per customer ("SAIFI"), others reported over five power outages per customer. Grimsby Power reported 0.73 hours of interruption and 0.52 outages per customer, in 2014. This placed Grimsby in a middle ranking (13th for SAIDI and 4th for SAIFI) among the 72 utilities. These reliability indices are not normalized with respect to significant weather events and are, therefore, highly variable from year-to-year.

[2] OEB Scorecard Appendix F

System Reliability Performance for Ontario Electricity Distributors - 2014

	Min.	Max.	Avg.
SAIDI - "System Average Interruption Duration Index"	0.01	12.31	2.26
SAIFI - "System Average Interruption Frequency Index"	0.01	6.47	1.82

Figure 15

** data excludes one utility who did not report on these measures

ASSET MANAGEMENT

The 'Distribution System Plan Implementation Progress' measure is a new measure under the RRFE program; however, no measurement standard has been defined by the OEB. Grimsby Power has developed its initial Distribution Asset Management Plan and is currently creating a Distribution System Plan as per OEB Chapter 5 requirements.

GPI followed the DAMP as a guide in the preparation of the DSP and in doing so has benefited from the information in the plan. The DAMP analysis predicted a capital spend between $832,000 to $1,300,000 (without inflation) to ensure the proper growth and to sustain the assets within the TUL. Overall the capital budget for 2012 has remained within the parameters as set out in the DAMP.

The DAMP was a good starting place for a documented asset management plan but it did not predict the correct population increase and did not account for the amalgamation of GPI and NWTC. The population increase will be 3 to 4 times higher than the DAMP anticipated and the NWTS was not in the plan for an additional asset to maintain. Therefore GPI see`s itself at the higher end of the capital spend and surpassing it to maintain our assets. The DSP will be a great tool to help manage this as GPI moves forward and will be a living document to be updated as changes are made in the Distribution System.

COST CONTROL

Keeping costs under control is a responsibility taken seriously at Grimsby Power. While prudent investment in reliable equipment and employee training is necessary, the level of spending is measured and controlled, so that customer rates are minimally affected.

Grimsby Power controlled costs within a narrow range for the previous five years. Total costs per customer ranged between $453 and $568. There was a slow increasing trend with the implementation of new initiatives such as smart meter installations between 2010 and 2012, in compliance with Ontario Energy Board directives. Grimsby Power revised its expenditures for inclusion in its Cost of Service rate application for January 1, 2012 rates. As stated in the application, previous expenditures were below optimum. These expenditures were fully vetted during the rate application process, and approved by the Board. The increased cost per customer in 2012 reflects Board-approved expenditures.

The total costs per kilometre of line matched the trend of costs per customer for Grimsby Power, since neither the customer numbers, nor the kilometres of line, changed significantly. The Scorecard value [3]of total cost per km line shown in 2009 is incorrect, and should be $18,879, not $26,343. While reported figures were revised, the Scorecard does not include this revision.

PERFORMANCE OUTCOME #3: PUBLIC POLICY RESPONSIVENESS

CONSERVATION & DEMAND MANAGEMENT

In 2011, Grimsby Power contracted Burman Energy to manage energy conservation and demand management activity in the Grimsby service area. Burman Energy was active in the community, and assisted residential and business customers to earn the incentives available to them. Grimsby Power was well represented with an attractive booth at many town events and festivals. Coupon savings and small business lighting and equipment refunds were, and are, available to those seeking to save energy using improved technology.

For the 2011–2014 period, the Ontario Energy Board established targets for energy conservation for each utility in the Province. Grimsby Power exceeded their target in energy savings by 37% by the end of 2014. Grimsby Power performed competitively on the demand management target, ranking 14th highest among the utilities at the end of 2013.

CDM targets established by the Board for Grimsby Power were 7.76 GWh of cumulative energy savings and 2.06 MW of demand savings for the period of 2011–2014.

[3] OEB Scorecard Appendix F

The following table summarizes the values that should be shown for each of the two Conservation and Demand Management measures on the Scorecard (taken from Ontario Power Authority verified results)[4]:

Percent of CDM Targets Achieved Each Year (2011 - 2014) for Grimsby Power Inc.

	2011	2012	2013	2014
Net Annual Peak Demand Savings (Percent of Target Achieved)	24.65%	40.19%	50.49%	55.44%
Net Cumulative Energy Savings (Percent of Target Achieved)	53.60%	91.58%	123.10%	137.08%

Figure 16

CONNECTION OF RENEWABLE GENERATION

Ontario runs two renewable generation programs. FIT ("Feed-in Tariff") applicants are those customers setting up solar or other renewable generation equipment to generate more than 10 kW of electricity at a time. MicroFIT applicants are those customers applying to generate electricity at a level less than or equal to 10 kW of electricity at a time.

In Grimsby, all customers approved for microFIT and FIT connections were connected within 60 days. At year-end 2014 (at the time of publishing of the Scorecard), there were 21 microFIT and 2 FIT customers generating power onto Grimsby Power's electricity distribution system.

The Scorecard indicates that Grimsby Power achieved 100% of 'Renewable Generation Connection Impact Assessments ("CIA") Completed On Time' in 2011, and shows blank in other years. To be clear, there was only one CIA to complete in 2011, and it was completed on time; in other years, there were no CIAs to complete.

For 'New Micro-embedded Generation Facilities Connected On Time', the Scorecard has left the years before 2013 blank. This is inaccurate. The values should be 100% for every year from 2010 inclusive to 2014. The following table summarizes FIT and microFIT connections in each year since 2010; all were connected on time:

[4] OEB Scorecard Appendix F

FIT and microFIT Connections to Grid 2010 - 2014 for Grimsby Power Inc.

	2010	2011	2012	2013	2014	Total
FIT - Number of Sites Connected to Grid:	0	0	1	0	1	2
Capacity (kW)	0.0	0.0	100.0	0.0	250.0	350.0
MicroFIT - Number of Sites Connected to Grid:	4	7	2	4	4	21
Capacity (kW)	29.3	70.0	19.3	34.3	26.0	178.9

Figure 17

Note: For the FIT Application, the CIA was completed in 2011; the connection was completed in 2012

PERFORMANCE OUTCOME #4: FINANCIAL PERFORMANCE

FINANCIAL RATIOS

Grimsby Power has maintained a healthy financial condition featuring a strong Current Ratio between 0.76 and 1.7. The Debt-Equity ratio for Grimsby Power has remained close to 1:1, which indicates that there is not an over-reliance on debt financing.

Among utilities in Ontario, the range of values for Current Ratio was between 0.33 and 4.15 for 2014[5]. Grimsby Power at 1.32 held a middle ranking (42nd) within the 72 utilities. A ratio above one is considered healthy, since it infers that current debts could be completely eliminated using only current assets.

The range reported by utilities for the Debt-Equity ratio was between 0.00 and 3.26 in 2014. A lower value is healthy since this infers a reliance on equity, rather than debt, for financing. Grimsby Power reported a value of 1.24 and held a below middle ranking (55th) among utilities for this measure in 2014.

The following table depicts the range of values for Ontario Electricity Distributors in 2014 for the Current Ratio and for Leverage:

Ontario Electricity Distributors Minimum, Maximum and Average Values for Current Ratio and Leverage - 2014

[5] OEB Yearbook of Electricity Distributors

	Min.	Max.	Avg.
Current Ratio	0.33	4.15	1.42
Leverage: Debt: Equity Ratio	0	3.26	0.97

Figure 18

Since rebasing in 2012, Grimsby Power has achieved a return on equity within the levels approved by the Ontario Energy Board. In 2012, the return on equity was artificially high (12%) because of the change from CGAAP (Canadian Generally Accepted Accounting Principles) to modified IFRS (International Financial Reporting Standards) accounting practices, which became effective January 1, 2012. Since then, it has returned to lower levels (7.2%). The deemed rate established in the 2012 rate application to the Ontario Energy Board (EB-2011-0273) was 9.42%. The Board uses a dead band of plus or minus 3% before a financial review may be initiated.

PEER GROUP ANALYSIS AND BENCHMARKING

A peer group has been established for performance comparative analysis of SAIDI, cost per customer and customer satisfaction (using average LV connections, telephone accessibility, and appointments met). These measures support GPI's Business Objectives and investment decisions. The sampled data covered a 5-year period. The graph below indicates that GPI's SAIDI is above peer average, 3 of 5 years and is in the 25 to 50 percentile range of values. GPI is clearly underperforming in terms of outage duration. Further, the results were used to support the investment decisions that will lead to improvement of outage management.

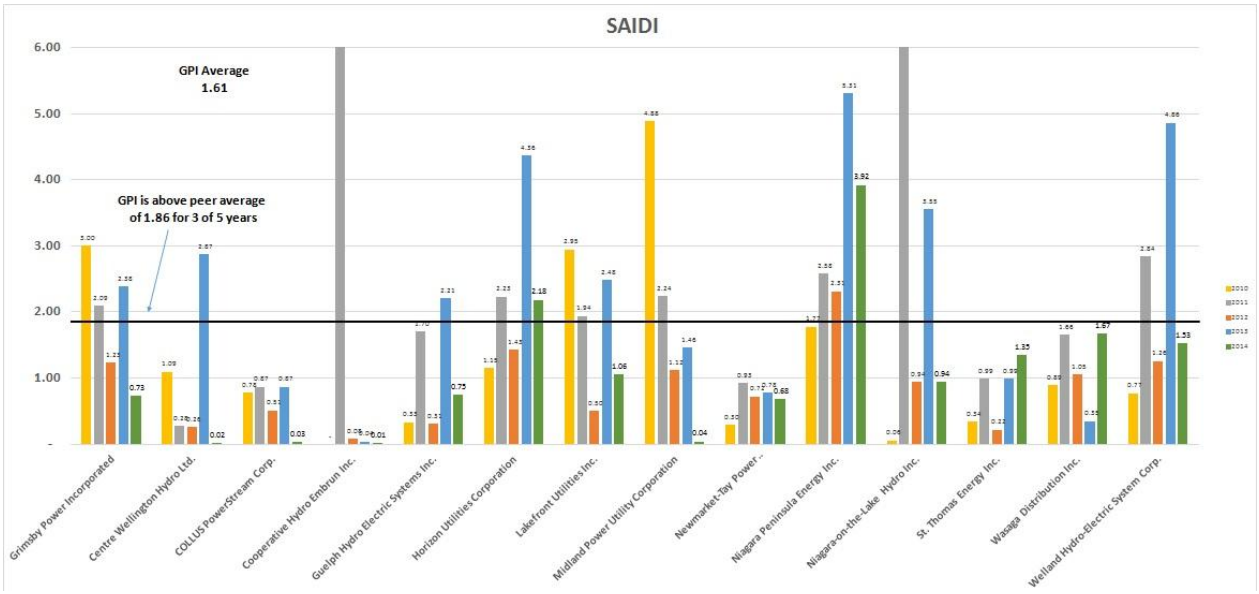


Figure 19

Based on comparative analysis of Cost per Customer data for 2009, 2010, 2011, 2012, 2013[6], 2014 GPI is outperforming the peer average of $545.12 and in fact, GPI is in the 90 percentile range with a cost of $390.19. This supports GPI's objective to maintain its position as a low cost service provider in the area, and its goal to maintain its cost at the 50th percentile or less, with respect to residential customer costs.

[6] OEB Yearbook of Electricity Distributors

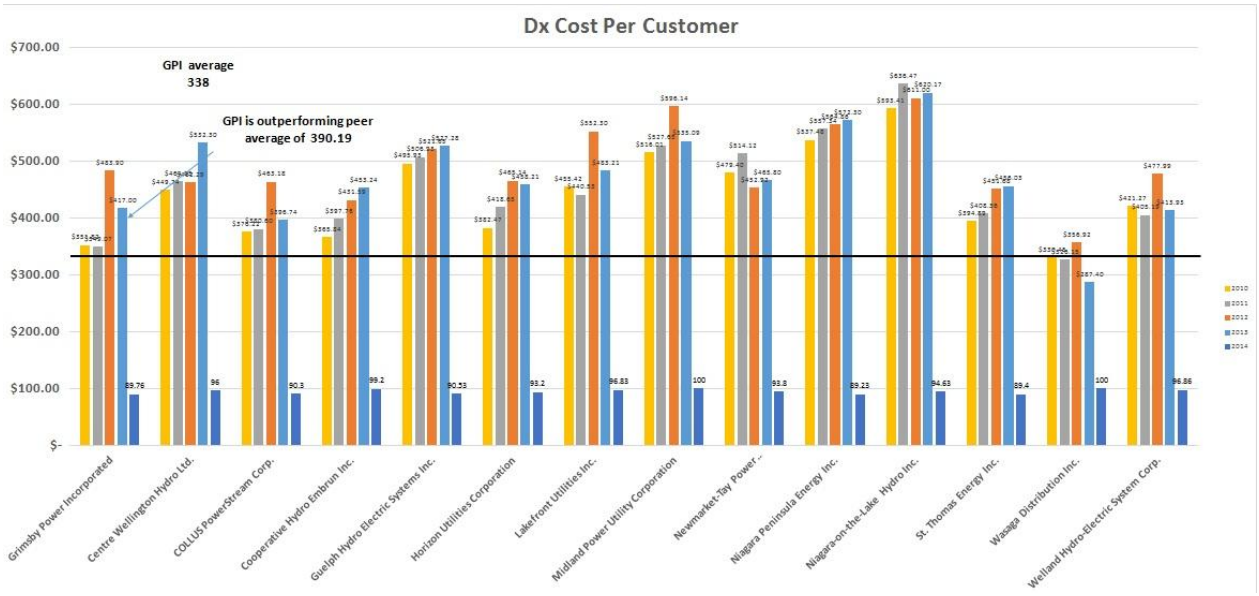


Figure 20

GPI is approaching the peer average of 97.25 customer satisfaction benchmark, but is clearly underperforming as it is under the 25 percentile. There is room for improvement, in directing efforts and investments in enhancing customer communication. The results of the peer analysis are consistent with the outcomes of customer survey reviewed in the prior section.

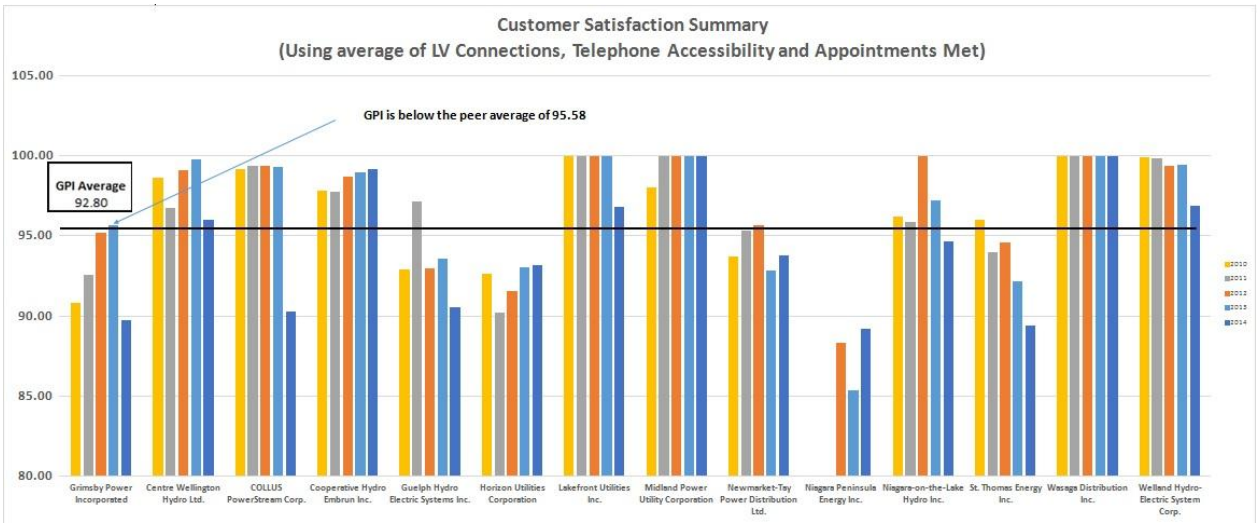


Figure 21

DS PLAN ADDRESSES FOUR OUTCOMES (5.0.4)

Based on historical trends and achievements, GPI is shaping its future plans and investment decisions to address OEB expectations in the following areas:

- *Customer Focus*
- *Financial Performance and Economic Efficiency Performance*
- *Public Policy Responsiveness, Health & Safety and Environmental Performance*
- *Operational Effectiveness, Reliability, Consistency and Improvement*

GPI's Asset Management (AM) method includes the development of prioritized projects and program levels (Asset Condition Assessment - ACA and EOL driven) tied to mitigation of risk.

GPI also runs a variety of AM Investment scenarios to test against long-term rate impacts (with a future goal to identify impacts, test with customers and smooth over time), shareholder returns and financial viability.

APPROACH TO INVESTMENT STRATEGY AND DSP

GPI has always strived to continually improve its value to its customers. The creation of the long-term distribution asset management plan in 2011 is part of a continuum to ensure system investments align with customer needs.

In this DSP, GPI has further improved its asset management process by implementing an additional level into GPI's longer-term planning processes. Discretionary capital investments are segregated into sustainment "programs" and capital "projects". The former has been assessed by analyzing asset condition data, developing investment levels (from minimum to optimized), and then relating these levels to customers' needs, as determined through various engagement methods (including direct survey). For projects, corporate criteria have been established to allow objective prioritization of investments. These criteria are included in business cases to support the prioritization process. This is an effective bottom-up approach to identify asset needs.

In addition, GPI also employs a top-down approach that assesses the impact of the various program assessment levels, and projects against the customer's bill, shareholder returns, system performance and financial viability. The combination of top-down and bottom-up long-term planning provides a holistic approach designed to optimize GPI's capital plans.

GENERAL & ADMINISTRATIVE MATTERS

INVESTMENT CATEGORIES (5.1.1)

Capital spending by category is designed to meet both defined customer preferences and distribution system requirements. As per OEB guidelines, the spending categories are described as follows:

- System Access investments are planned on historical actual levels required to meet regulatory obligations for connections, upgrades and plant relocation, driven by customers and third parties.
- System Renewal investments driven by asset condition to derive replacement programs. Plans for replacements are based on consideration of the number, type, age and condition of assets. The proactive replacement of system components prior to failure will reduce costs associated with outage response and reactive replacement.
- System Service spending is focused on system reliability improvement projects, which are based on outage considerations, system impact, smart grid upgrade scenarios and customer preferences. These projects are assessed against corporate business objectives including customers stated preferences. The

final stage of a voltage conversion is also included in this category and will have a positive impact on the reduction of line losses.

- General Plant category is focused on ensuring that adequate tools, such as OMS, are in place to support the day-to-day operations, and to improve customer communications in contingency scenarios of unplanned outages.

The annual investments are leveled to ensure consistency throughout the planning process. GPI has incorporated the customer preferences obtained through targeted customer research and customer engagement process.

INVESTMENTS RELATED TO RENEWABLE ENERGY GENERATION (5.1.2)

GPI has not identified the need for renewable generation enabling capital expansion expenditures, although its 5-year capital expenditure program has planned renewable generation enabling expenditures for the development of an outage management system and various smart grid-related technological components. GPI notes that it expects most of the growth in its service area will be along the QEW corridor, and the projected new load does not generate the need for any major expansion or reinforcement. GPI has evaluated the capacity of its feeders to accept generation and does not have any restrictions beyond current standards for the integration of REG. There are no other REG investments contemplated at this time.

PLANNING IN CONSULTATION WITH THIRD PARTIES

PLANNING WITH THIRD PARTIES (5.1.4) (5.2.2)

Chapter 5 implements the Board's policy direction on 'an integrated approach to distribution network planning'. Regional planning is conducted through the Integrated Regional Resource Planning (IRRP) process, whereby local stakeholders collaborate in the development of integrated solutions for maintaining a reliable supply of electricity to Ontario communities. The regional planning process begins with a needs assessment performed by the transmitter, which determines whether a regional plan is required or not. If a regional plan is required, the IESO then conducts a scoping assessment to determine whether a more comprehensive Integrated Regional Resource Plan is required (led by the IESO), or a more transmission - and distribution - focused Regional Infrastructure Plan is required (led by the transmitter).

The objective of the IRRP process is to develop long-term electricity plans that thoughtfully integrate all relevant resource options, such as conservation and demand management, distributed generation, large-scale generation, transmission and distribution.

As of the current date, GPI has contacted Hydro One in regard to the status of the Regional Planning Process, and has attached a response letter from Hydro One in Appendix E.

GPI is part of the Niagara Region planning zone in Southern Ontario. The LDCs providing service to customers in the Niagara region include:

- Canadian Niagara Power Inc.
- Grimsby Power Inc.
- Horizon Utilities Corporation
- Hydro One Networks Inc.
- Niagara Peninsula Energy Inc.
- Niagara-On-The-Lake Hydro Inc.
- Welland Hydro-Electric System Corp.

At this time, neither a Regional Infrastructure Plan, nor an Integrated Regional Resource Plan has been completed for GPI's service territory. GPI is included in "Group 3", which is the final group in the regional planning prioritization. As a result, GPI plans will be revisited and revised, as required, in sequential order with a Regional Infrastructure Plan.

Although a formal regional planning process is not currently underway, GPI does maintain a membership in the North Niagara Public Utilities Coordinating Committee (NNPUCC). This committee meets approximately seven times per year, and topics of discussion include future development projects such as new subdivisions, road widening projects, etc. This information, along with input from sources such as builders and developers, forms the projected upgrades and expansions needed in the short and long-term.

Information from the municipal development department is also used to project the amount of customer-driven activity (such as community upgrades or new commercial construction). Most of these customer-driven projects are accommodated with minimal changes to the distribution system. These projects fit into the Annual Capital Budget directly, and are used to allocate the customer driven portion of the 5-year capital budget.

REGIONAL PLANNING & CONSULTATIONS (5.1.4.1)

Infrastructure planning on a regional basis is required to ensure that regional issues and requirements are effectively integrated into GPI's planning processes, which will, in turn, help promote the cost-effective development of electricity infrastructure in the Province. The effective use of regional infrastructure planning and the inclusion of regional considerations in GPI's DS Plan is the key to ensure coordinated development and implementation of smart grid provincial strategy. It is important that the necessary investments are made in distribution and transmission systems that will best serve the interests and the future of the region.

GPI's intention is to follow the Board's directions and work to address regional planning issues as they arise. GPI will assess and amend actions where appropriate. GPI is taking an active role in municipal planning. GPI makes decisions based upon the most cost-effective solutions, and is considering conservation as one of the options to defer the need for infrastructure investments.

More information is being collected in the following areas:

- Forecast load at existing (and proposed, if any) points of interconnection
- Investments involving smart grid equipment and/or systems that could have an impact on the operation of assets serving the regionally interconnected utilities
- Studies of innovative processes and technologies

CONSULTATION WITH REGIONALLY INTERCONNECTED DISTRIBUTORS (5.1.4.2)

GPI intends to consult regionally interconnected distributors and transmitter(s) to which the distributor is connected through the Regional Planning Process, and as the need arises. This plan will be amended as the Regional Plans are being further developed.

RENEWABLE ENERGY GENERATION INVESTMENTS (5.1.4.2)

INFORMATION RELATING TO REG INVESTMENTS (5.1.4.2.1)

Ontario runs two renewable generation programs. FIT ("Feed-in Tariff") applicants are those customers setting up solar or other renewable generation equipment to generate more than 10 kW of electricity at a time. MicroFIT applicants are those customers applying to generate electricity at a level less than or equal to 10 kW of electricity at a time.

In Grimsby, all customers approved for microFIT and FIT connections were connected within 60 days. To date, GPI has connected 20 microFIT projects, totalling approximately 186 kW of capacity in GPI's distribution system. Additionally, GPI has connected 2 FIT applications, totalling 350 kW. These projects combine for total capacity of approximately 536 kW of renewable generation through the FIT and microFIT programs, all of which remain active to date.

GPI achieved 100% of 'Renewable Generation Connection Impact Assessments ("CIA") Completed On Time'. GPI has completed all required CIAs to date.

GPI has not identified the need for renewable generation enabling capital expansion expenditures, although its 5-year capital expenditure program has planned renewable-generation-enabling expenditures for the development of an outage management system and various smart grid-related technological components. GPI notes that it expects most of the growth in its service area will be along the QEW corridor, and the projected new load does not generate the need for any major expansion or reinforcement. GPI is aware of the capacity of its feeders to accept generation and does not have any restrictions beyond current standards for the integration of REG. There are no other REG investments being contemplated at this time.

IESO COMMENT LETTER (5.1.4.2.2)

As outlined in the Chapter 5 filing requirements, the Board expects that GPI obtain a comment letter from IESO which will review the following areas:

- the applications it has received from renewable generators through the FIT program for connection in the distributor's service area;
- whether the distributor has consulted with the IESO, or participated in planning meetings with the IESO;
- the potential need for co-ordination with other distributors and/or transmitters, or others, on implementing elements of the REG investments; and
- whether the REG investments proposed in the DS Plan are consistent with any Regional Infrastructure Plan.

The IESO comment letter is attached in Appendix E.

DISTRIBUTION SYSTEM PLAN (5.2)

DISTRIBUTION SYSTEM PLAN OVERVIEW (5.2.1)

KEY ELEMENTS OF THE PLAN

The Distribution System Plan details the investment decisions developed on the basis of information derived from its asset management and capital expenditure planning process. Grimsby Power is strategically planning, during the five-year period, to lower the investment in distribution infrastructure in the short–term, and concentrate on investing in general assets that support the customer preferences. The investments have been justified by the reference to specific aspects of asset condition assessment and customer preferences, as determined through a targeted customer research survey. GPI is in the process of completion of a broad scale voltage conversion which has refreshed much of its asset base. Throughout the Distribution System Planning process, GPI has considered field assessments, engineering judgement and system specification to determine the delay of some infrastructure investments, all of which will have minimal impact on the system reliability. One important planning component is to keep distribution assets investment smooth year over year.

GPI is planning, in the short–term, to divert funding towards customer identified priorities, namely, a modern Outage Management System (OMS), social media and other projects that will enhance customer communications. An OMS will support the DSP by capturing outage data in real time and allowing GPI to coordinate activities to improve reliability.

A close connection exists between economic growth in Grimsby and a reliable, predictive and modern energy system. Grimsby Power has the opportunity to play a lead role in a Community Energy Plan and map out the energy future of Grimsby. GPI intends to demonstrate how that future can positively influence Grimsby's prosperity. GPI's long-term objective is to integrate smart grid technologies allowing more automation (e.g. self-healing HV switches) and intelligence into the system (e.g. - electronic reclosers). This will also help to reduce SAIDI and SAIFI in an economic way.

EXPECTED SOURCES OF COST SAVINGS

The sustaining asset replacement programs identified in the System Renewal category are expected to have a number of positive impacts on future O&M costs:

- Proactive pole replacement prior to failure of the in-service pole or associated components will reduce costs associated with outage response and reactive replacement.
- The replacement programs allow for replacement of legacy units that can no longer be economically maintained. The type of replacement units now available results in a much less labour-intensive program of inspection and corrective maintenance as required, as opposed to the periodic preventive maintenance required for legacy assets.
- The voltage conversion that occurs in conjunction with line rebuilds on legacy lower voltage systems will have a positive impact on the reduction of line losses. This has positive impacts on overall system reliability, resulting in lower costs associated with outage response. The completion of the final stages of voltage conversion from 8 KV to 27.6KV and elimination of step down transformers (27.6kV to 8kV) will also increase system capability to accommodate expansion and reduce outages.
- Additional asset and condition information and system operating data available from GIS and OMS will allow for:
    - efficiencies in the conceptual and detailed design processes
    - reduced site visit requirements by engineering and operations staff
    - increased accuracy of cost analysis for items such as line losses and avoided future costs
    - adjustments to inspection and maintenance programs for certain asset types due to the availability of more detailed asset condition information and operating records

PERIOD COVERED BY THE DS PLAN

GPI's DS Plan includes 2010-2014 as the historical period, 2015 is the bridge year and 2016-2020 as the forecast period (with a 2016 Test Year). This is the first DSP filing and historical budgetary is not required.

VINTAGE OF THE INFORMATION

The information is current as of September 2015.

COORDINATED PLANNING WITH THIRD PARTIES (5.2.2)

The Board direction is on 'an integrated approach to distribution network planning'. As indicated above, neither a Regional Infrastructure Plan, nor an Integrated Regional Resource Plan has been completed for GPI's service territory. GPI is included in "Group 3", which is the final group in the regional planning prioritization.

PERFORMANCE MEASUREMENT FOR CONTINUOUS IMPROVEMENT (5.2.3)

To facilitate performance monitoring and eventually distributor benchmarking, the Board mandated the capturing of key performance information into a Scorecard (Appendix F). The Scorecard matrix covers four outcomes, and was previously described. The information in the Scorecard is organized in a manner that facilitates evaluations and pinpoints areas of required improvement.

GPI plans to achieve OEB's Operational Effectiveness performance outcomes through improvement initiatives in productivity and cost performance. GPI's asset management and capital expenditure planning processes are designed to identify and take advantage of opportunities for continuous improvements, while delivering on OEB explicitly stated system reliability and quality objectives.

Converting the 8.3kV distribution plant to 27.6kV will eliminate maintenance expenses and will improve service quality performance metrics. Maintenance programs and operational practices are also designed with reliability in mind. Capital investments are aimed at sustaining system performance by proactively upgrading deteriorating assets and building redundancy in the system with automation (reclosers and self-healing systems) and smart grid elements. Investments in OMS will provide real-time system information that facilitates the rapid identification of problems and promotes a more efficient response.

EFFECT OF PERFORMANCE TRENDS INFORMATION ON THE DS PLAN

Optimizing the performance of GPI's Distribution System Network includes initiatives that, collectively, will achieve sustained improvements in asset management and the long-term performance of the distribution network. These initiatives include:

- Further development of the overall asset management framework and governance,
- Development of individual plans, which integrate lifecycle costs, interventions (maintenance/ replacement/ disposal) and set out medium-term investments and implementation plans by asset type,
- Development of an outage management system and expansion of asset analytics (single sources of asset data, network performance modelling, predictive life and asset health models and improvement of maintenance management),
- A focus on operations plan delivery and further refinement of contractor competency standards to ensure regulatory compliance, standards of safety,

- Further standardizing the equipment types across the distribution network, as assets are routinely replaced or new assets put in place. Capital projects include areas where GPI can eliminate transformers that are rare sizes so that GPI can eliminate stock and spare transformers as well

- GPI is moving transmission assets into the LDC (OEB Case Number EB-2014-0344 – Amalgamation of Grimsby Power Inc. & Niagara West Transformation Corporation), which will provide for more efficient and cost-effective operation of the assets, and will avoid the additional costs associated with a duplicate administrative structure and another layer of (transmitter-related) regulatory compliance. GPI anticipates annual savings of approximately $35,000 as a result of eliminating costs associated with a duplicate administrative structure and another layer of (transmitter-related) regulatory compliance.

ASSET MANAGEMENT PROCESS (5.3)

ASSET MANAGEMENT OBJECTIVES & CORPORATE GOALS (5.3.1.A)

GPI's primary goal is to make consistently sound decisions while carrying out the appropriate tasks at the right time and at the optimum level of expenditure. GPI's Business objective aims to maximize the rate of return on rate base, with debt-equity targeting a split of close to 60:40.

GPI is also committed to maintaining customer satisfaction, delivering reliable cost-effective service, and maintaining its position as one of the lowest cost service providers in the area.

As circumstances affecting assets change, the expenditure interventions required in a given year are likely to change. However, the goal of this plan is to establish direction for investment decisions and outline the long-term strategy for managing the assets under GPI's ownership. This DSP covers projects for the next five years, during which time, forecasts of asset management drivers can be refined with a reasonable degree of accuracy. GPI's intention is to maintain a dividend of 50% of net income, while ensuring enough cash flow to sustain capital investments and OM&A.

GPI is using the Scorecard reporting mechanisms incorporated into the Asset Management Process to monitor progress in meeting the performance outcomes set by the Board. GPI seeks to achieve an optimal balance between the key elements of asset management, service levels, costs and business risk. This will enable the utility to provide economically sound business opportunities for its shareholders and operate with a view to profitability and maximizing shareholder value, while maintaining commitment to system reliability, customer satisfaction, business ethics and standards. The key goals of the asset management process are to:

- Balance cost, performance, and risk;

- Align organizational objectives with investment decisions; and
- Create a multi-year asset plan based on rigorous and data-driven processes.

Information about GPI's asset attributes and condition data are held within databases, various paper records and files. Asset conditions are assessed by various inspection and maintenance activities. These activities are analyzed to determine what appropriate maintenance intervals best suit the asset. Detailed attribute condition information is continually being improved, and with time, the confidence level of this information will be enhanced.

The following Processes are the core Asset Management Processes at GPI:

- Inspection and maintenance processes;
- Capital expenditure planning processes;
- Capital financing processes; and
- Information management processes

ANNUAL BUSINESS PLANNING

GPI regularly reviews and updates a number of key documents which support the annual business planning process. These documents include the distribution system maintenance and inspection program, asset condition assessment, and detailed budgets. Going forward, this distribution asset management plan will also be reviewed.

ANNUAL BUDGETS

Each year GPI produces an annual budget for the next year, which reflects the costs of individual projects and expenditures over the year. This budget reviews asset and operational issues experienced in the past and anticipated for the future, and contributes to the long-term alignment within the strategic context. It must be understood that this alignment process is very much a moving target.

A critical activity for GPI (moving forward) is to ensure that the annual budget reflects the fundamentals of this DSP.

MAIN DRIVERS OF ASSET MANAGEMENT PLAN (5.0.4, 5.4.5)

This DS Plan, developed through an asset management approach, reflects GPI's strategic commitment to customer service excellence, net investment in distribution infrastructure and optimization, consistent and financial performance and employee and public safety. During the planning process, a Business Risk Management framework was deployed to identify residual operational risks relative to current performance outcomes. Some of the factors in consideration during the planning process include service reliability, safety, obsolescence, operational and environment considerations.

The table below summarizes the overall asset planning approach.

GPI's DS Planning Drivers

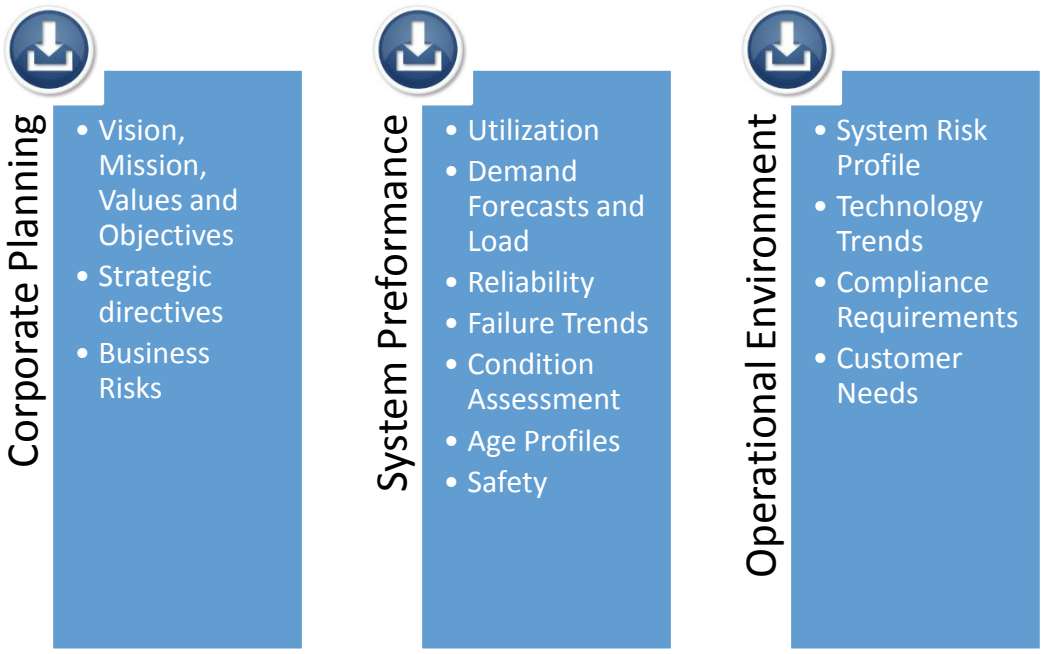


Figure 22

Distribution planning is not a static process; as circumstances affecting GPI assets change (e.g. standards, knowledge), there are likely to be changes in projects and programs, and changes to the level of expenditures.

Customer requirements are reflected in the setting of performance targets, such as response times for outages and notification times for planned outages. Customer expectations are gathered via regular surveys and routine customer contact. GPI has definitively learned what customers prefer through their engagement in a comprehensive customer survey. A top priority for customers is better reliability and enhanced communications.

General **load growth** eventually brings about a need to invest in additional network capacity. Given the current and forecasted load growth over the five year planning horizon GPI expects that its electrical infrastructure will continue to be able to accommodate this load growth. However, there is always the possibility of large developments, which may trigger upgrades to existing equipment or expansions to the distribution system.

Regulatory Requirements and obligations are imposed by the government, and by the regulatory agencies that execute the government's direction. In addition to this, GPI's stakeholders expect the expression of good corporate ethics. The attainment of environmental benefits and energy conservation are important considerations of GPI's policies and procedures. In May 2009, the Ontario Legislature passed Bill 150, the Green Energy and Green Economy Act, 2009. This legislation is a framework, aimed at making fundamental changes to the roles and responsibilities of local distribution companies (LDCs). This Act led to a number of supporting regulations required to implement the Act. GPI intends to support embedded generation and smart grid implementation.

The current age and **asset condition** profile has a major influence on GPI's future asset management plans. Where possible, asset investment decisions will take into account the performance of assets and the expected condition and performance profile under different investment scenarios. GPI is currently utilizing the information mapped in the GIS to assist in its asset replacement programs, in conjunction with inspection and testing records.

System Risk Profile, as reflected in asset management planning includes operational risks, natural environmental events, regulatory and legal risks, and risks associated with the different lifecycle stages of an asset.

Safety has always been a priority at GPI and is essential to good utility practice. The Electrical Safety Authority oversees public safety issues through Regulation 22/04 annual audits and inspection programs.

Continuous improvement is a key part of asset management; this includes **new technologies**, tools or methods that have a potential benefit to the company as they continually become available. A longer-term GPI objective is to build more automation (e.g., self-healing HV switches) and system intelligence (e.g., electronic reclosers).

The drivers noted above provide the context for asset management at GPI. Managing the balance between drivers is incorporated into GPI's overall DSP. The main drivers of GPI's DS Plan also align with OEB expectations to meet the four performance outcomes.

MANAGING STAKEHOLDER INTERESTS

IDENTIFYING STAKEHOLDERS

GPI is governed by a Board of Directors, and has two shareholders, The Town of Grimsby and Fortis Ontario. Other stakeholders include:

- Electricity retailers, customers, and end consumers
- Contractors and service providers
- Hydro One - Distribution and Transmission Supplier
- Tree owners
- Government agencies such as the OEB & IESO
- Land owners where GPI assets exist
- Town of Grimsby (operational perspective)

GPI has contact with all of its stakeholders. Their suggestions provide opportunities for GPI to conduct its business, and provide perspective about rates and service levels.

ACCOMMODATING STAKEHOLDER INTERESTS

Stakeholder interests can be viewed from a number of perspectives including Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial Performance. Financial stability is required to ensure that shareholders and lending institutions have sufficient confidence to continue owning and investing in GPI. Electricity rates provide the means for GPI to create revenue and signal underlying costs. Not charging appropriate rates has economic implications for both GPI and its customers. The Quality of Supply includes emphasis on reliability with respect to the number of interruptions, the duration of interruptions, the amount of flicker, and the quality of

supply. Safety involves staff, contractors, customers, and the public. GPI must ensure the operation of the distribution system is safe for all.

GPI accommodates stakeholder interests as follows:

Interest	How GPI accommodates stakeholder interests
Customer Focus *(Service Quality and Customer Satisfaction)*	GPI conducted a customer survey to determine customer preferences and customers indicated that they expect their utility to provide consistent, reliable energy, handle outages and restore power quickly. Customers also want improvement in communications. To address customer preferences, GPI will continue to effectively maintain its infrastructure with funds available and invest in customer communications, smart grid and "build in" system intelligence.
Financial Performance	GPI will accommodate stakeholders' needs for long-term viability by returning a dividend to the shareholders. GPI's revenue is constrained by regulatory requirements, conservation and demand management activities, and the state of the economy. Failure to collect enough revenue to fund reliable assets will impact customers in a negative way. Conversely, collecting too much revenue penalizes customers and transfers a disproportionate proportion of wealth to the shareholder. GPI's pricing strategy must be cost-effective and, at the same time, be sufficient to continue to balance distribution system security, capacity, reliability, and return on investment.
Operational Effectiveness	GPI will maintain a reliable system, and will implement this DSP in an effective manner to benefit the interests of all stakeholders. GPI will ensure that the public is kept safe by ensuring all assets are structurally sound, live conductors are maintained with at least minimum clearances, enclosures are kept locked, and touch & step potentials are kept within standard. GPI will ensure the safety of its staff by implementing and continuously improving its safety management program.
Public Policy	GPI will continue to deliver on obligations mandated by the government. GPI intends to

Responsiveness	continue accommodating embedded generation and smart grid development.

Figure 23

MANAGING CONFLICTING INTERESTS

Conflicting interests are managed by prioritizing investments based on ranking mechanisms. Safety and Criticality is given priority, and business critical projects are addressed with care as soon as feasible. All other interests must be managed as the situation dictates, and will, out of necessity, be a balance of some proportion (not necessarily equal proportions) taking into consideration various stakeholder interests. These interests are embedded into a prioritization tool. (Appendix I)

Further testing of feasible solutions and investment scenarios expose impact on customer rates, shareholder returns and financial viability. This provides the necessary information to effectively balance the various competing needs. GPI has refined an Investment Strategy where planning scenarios are run through financial models to expose impacts on customer rates, shareholder returns and financial viability. This holistic approach provides the necessary information to effectively balance the various competing needs. The investment Strategy methodology integrates the "bottom-up" asset needs with "top-down" strategic criteria and review.

OVERVIEW OF ASSETS MANAGED (5.3.2)

FEATURES OF DISTRIBUTION SERVICE AREA (5.3.2.A)

GPI's service area covers 69 square kilometers, and includes all geography within the borders of The Town of Grimsby, in the Regional Municipality of Niagara. Out of the 69 square kilometers, 19 square kilometers is urban and 50 kilometers is rural. The service territory is shown in Appendix A.

The main function of GPI is to receive power in bulk from points on the high-voltage transmission grid and distribute it to the local consumers in Grimsby. Delivery involves reducing the voltage of bulk power supply to the levels used in end-use electrical equipment. Delivery is achieved via conductors held above or below ground.

GPI Assets include poles, conductors, line transformers, switches, transformer station equipment, conduits, computer systems and software, transportation equipment, storage areas, and office buildings.

SUMMARY DESCRIPTION OF SYSTEM CONFIGURATION (5.3.2.B)

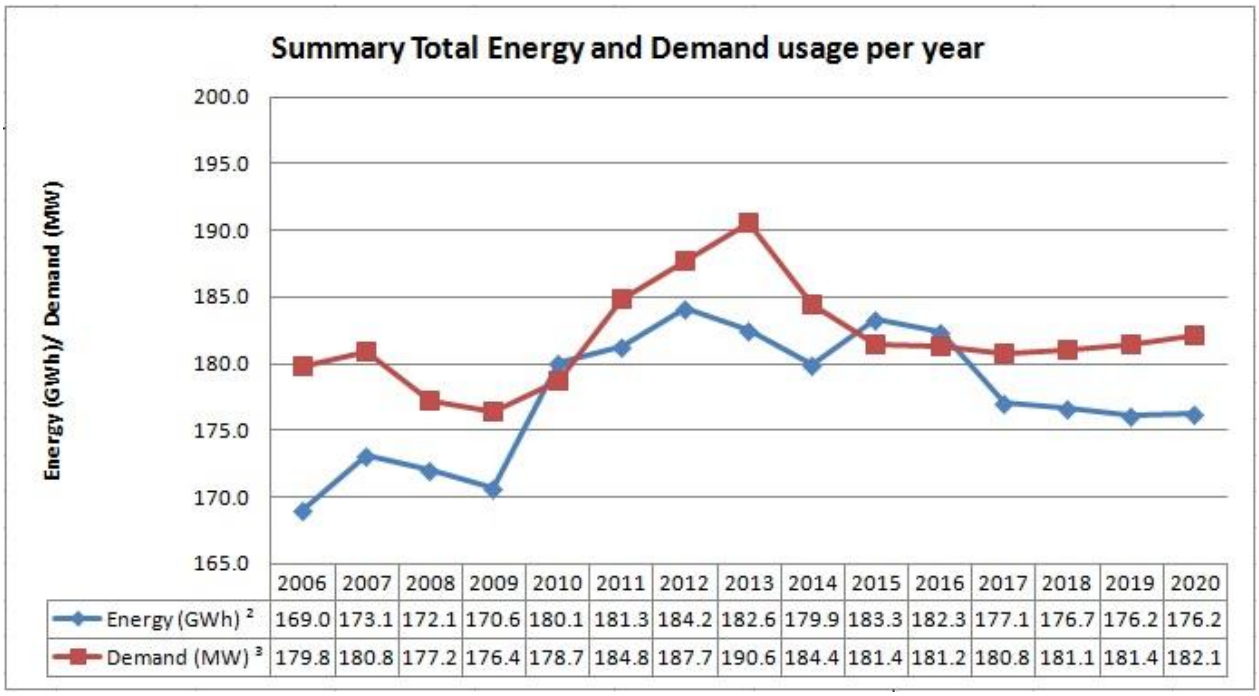
The GPI distribution system supplies approximately 11,111 customers throughout the Town of Grimsby. These customers are supplied by one (1) Hydro One owned transformer station and by one (1) GPI owned transformer station (TS's). In 2014, GPI delivered 175,931,097 kWh of total billed energy.

ENERGY & DEMAND CHARACTERISTICS

GPI has seen a lot of customer growth in the past year and it will be sustained for at least two years based upon information from the town and the planning department. This should give GPI a steady increase in demand usage but the CDM program and renewable energy initiatives will help to maintain the current demand.

Key energy and demand figures separated into transformer station areas and based on historical information from 2006 to 2014 and projections from 2015 to 2020 are as follows:

The table below provides information about the Total Energy Consumption and Energy Demand per year



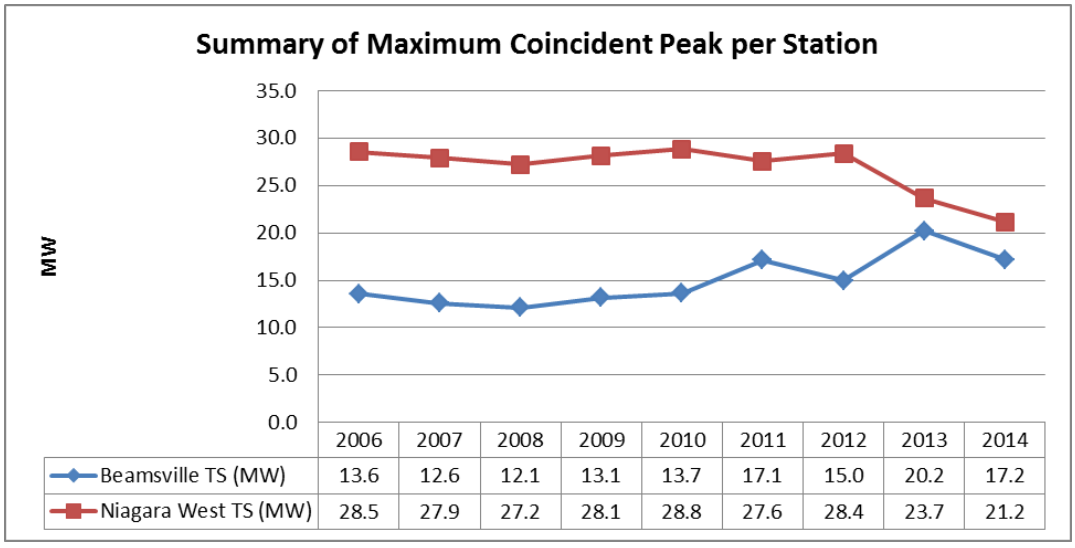
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Energy (GWh) [2]	169.0	173.1	172.1	170.6	180.1	181.3	184.2	182.6	179.9	183.3	182.3	177.1	176.7	176.2	176.2
Demand (MW) [3]	179.8	180.8	177.2	176.4	178.7	184.8	187.7	190.6	184.4	181.4	181.2	180.8	181.1	181.4	182.1

Figure 24

[2] *Total billed from all applicable classes (Residential, GS<50, GS>50, Streetlight, USL)*

[3] *Total billed from all applicable classes (GS>50 and Streetlight)*

The tables below provide a summary of the maximum coincident peak per station: also the HAF wind project came on line mid 2014 at the NWTS.



	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beamsville TS (MW)	13.6	12.6	12.1	13.1	13.7	17.1	15.0	20.2	17.2
Niagara West TS (MW)	28.5	27.9	27.2	28.1	28.8	27.6	28.4	23.7	21.2

Figure 25

NETWORK CONFIGURATION

GPI is connected to the Ontario power transmission grid at two (2) transformer stations, each with a typical Dual Element Spot Network (DESN) configuration (2 power transformers per station). One (1) transformer station is owned by Hydro One (HO) and one (1) is owned by GPI. GPI customers are supplied via four (4) 27.6kV feeder circuits. Within GPI's service territory there are several step down transformers fed from the 27.6kV circuits, which supply GPI customers with 8.32kV. Responsibility for maintaining the circuits lies with the respective owners of the equipment. The current configuration of GPI's Distribution System is shown in the graphic below.

Distribution System Configuration

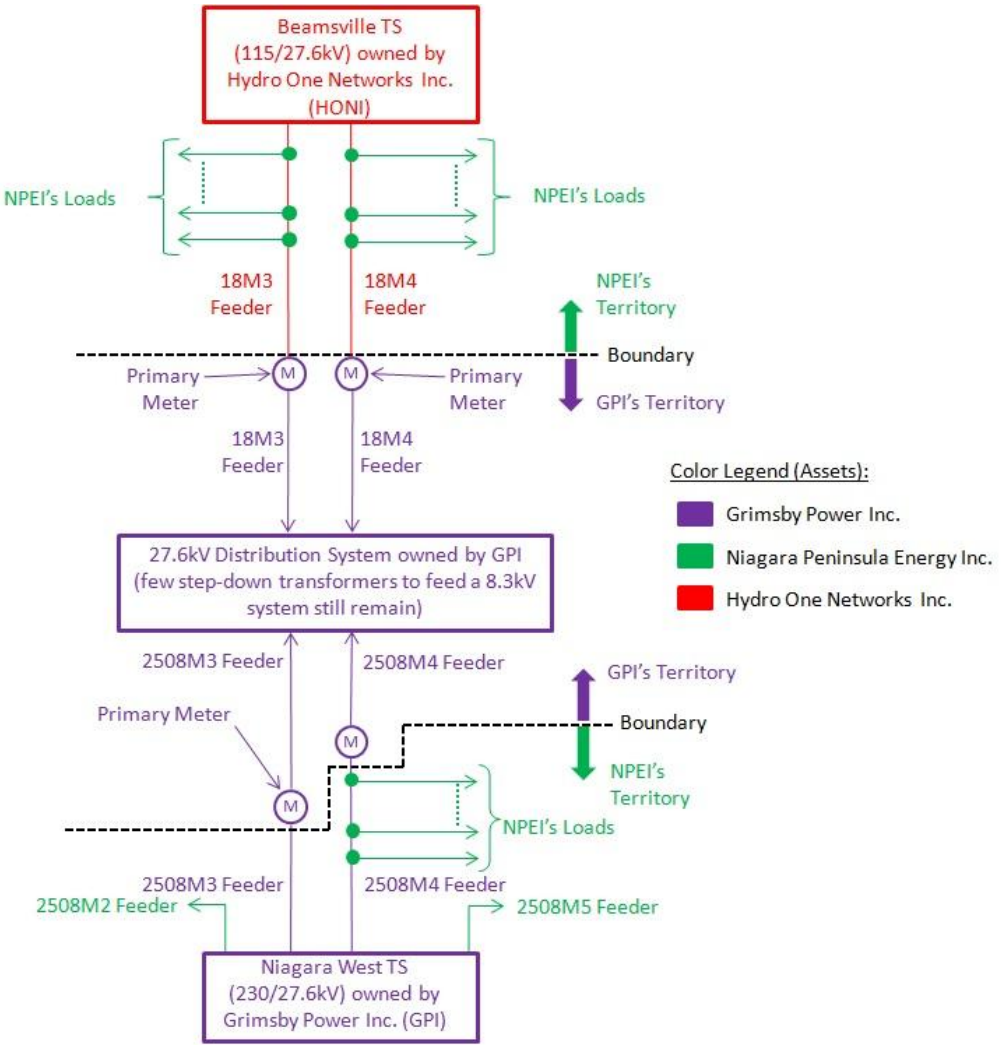


Figure 26

ASSET INFORMATION (5.3.2.C)

The following table provides information regarding GPI's assets:

Description of Asset	# of Assets
Transformer Station	1
Wood Poles	3,640
Concrete Poles	68
Pole Mounted Transformers	813
Pad Mounted Transformers	682
Gang Operated Overhead Switches	59
Meters	10,995
Pad Mounted Switchgear	11
Underground XLPE Cable	74 km
Overhead Conductor	169 km

Figure 27

ASSET CONDITION ASSESSMENT

The method of information collection and storage is a key component to successfully managing the data from all assets. Records are kept in a number of formats either paper based files, GIS, database (MS Access-Db), or spreadsheet (MS Excel-Sp) based. This essential data has been consolidated into a single model whereby asset demographic data can be analyzed as well as available asset condition data. Asset condition data is reviewed to determine if there are any high severity defects or imminent replacements needed. GPI combines this with age data and then it is able to establish an adjusted age which can be objectively compared to the typical useful lives of the various asset types to determine replacement options.

In general, and as a direct result of a recent and ongoing 8kV to 27.6 kV voltage conversion, a large number of assets of Grimsby Power are new or relatively new, The adjusted age demographic (adjusted for condition and severity of defects) assessment helped to design the sustainment plan for replacing assets. GPI has performed close to 14,000 inspections of wood poles; 12 were found to be defective and scheduled for immediate replacement within one week. This shows that GPI assets are in good condition, allowing for the opportunity to divert capital funding into other projects (customer-driven and smart grid). The following considerations were taken into account to determine GPI's distribution system plans and allocation of investments:

- Reliability statistics were very good, and assets are predominantly new and in a good condition, as a result of the recent voltage conversion;
- Plant inspections over the last few years have identified very few assets with high severity defects;
- Although GPI does have a high level of confidence in its asset information, there is an opportunity to better organize the data into a consistent format and source system (single system of record), as well as define condition standards that can be consistently translated to probability and outcome. This will continue to be a subject of the continuous improvement process as inspections are conducted and source systems are replaced over time (e.g. GIS, OMS, etc.).

KEY SYSTEMS AND PROCESSES

GPI's key tool to manage asset knowledge is its ESRI Graphical Information System (GIS). This system, in conjunction with a number of connected databases and spreadsheets residing on the outside of the main software platform, contains the attributes and maintenance/inspection information for some of the distribution assets, as noted in the above table. A graphical representation of the specific asset is placed on top of an aerial photo of the ground within the service territory of GPI. This graphical representation presents a software link to the asset attributes collected in the system. In addition to the GIS, a number of paper records also exist which contain the asset information. As mentioned above, this will be an area of continuous improvement, given the need for data integrity in this area and the new reliance on analytics to drive asset replacement programs (as outlined below).

CAPACITY ASSESSMENT (5.3.2.D)

Apart from the sustainment of existing assets in the distribution system, GPI has considered the needs of potential demand expenditures. They are required to supply the needs of a new customer, or to enhance reliability in an

area where system capacity is constrained. GPI has performed System Capacity Studies, and has also considered population growth, the economy and effectiveness of conservation programs.

In terms of system capacity studies, GPI has performed DESS System Analysis of 6 MW added load to the distribution system while maintaining voltage and conductor thermal limits. Prior to adding the load, the computer model was scaled to the peak load reached on June 30, 2014, approximately 38 Megawatts. Three transformers of 2 MW each were added to the model in two separate locations of expected growth. Each transformer was loaded to 80% of full load. The load was connected to the Beamsville 18M4 feeder. The voltage drop and conductor thermal loading was within limits.

In order to determine how growth might affect the distribution system, a number of areas need to be analyzed. These include: population forecasts, the number of new connections, the type of connections, and historical demand. Current steady population growth will not significantly affect the distribution assets within the planning horizon of 5 years.

NUMBER OF NEW CONNECTIONS

GPI's new connections increased dramatically in 2014 with 444 connections. The following charts provide the specifics of historical trends and predicted future new low voltage (LV) connections.

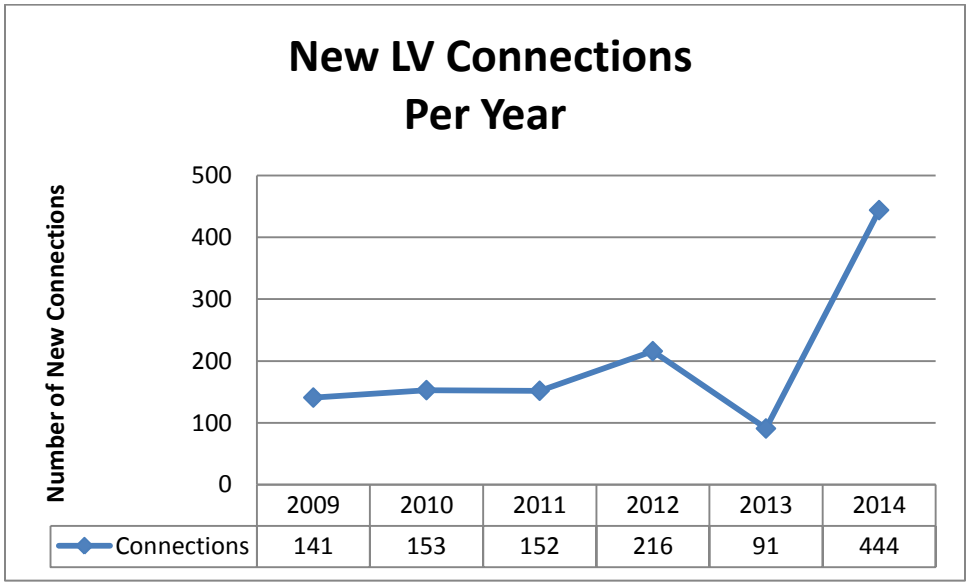


Figure 28

GPI is actively participating in municipal planning activities. The following chart contains details about the planned new low voltage connections during the next five (5) year period. The projections are based on analysis of data for municipal development permits and forecasted date of development completion.

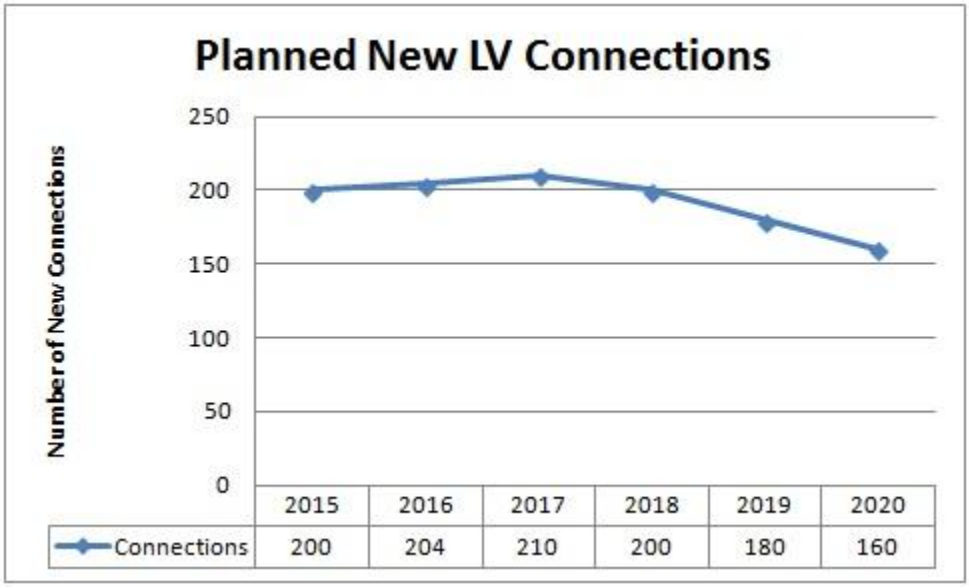


Figure 29

ASSET LIFECYCLE OPTIMIZATION POLICIES AND PRACTICES (5.3.3)

Electricity assets, like any other type of physical assets, have a lifecycle. This section describes how GPI assets are managed over their entire lifecycle, from conception to retirement.

GPI will be working towards a lifecycle Asset Management program as the basis for longer-term planning and predictable investment levels that optimize operational and financial risks.

GPI's approach in Asset Lifecycle Management and Planning is holistic in nature, and takes into consideration the combined implications of managing all types of assets, including physical assets, financial and human capital. GPI focuses on a System and Process approach of Asset Management and Planning, considering assets in their operating context, and optimizing the value of the overall assets system rather than the individual asset.

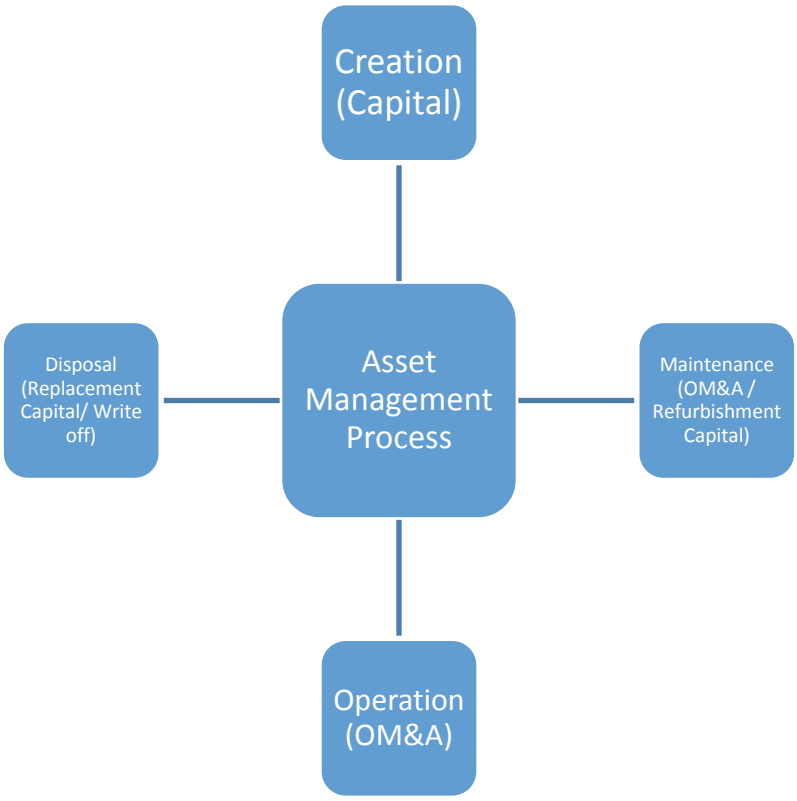


Figure 30

MAINTENANCE PLANNING

GPI manages assets with the intent of providing a safe, efficient, reliable, and cost effective electricity distribution system.

For example, distribution transformers are manufactured with the intent that there is no need to provide regular maintenance (maintenance-free) for the duration of their lifecycle. Generally speaking, they remain in service providing continuous service until they reach the end of their lifecycle – they fail in service.

Some distribution assets remain in service delivering electricity with little required maintenance. However, a small percentage of the distribution assets, such as substation transformers do require regular maintenance. These transformers generally supply many hundreds or thousands of customers, and a failure would likely result in a

lengthy outage and a significant number of resources to replace a failed unit. This maintenance involves regular condition testing, which highlights or identifies possible problems.

The inspection and maintenance of distribution assets is detailed in GPI's "Distribution System Maintenance and Inspection Program", attached as Appendix G. The maintenance and inspection program was first introduced in 2006. The document is continuously updated with new information upon which maintenance or inspections of equipment are based. Maintenance standards in the program are built upon manufacturers' recommendations, industry regulatory requirements, industry best practices, and GPI's own experience with performing the maintenance or inspection.

The initial intent of the program is to build a knowledge base to provide enough information to make informed decisions on future maintenance activities. Initial intervals for maintenance may be changed, based on actual experience with field data collected. For example, most of the maintenance forms have the following questions, which are filled out by the maintainer:

Indicate which one of the following statements applies to this particular maintenance activity:

☐ A The maintenance was unnecessary; it could have been done later

☐ B The maintenance was performed at the right time; only normal maintenance was required

☐ C The maintenance should have been done earlier; major faults were found

This process will allow GPI to collect information and base future intervals on the actual existing condition of the asset. In this way, the cost to perform maintenance can be optimized. The data collected from the maintenance provides valuable information upon which to base repair work, refurbishment activities, and asset replacement schedules. In addition to actual asset maintenance, a number of programs exist to enhance the reliability of the assets, or to identify problems with assets. These programs are as follows:

Ultrasound Inspection – An ultrasound detection patrol was first conducted at GPI in 2005. The purpose of ultrasound detection is to identify poor electrical connections and overloaded equipment on the distribution system. Concerns detected were visually inspected and verified by the line crew. Since then, ultrasound detection has been added as a regular inspection technique. It is conducted on all pad-mounted transformers once every three (3) years in urban areas and once every six (6) years in rural areas. Critical items identified are corrected immediately and non-critical items are scheduled for repair in conjunction with other planned work.

Line Clearing and Tree Trimming – The purpose of this program is to clear all lines from encroachment of trees and branches to eliminate tree contact with lines. Tree contacts are a major cause of distribution system outages and

momentary interruptions for GPI customers. This program cycles through the service territory on a five-year basis. In 2011, the program was changed to an area-by-area program. Currently, the schedule aims to complete each area at least once in a five-year period, subject to change based on conditions found. Bids are tendered out each year and GPI follows up with inspections to ensure that the contractor is performing the work to GPI standards.

Distribution System Plant Inspections and Ground Level Maintenance - These inspections are regulated under the OEB Distribution System Code. The code specifies the minimum requirements to inspect urban areas on a 3 year cycle and rural areas on a 6 year cycle. GPI utilizes the same maintenance program and map as the Line Clearing and Tree Line Trimming program. The inspections involve a visit to each asset location. For overhead distribution plant this means every pole and for underground distribution this means all pad mounted equipment. The visual inspection is to be completed by meeting the minimum requirements of the DSC. The GPI condition of assets will be documented by completing all required fields in the inspection database form.

Off Road High Voltage Line inspection and Maintenance - Within the boundaries of Grimsby a number of line sections are off road and inaccessible by truck for parts of the year and in some cases all year round. All of these line sections are overhead and are located on unopened road allowances and private land. Inspection and maintenance of these lines is necessary on a regular basis to safeguard the reliability of the electrical supply. All sections are patrolled by foot once per year and inspected once every 10 years.

Switch Maintenance Program (Overhead and Pad Mounted) – This program is to ensure the reliability of all switching devices in the electrical distribution system. The program maintains switches on a 3 year rotational basis. The program consists of physically cleaning, lubricating and ensuring the switch operates smoothly.

Transformer Station – The following describes the scope of work undertaken at the NWTS over a 5 year maintenance period:

I Visual / Non-Contact Inspections Main Outdoor/Indoor:

- 230kV Structure / Insulators Inspection – (Power Washing Was Not Required).
- Ultra Sonic Survey: (All 230 – 27.6kV outdoor / indoor electrical equipment).
- AREVA GIS SF6 Gas Pressure Inspection and Log Gauge Read-Outs. (Performed During Monthly Inspections)

II Thermographic Inspection:

- 230kV Substation yard structure and connected equipment.
- DC Battery Bank.
- AREVA - 27.6kV pfisterer connections.
- Termination points at overhead riser pole locations.

III Transformers T2 and Station Service SS2 - Mechanical Inspections:

- Porcelain Insulator condition inspected for chips, cracks or tracking.
- All current carrying connections inspected and tightened, as required.
- Inspected the general physical condition, including any evidence of oil leaks.
- Inspected all tank grounding cables.
- Inspected the control box for debris, corrosion, moisture or any sign of overheating.
- Inspected and recorded the lightning discharge counter readings.
- Verified liquid level of the conservator.
- Checked for and remove any debris from radiators.
- Checked for and reported any paint damage and signs of rusting.
- Visually checked all gauges.
- Checked physical condition, operation and rotation of the cooling fan blades.
- Cleaned any debris from fan housing.
- Inspected the condition of the Silica-Gel breather and the colour of the desiccant.

IV Transformers T2 Electrical Inspections:

- Turns ratio on all available tap positions by electrically operating OLTC through the upper and lower range limits.
- Winding resistance on high and low side windings – including attached neutral reactor.
- Insulation resistance on high and low side windings – including attached neutral reactor.
- Insulation resistance of the core.
- Polarization Index.
- Double power factor and capacitance tests:
    - Windings in accordance with IEEE method II.
    - 10kV winding excitation current.
    - Bushing C1 and C2 capacitance taps.
    - Lightning Arrester.
- Checked sudden pressure / rise, winding and oil temperature alarm and trip contacts.

VI Transformers T1/T2 and Station Service SS1/SS2 Insulating Fluid Analysis:

- Dielectric Breakdown to ASTM D1816 – (2mm Gap).
- Water Content per ASTM D1533.
- Power Factor @ 25°C per ASTM D924.
- Interfacial Tension per ASTM D971.
- Acidity per ASTM D974.

- Colour per ASTM D1500.
- Visual per ASTM D1524.
- Dissolved Gas Analysis per ASTM D3612.

VIII SS2 - Station Service Switchgear:

- All switchgear components were thoroughly cleaned and inspected.
- The main disconnecting devices were exercised and lubricated.
- Contact Resistance of the main devices was measured.
- All cable and bus connections were inspected and tightened as required.
- All feeder and distribution devices were cleaned and inspected.
- Insulation resistance was measured.
- Current transformer and wiring was inspected.

IX Maintenance –Bus-Y-230kV

- 230kV switch/bus/insulators were inspected/cleaned – (power washed)/ lubricated and electrically tested

X 230/27.6kV-Y-Bus-Relay Protection

- Confirmed applied settings with current approved engineered setting sheets
- Simulated meter functions by secondary injection to verify the voltage and current ratios
- Calibrated as per the engineered approved settings and drawings
- Testing of all digital inputs and outputs as per schematic drawings
- Verified trip circuits via secondary injection
- On-load measurements and verification following energizing to confirm correct phasor relationship

UNDERSTANDING ASSET LIFECYCLES

Definition of Key Lifecycle Activities:

Activity	Detailed Definition
Operations	Involves changing the design parameters of an asset, such as changes in circuit configuration or setting a tap setting on a transformer. Does not involve a physical change to the asset. Line clearing of trees is an operations activity.
Maintenance	Involves replacing consumable components on asset assemblies, but not the whole assembly. Generally, these sub-components wear out before the whole assembly fails, for example, an insulator on a pole assembly or an arc snuffer/muffler on a gang operated load break switch.
Sustainment	Involves replacing assets in terms of the assets listed under asset categories, for example, replacing a pole in a pole line.
Retirement	Removes an asset from the distribution system, for example, removing a redundant pole line from service. By definition, retirement is a reduction in the distribution system footprint.

Figure 31

OPERATING THE ASSETS

Operational activities generally arise in dealing with distribution system issues when assets are not operating as normal. As an example, a number of triggers exist, as follows:

- Voltage levels too high or too low – outside of Canadian Standards Association Voltage Variation Limits for circuits up to 1000V under “Normal Operating and Extreme Operating Conditions”
- Fault current exceeds thresholds on protective devices such as breakers, reclosers, and fuses
- Demand exceeds thresholds on protective devices and or the assets current carrying capacity
- Customer concerns about the quality or reliability of electricity being supplied to them

MAINTAINING THE ASSETS

Maintenance deals primarily with replacing consumable components of assets. Components wear out in a number of ways, including oxidation, pitting or erosion of contact surfaces, material rot, gasket degradation, pitting of insulators, etc. Continued operations of devices which clearly exhibit component degradation, will eventually lead to a failure in the distribution system. Failure of assets is influenced by a complex interaction of parameters, such as quality of manufacture, quality of installation, age, operating hours, number of operations, loading cycles, stress due to fault events, ambient temperature, contaminants, and the maintenance performed during the life of the asset.

Specific maintenance strategies, such as run-to–failure, or decisions to clean pad-mounted switchgear, have been developed, primarily based on past inspection results, maintenance histories or manufacturers recommendations.

SERVICE LEVELS

GPI considers its service levels, and relates them to the performance of its distribution assets.

GPI assesses customers' preferences by obtaining informal feedback from customers during regular daily interactions with the utility. GPI considers service levels to include a broad range of services, including capacity, quality of electrical supply, continuity, restoration, ground clearances to conductors, grounding of equipment (public safety), and the absence of (radiant) interference.

GPI considers customer preferences to fall into three categories, in order of priority (highest to lowest), as follows:

- Reliability – continuity and reliability of electrical supply
- Quality – the absence of momentary interruptions and non-standard voltage levels
- Process – answering the phone, processing regular utility transactions such as new service connections and upgrades to electrical services, and outage notices

SERVICE LEVELS - RELIABILITY

Three internationally accepted indices measure the reliability of supply. These indices called SAIDI, SAIFI, and CAIDI, are defined as follows:

- SAIDI – *System Average Interruption Duration Index* – the average length of outage customers experience in the year– expressed as hours per customer per year;

- SAIFI – *System Average Interruption Frequency Index* – the average number of interruptions each customer experiences – expressed as number of interruptions per year per customer;
- CAIDI – *Customer Average Interruption Duration Index* – the speed at which power is restored – expressed as average duration in hours per customer per year.

RISK MANAGEMENT

GPI's Distribution System Maintenance and Inspection Program document is aimed, in part, at protecting the public from physical, electrical, and environmental hazards, by maintaining a schedule of regular asset inspections and maintenance activities.

Ontario Regulation 22/04 - Electrical Distribution Safety is a key regulation; it requires GPI, and all other LDCs, to maintain distribution standards, material standards, and construction verification programs to safeguard the public from hazards associated with the distribution system. The Electrical Safety Authority (ESA) is responsible for enforcing the regulation, and is ensured through a system of annual audits and regular field inspections.

GPI promotes excellence in health and safety management in order to prevent losses to people, assets, environment, and reputation. Keys to this H&S Management system are the evaluation of risk for all workplace hazards, regular H&S meetings with staff, and feedback on losses or near losses occurring in the workplace.

Written emergency response procedures have been prepared as follows:

- Distribution System Emergency Contingency Plan
- Sabotage Reporting

GPI will follow all regulatory requirements and guidelines to ensure the distribution system has a low risk impact on the environment.

KEY ASSUMPTIONS

A series of key assumptions form the basis of the development of this DSP. These key assumptions, provide a foundation for planning and forecasting predictions of future activities, whether to maintain, replace or develop new assets (discretionary capital projects).

The key assumptions for this DSP are as follows:

- Electricity growth rates will continue to be slow in the next five (5) years due to an economy in recovery and the impact of the Conservation and Demand Management (CDM) Programs in lowering demand and electricity usage. Appendix N provides information about the electricity growth rate based on load forecast model. The kWh energy consumption is expected to drop by 0.16% within the next 5 years.
- Renewable Energy Generation will impact the system
- Recognition that the economy and future economic development of the Town of Grimsby depends on a secure and reliable supply of electricity.
- In the next five (5) years, regulatory activities by the Ontario Energy Board (OEB) will continue at the current pace putting a heavy strain on GPI's resources.
- The Green Energy Act requires investments in the distribution infrastructure in order to meet the "Smart Grid" characteristics alluded to in the legislation.
- The majority of smart meters were installed in 2010. Investments to harness the data produced by the meters will need to be made to promote the "Smart Grid".
- With reference to the "Smart Grid", new technologies will be developed within the planning horizon of this Plan. GPI is including two specific projects (Outage Management System and Distribution Automation) in the DSP to advance in this area and tied to our customer survey results.
- Present service levels will continue to be improved, but will remain in balance with customer needs, price-quality trade-offs, and industry best practice(s). Service levels may change as a result of continuing efforts by the OEB to quantify certain measures as are contained in the LDC's Scorecard. There is a certain degree of uncertainty with respect to where the measures of the Scorecard will lead performance outcomes, as the OEB entertains comparing utilities' performance metrics.
- GPI's DSP is a strategic document to convey future distribution system development and maintenance plans to stakeholders.
- GPI's asset management systems will continue to evolve, in order to process performance information to meet demand, capacity, security, and reliability levels in a timely manner.
- Use of outside line construction firms to perform distribution maintenance, replace, and install assets (as prescribed by work plans of projects) will continue and will ensure major components of work are completed at competitive price levels.
- Compliance with relevant regulatory requirements, as they pertain to electricity rates, filing requirements, health & safety, and environmental protection, will be maintained.
- Meeting the requirements of our Shareholder by achieving the objectives set in GPI's mission statement.
- Asset management planning involves forecasts based on information collected from many sources. Distribution system development for the next five (5) years has been projected; however, some planning areas in the last three (3) years of the plan are less certain, and are based solely on trending.

CAPITAL EXPENDITURE PLAN (5.4)

SUMMARY OF CAPITAL EXPENDITURE PLAN (5.4.1)

During the five-year period, Grimsby Power is strategically planning to make leveled investment in distribution infrastructure required for system sustainment, and in the short–term, intends to concentrate on investing in general assets that support service reliability and customer preferences. Therefore, the main investment drivers are in the areas of end of useful life of the assets, business operational efficiently, reliability and customer preferences. Capital spending by category is designed to meet both defined customer preferences and distribution system requirements.

- System Access investments are planned on historical actual levels required to meet regulatory obligations for connections, upgrades and plant relocation driven by customers and third parties. GPI expects that its system will continue to be able to accommodate the vast majority of requests for new load connections and for service upgrades. New connections are expected predominantly in the development areas around the QEW corridor.
- System Renewal investments are based on the requirements of asset replacement programs, mainly driven by pole replacement. Plans for replacements are based on consideration of age and condition of assets. The proactive replacement of system components prior to failure will reduce costs associated with outage response and reactive replacement. Adjustments to the programs will be completed with gathering more detailed asset condition information and records. The annual investments are leveled to ensure consistency throughout the planning process.
- System Service spending is focused on system reliability improvement projects, which are based on outage considerations, system impact, smart grid upgrade scenarios and customer preferences. The final stages of voltage conversion work will have a positive impact on the reduction of line losses. The integration of smart grid technologies allowing more automation (e.g., self-healing HV switches) and intelligence into the system (e.g., electronic reclosers) emerged as a longer-term objective and will help reduce SAIDI in an economic way. GPI has not experienced any major issues with connection of existing microFIT or small FIT projects to its system, and does not expect any issues within the current five-year plan, based on the anticipated volume of new projects.
- General Plant category is focused on ensuring that adequate tools, such as OMS, are in place to support the day-to-day operations, and to improve customer communications in contingency scenarios of unplanned outages. GPI has incorporated the customer preferences obtained through targeted customer research and customer engagement process. The short-term plans are to divert funding towards customer-identified priorities, namely, a modern Outage Management System (OMS), social media and

others to enhance customer communications. An OMS will also support the distribution system planning activities related to improving reliability by providing important outage statistics.

Asset enhancement and development projects have been identified, and details are outlined in the capital budgets for 2015. Trended capital budgets have been prepared for years 2016 through 2020.

Refer to Appendix H for Summary of Five-Year Plan for Capital-related Expenditures (2015 – 2020).

CAPITAL EXPENDITURE PLANNING PROCESS OVERVIEW (5.4.2)

CAPITAL EXPENDITURE PLANNING OBJECTIVES, PLANNING CRITERIA AND ASSUMPTIONS (A)

GPI's objective is to maximize rate of return on rate base and maintain a dividend of 50% of net income, while ensuring enough cash flow to sustain capital investments & OM&A. To achieve this, the utility must carefully optimize the capital investment expenditures and provide economically sound business opportunities to its stakeholders. Capital expenditures are planned with a view of profitability by maximizing shareholder value while maintaining commitments to:

- Distribution system reliability
- Customer satisfaction
- Respecting and protecting the environment
- Distributing high quality power that is safe for consumers, and
- Meeting the changing needs and desires of consumers.

Steps in the planning process often follow a bottom-up workflow by identifying needs such as customer preferences and system inefficiencies. A cost-opportunity analysis or feasibility study can identify possible solutions and alternatives, as well as potential costs and consequences. Cost-opportunity options are analyzed, and cost estimations are compared to the annual budget and, if approved, the expense moves to the planning stage.

ALTERNATIVES FOR SYSTEM CAPACITY PLANNING AND OPERATIONAL CONSTRAINTS (B)

GPI considers all viable alternatives for resolving system capacity issues or operational constraints. For all identified issues and constraints, a "do-nothing" alternative is considered, in order to determine whether the risks associated with the issue/constraint merit any significant investment. Once a capacity issue or operational constraint has been identified for which "do-nothing" is not an acceptable approach, GPI considers all reasonable alternatives to resolve the issue. GPI does not expect any capacity related issues within the distribution system over the 5 year

planning horizon. The Regional Planning Process is expected to result in a more formal approach for considering upstream transmission system capacity constraints. This process has not started yet, and will be addressed later.

PROCESSES, TOOLS & METHODS (5.4.2.C)

GPI CAPITAL PLANNING PROCESS

FIVE YEAR PLAN

GPI uses results from its long-term planning efforts and other reports, such as asset condition reports, to perform 'tactical' planning which covers a five-year period. Changes to the regulatory environment must be taken into account as well.

Annual updates to the medium-term plan incorporate new information that may arise, such as new regulations, longer-term individual customer needs, or updated information arising from the activities described in the long-term planning process. Typical inputs to medium-term planning include:

- Customer-driven needs
- Municipal-driven needs
- Health, Safety and Environmental issues
- Regulatory requirements
- Reliability analysis
- Asset Condition Assessment
- Asset replacement requirements (based on the outcome of long-term planning)
- Expansion requirements (if any are identified through long-term planning)
- Extraordinary initiatives, such as FIT, Smart-Grid and Smart Meters

The results of the medium-term planning process provide the basis by which to select and prioritize projects for inclusion in the 5-year GPI Capital plan. Results of medium-term planning are also considered to review the effectiveness of maintenance programs and to make adjustments as required.

ONE YEAR GPI CAPITAL PLAN

Short-term planning involves developing specific plans to implement the projects defined in the budget for the current year, as well as to operate and maintain the distribution system(s) in a safe and reliable manner.

It also addresses short-term needs, such as connection of new customers or reaction to external events, such as severe weather conditions and storms.

- Current Budget Year Project Design
- Customer-Driven Asset Development
- Municipal and Developer-Driven Asset Development
- Other Short-Term Projects

Throughout the planning process, GPI deploys tools for prioritizing, managing risks and optimizing the timing of capital expenditures. While different project categories may require different tools, metrics as payback period, net present value and return-on-investment are among the most commonly used throughout the project definitions. The capital project prioritization tool (Appendix I), used at GPI encompasses ranking of capital expenditures in the areas of Strategic Fit, System Needs and Feasibility based on the following ranking criteria:

- Alignment with Goals and Objectives – Evaluates the alignment of project or action to corporate goals and objectives (mission and values)
- Customer Focus - Evaluates how well the project or action positions GPI better, in relation to customer preferences (customer survey)
- Public Policy Responsiveness - Evaluates if the project or action aligns with REG, CDM, Green Energy Act (GEA) requirements
- Criticality - Evaluates if the project or action addresses assets critical to the business and critical to customer satisfaction
- Asset Health (Age/Condition) - Evaluates the expected useful life (or remaining life) of the assets
- H&S , Environmental - Evaluates if there are health, safety and environmental risks

- Cost Benefit – Evaluates the cost benefit of project or action Operational and Technology Risk - Rates if the project or action will address operational or technology risks and issues
- Resources: People - Evaluates the availability of required skills and other resources to execute the project or action

There is a weight scale assigned to each ranking criteria as shown in Appendix I. The weight criteria can be changed based on the project portfolio. The overall project score is determined based on the Ranking 1 to 5 and weighting of each of the criteria. Appendix I also illustrates the definitions of each ranking, broken down per criteria.

It should be noted that sustainment-type programs are not evaluated using this model. Sustainment programs address an ongoing "like-for-like" replacement of existing assets at their end of useful life.

CUSTOMER ENGAGEMENT MECHANISMS (5.4.2.D)

GPI actively communicates with its customers regarding ongoing business, accomplishments and changes in regulatory matters. Customers' feedback and experiences were collected via targeted customer research, and were incorporated into this DSP throughout the planning process. Where practical, the Voice of the Customer (VOC) has shaped GPI's business direction, with regard to its long-term strategy of improving reliability, service quality and communications.

GPI has developed a multi-level customer engagement model to reach out to customers, stakeholders and third parties as part of its business relations. The philosophy behind the engagement activities supports the primary business goal aimed at customer focus in shaping utility features and implementing of environmentally friendly paperless technologies, while increasing distribution system reliability through smart grid development. GPI considers this model as a Continuous Engagement Improvement Process. This model is designed to transform customer service channels into powerful relationship and branding tools, targeted in helping customers to lower their own consumption costs, increase communication efficiency, drive incremental revenue, improve on value and drive greater return on investment. GPI has entered a new phase of customer engagement after redefining the strategic plan, positioning customer engagement points, and offering educational components to help customers to modify their behavior and allow them to take control over their energy usage choices. In the past, the relationship with the customer has been largely transactional; however, GPI has now taken the lead in the community to empower customers through customer education to help them to modify their consumption behaviors. The graphic below outlines the stages of customer engagement:

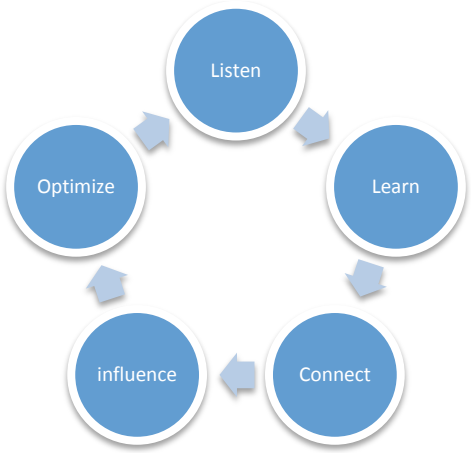


Figure 32

Current engagement touch points are:

Customer Surveys - GPI conducted a customer satisfaction survey and targeted research of customer preferences to support the DSP investment planning process. To ensure impartiality and objectivity of the results, GPI has contracted third parties to design and conduct the surveys. The results of the customer survey were previously summarized. It is important to note the importance of the educational component delivered by skilled communication experts.

Meetings with Commercial and Industrial Customers – Large general service customers are invited to meet with GPI, both to review opportunities and to explore conservation initiatives and opportunities, as well as to learn more about changes in the industry and the company's efforts to address the changes. Customers are encouraged to ask questions and provide feedback in support of GPI distribution activities.

Corporate Website – The website provides a one-stop location for GPI's customers to gain access to important information on distribution services, rates, regulatory matters and decisions, customer initiatives, conservation and demand management programs. GPI's website also provides customers a mechanism by which to reach out for services and provides contact information. GPI is offering e-billing.

MyHydroEye Time-of-Use (TOU) Web Portal - The portal can provide quick and easy access to electricity consumption and cost information for customers of Grimsby Power. With MyHydroEye, customers can view their usage and costs at multiple levels of detail (e.g., hourly, daily, monthly, bill period) in a variety of graphical and

tabular formats. They can also view bill predictions and set up usage and cost alerts to help customers in monitoring and managing their electricity consumption. MyHydroEye integrates with Ontario's MDM/R system providing capability for consumers to view electricity consumption at a detailed level. Grimsby Power's MyHydroEye has extended the application to Smart phones such as BlackBerry® and iPhone, enabling customers to conveniently monitor and manage their energy consumption while on the go.

Access to Interval Meter Data – GPI offers a service (from an outside company) meter reading with hourly readings. The company has to log on a database to see their usage and can adjust the parameters to acquire the information needed.

Bill Inserts – GPI send bills inserts regularly to its customers with monthly invoices. This includes information on specific customer initiatives, energy savings coupons, safety messages, community involvement, eBilling contest information, distribution and cost of power rate information, and information regarding current CDM initiatives.

Conservation and Demand Management ("CDM") Programs – GPI remains diligent in promoting and engaging customers through its CDM programs through a variety of outreach efforts, including the placement of ads in municipal publications, marketing material displays in keys areas of all municipal and community outreach events. GPI has engaged Burman Energy Consultants Group to administer CDM programs for GPI customers.

REG INVESTMENT PRIORITIZATION METHOD & CRITERIA (5.4.2.E)

GPI has not included any REG investments in the current DS Plan.

SYSTEM CAPABILITY ASSESSMENT FOR RENEWABLE ENERGY GENERATION (5.4.3)

GPI has not identified the need for renewable generation enabling capital expansion expenditures, although its five-year capital expenditure program has planned renewable generation enabling expenditures for the development of an outage management system and various smart grid-related technological components. GPI is aware of the capacity of its feeders to accept generation and currently does not have any constraints. There are no other REG investments contemplated at this time.

GPI notes that it expects most of the growth in its service area will be along the QEW corridor, and the projected new load does not generate the need for any major expansion or reinforcement. GPI has performed a System analysis with the addition of a 6 Megawatt of load in areas of growth. This analysis concluded that voltage drop and conductor thermal loading was within limits, and therefore, no immediate investments were required.

RENEWABLE GENERATOR APPLICATIONS OVER 10KW (5.4.3.A)

As of September 2015, GPI has connected 2 FIT projects and these FIT projects represent a total of 350 kW of generation. GPI has connected 21 MiroFIT projects, totaling 179 kW of generation. The table below depicts the current REG connections:

Year	# FIT	# MicroFIT	Total Capacity FIT (kW)	Total Capacity MicroFIT (kW)
2014	1	4	250	26.0
2013	0	4	0	34.3
2012	1	2	100	19.3
2011	0	7	0	70.0
2010	0	4	0	29.3
2009	0	0	0	0.0
Total	2	21	350	178.9

Figure 33

ANTICIPATED NUMBER & CAPACITY OF REG CONNECTIONS (5.4.3.B)

GPI expects to continue to connect a half dozen microFIT projects annually, generally without issue. GPI does expect at least 2 larger FIT connections. The table below provides information about the planned REG connections.

Recent availability allows connection of FIT projects to the Niagara West Transformer Station, and as a result (as of August 22 2014) there has been more connection activity and interest in this process. GPI is forecasting an increase in connections between 2017 and 2020, based upon the current success of the FIT program.

Year	Number FIT	Number MicroFIT	Number of Other Generators	Total Capacity FIT (kW)	Total Capacity MicroFIT (kW)	Total Capacity of Other Generators (kW)
2015	0	5	2**	0	45*	130
2016	1	5	2***	1,000	45*	

2017	2	5	500****	45*
2018	2	5	500****	45*
2019	2	5	500****	45*
2020	2	5	500****	45*

Figure 34

** MicroFIT capacity is estimated to be 4 x 10kW + 1 X 5kW each year*

*** 2015 includes 2 gas turbines projects of 65kW each in total of 130 kW (not a renewable)*

**** 2016 FIT corresponds to 1 biogas generator of 1 MW (Grimsby Energy Inc.)*

***** 2017-2020 FIT capacity is estimated to be 2 x 250kW each year*

REG CONNECTION CAPACITY (MW) (5.4.3.C)

GPI has system capacity and will be able to accommodate the REG connections within the five-year planning period.

REG CONSTRAINTS (5.4.3.D)

There are no upstream constraints.

EMBEDDED DISTRIBUTOR CONSTRAINTS (5.4.3.E)

GPI has one embedded distributor, Niagara Peninsula Energy Inc. (NPEI), who has two 27.6kV circuits from the Niagara West Transformer Station. Currently there are no known or future constraints for NPEI.

MATERIAL INVESTMENTS (5.4.5.2)

DRIVERS BY INVESTMENT CATEGORY

System Access

The primary driver of this activity is customer service requests and mandated obligations under the Distribution System Code (DSC). This allows GPI to satisfy its asset management objective of providing for the needs of customers, as well as meeting regulatory requirements. This program is justified because of customer service requests that are relatively consistent year over year, in terms of both the number of requests, and the investments required to complete the connections.

System Renewal

This capital expenditure includes all "like for like" replacement costs related to renewal of major assets (poles, reclosers, switches, etc.) because of failure, serious damage or end of useful life. Major drivers in this category are risk of failure, substandard performance and functional obsolescence.

System Services

These projects will improve system reliability, automation and/or contingency performance. Examples of projects in this category are smart grid development, installation of electronic reclosers, OMS and completion of voltage conversion (8kV to 27.6kV)

General Plant

The vehicle replacements in this category are driven by GPI's evolving requirements for capital to support day-to-day business and operations activities. The timing of project-related expenditures has been determined based on adjustments related to asset condition and to end of useful life of the asset. Other investments in this category relate to IT enhancements to meet customer preferences.

SYSTEM RENEWAL MATERIAL INVESTMENTS (PROGRAM PRIORITIZATION)

SUSTAINMENT STRATEGIES AND RESULTS

Significant advancements in asset management tactics were implemented and described in Grimsby Power's Distribution Asset Management Plan filed in 2011. This DSP has continued on this path of improvement by adding additional data and analytics to its bottom-up program development. As well, GPI has introduced the concept of investment levels for each asset category that ties to predictable outcomes that provide flexibility in planning to address performance and input from customers.

For all major asset categories, GPI considers asset age, condition data and, specifically, the severity of identified defects for the various asset types, to develop adjusted ages that can be objectively compared to typical useful

lives (GPI utilizes the typical useful life of assets noted in the Kinectrics study[7]). As a result, for each major asset category, GPI is able to define levels of capital investment for renewal that tie to performance outcomes.

For this DSP four investment levels have been developed:

LEVEL 1 – represents the elimination of only high severity defects that pose safety, environmental, or imminent failure risk. This forms the minimum level of investment for each type of asset and may result in minor performance deterioration over time.

LEVEL 2 – addresses Level 1 needs, and also looks forward 5 years, where the adjusted age of assets would exceed the typical useful life. The result is an annual level of investment to replace EOL units maintaining the condition of the portfolio, and also sustains performance near current levels.

LEVEL 3 – is a higher level of investment that provides an opportunity for "catch-up" where assets already exceed end of life and also addresses Level 2 requirements. It provides for a catch-up over a 5-year period and would be expected to improve the performance of the portfolio, albeit at an increased cost, relative to other levels.

LEVEL 4 – is a longer-term smoothing approach comparable to Level 2 but looks out 10 years to provide a further opportunity for smoothing. The overall performance of the portfolio would be maintained over the longer-term; however, there may be variation year over year that may necessitate reprioritization during the plan. Ultimately, this should be accommodated within the overall system renewal capital levels.

Once asset levels by asset category are determined using this "bottom-up" approach, GPI then feeds these scenarios (of capital and related operations and maintenance expense) into a "top-down" investment strategy model geared to assess, at a high level, the impact on customer rates, financial viability and shareholder returns over the long term (ten plus years). The combination of these two approaches provides the required information to objectively balance asset needs and performance outcomes with customer rates and shareholder returns. This is a holistic approach to asset management, distribution system planning and investment strategy.

RESULTS:

To determine its future focus, GPI implemented the above approach and reviewed the assessment of customer preferences, as garnered through GPI's engagement activities. Further to these considerations, GPI has determined

[7] Kinectrics report is published as a part of OEB Revised Chapter 2 Appendices - version 2.1 from Aug 1-14 at Appendix 2-BB Service Life

that, in general, it is in a position to proceed with a longer-term view on asset replacement (Level 4). This determination to consider the longer-term view is influenced by:

- Examination of asset condition and demographic data - relatively new and in good condition
- Decision to focus capital toward improving:
    - Customer outage response and information
    - Smart grid and self-healing technologies.

The table, below, summarizes GPI's system renewal / asset sustainment capital programs, at the selected levels. The subsequent sections further describe investment levels for each asset category.

		Level		2015	2016	2017	2018	2019	2020
Wood Poles		4	Units	28	44	111	150	155	177
	Unit Cost	$1,500	Unit Cost w/Brdn	$ 1,683	$ 1,717	$ 1,751	$ 1,786	$ 1,822	$ 1,858
	Burden	$183	BYR* Adder w/Brdn	$ -	$ 49,985	$ 60,858	$ 89,639	$ 125,376	$ -
			Program Cost	$ 46,619	$ 126,068	$ 254,869	$ 356,791	$ 407,964	$ 329,416
Concrete Poles		4	Units	1	1	1	1	1	1
	Unit Cost	$2,000	Unit Cost w/Brdn	$ 2,244	$ 2,289	$ 2,335	$ 2,381	$ 2,429	$ 2,478
	Burden	$244.0	Program Cost	$ 2,468	$ 2,518	$ 2,568	$ 2,619	$ 2,672	$ 2,725
Pole Mounted Transformers		4	Units	1	1	1	1	1	1
	Unit Cost	$3,000	Unit Cost w/Brdn	$ 3,366	$ 3,433	$ 3,502	$ 3,572	$ 3,643	$ 3,716
	Burden	$366.0	Program Cost	$ 4,039	$ 4,120	$ 4,202	$ 4,286	$ 4,372	$ 4,460
Pad Mounted Transformers		4	Units	2	2	2	2	2	2
	Unit Cost	$6,000	Unit Cost w/Brdn	$ 6,000	$ 6,120	$ 6,242	$ 6,367	$ 6,495	$ 6,624
	Burden	$732.0	Program Cost	$ 10,800	$ 11,016	$ 11,236	$ 11,461	$ 11,690	$ 11,924
Meters		4	Units	229	229	229	229	229	229
	Unit Cost	$200	Unit Cost w/Brdn	$ 224	$ 229	$ 233	$ 238	$ 243	$ 248
	Burden	$24.40	Program Cost	$ 51,492	$ 52,522	$ 53,572	$ 54,644	$ 55,737	$ 56,851
Overhead Switches		2	Units	1	0	0	0	0	1
(direct from GPI)	Unit Cost	$28,000	Unit Cost w/Brdn	$ 31,416	$ 32,044	$ 32,685	$ 33,339	$ 34,006	$ 34,686
	Burden	$3,416.0	Program Cost	$ 31,416	$ -	$ -	$ -	$ -	$ 34,686
Padmount Switches		2	Units	0	0	1	0	0	0
(direct from GPI)	Unit Cost	$50,000	Unit Cost w/Brdn	$ 56,100	$ 57,222	$ 58,366	$ 59,534	$ 60,724	$ 61,939
	Burden	$6,100.0	Program Cost	$ -	$ -	$ 58,366	$ -	$ -	$ -
UG Cable		4	Units	734	1223	3058	3058	3181	3425
	Unit Cost	$125	Unit Cost w/Brdn	$ 140	$ 143	$ 146	$ 149	$ 152	$ 155
	Burden	$15.25	Program Cost	$ 102,947	$ 175,011	$ 446,277	$ 455,203	$ 482,879	$ 530,424

Figure 35

**BYR - are the poles identified as "Back Yard Replacements". The costs have been estimated separately, and added to the total cost, in order to avoid underestimating the investments required for the replacements of the assets.*

**Note: *Unit costs in the table above are derived using historical averages of direct costs, and then escalated year over year, based on an assumed 2% (reflecting CPI). In addition, a burden rate of 12.2% is added to adjust to the cost to include related corporate overheads and other allocations.*

WOOD POLES

RESULTS OF ASSET EVALUATION

Wood Poles, by far, have the largest number of assets within the distribution system. The age and condition of poles covers the full range of possibilities, from newly installed to below fifty (50) years of age. GPI's inspection and testing over the last few years has resulted in very few pole replacements. This indicates that the overall pole condition is good. A large number of wood poles have been replaced due to voltage conversion that is already in the works, to be completed during the current planning period. GPI has used a Typical Useful Life (TUL) of forty-five (45) years for poles. Fully 25.5% of GPI's wood poles are over 45 years old.

The table and graphic below provide information about the total wood pole count of 3640. The average pole age is 27 years, and 74.5% of the poles are under TUL.

Age	Number	%
Count	3642	
Average	27.1	
Median	22.0	
TUL	45	
>44	928	25.5%
<45	2714	74.5%
Maximum	82	
Minimum	0	

Figure 36

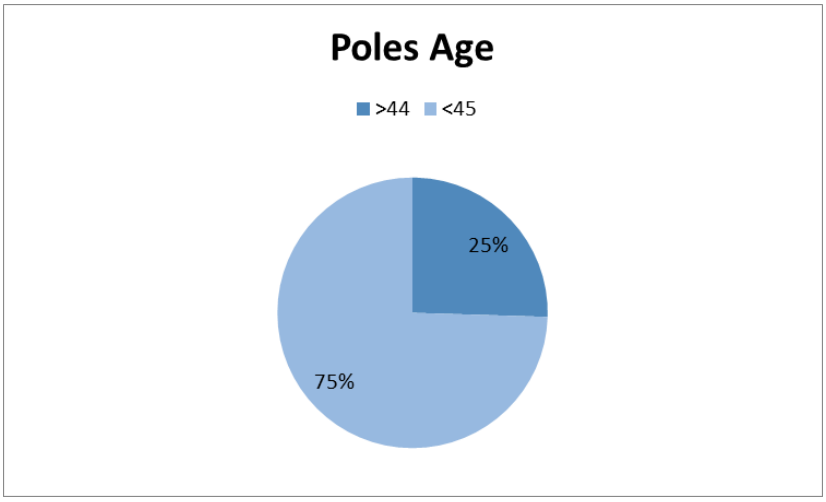


Figure 37

The table below provides information about the number of wood poles at different age categories based on pole age. 5.4% of the poles are approaching the TUL during the planning period and 25.5% are over the TUL. GPI is planning for their replacement.

	Age at % of TUL	Age Range	# of Poles in Range	Percentage of Poles in Range	Cumulative Percentage
> 0 & ≤ 25% of TUL	11.25	0 to 11	1103	30.3%	
> 25% & ≤ 50% of TUL	22.5	12 to 22	780	21.4%	51.7%
>50% & ≤ 75% of TUL	33.75	23 to 33	634	17.4%	69.1%
>75% & <100% of TUL	45	34 to 44	197	5.4%	74.5%
≥100% of TUL		45 or greater	928	25.5%	100.0%
Total # of Poles			3642		

Figure 38

The following graphic depicts the percentage of poles in each quarterly range of TUL (45 years).

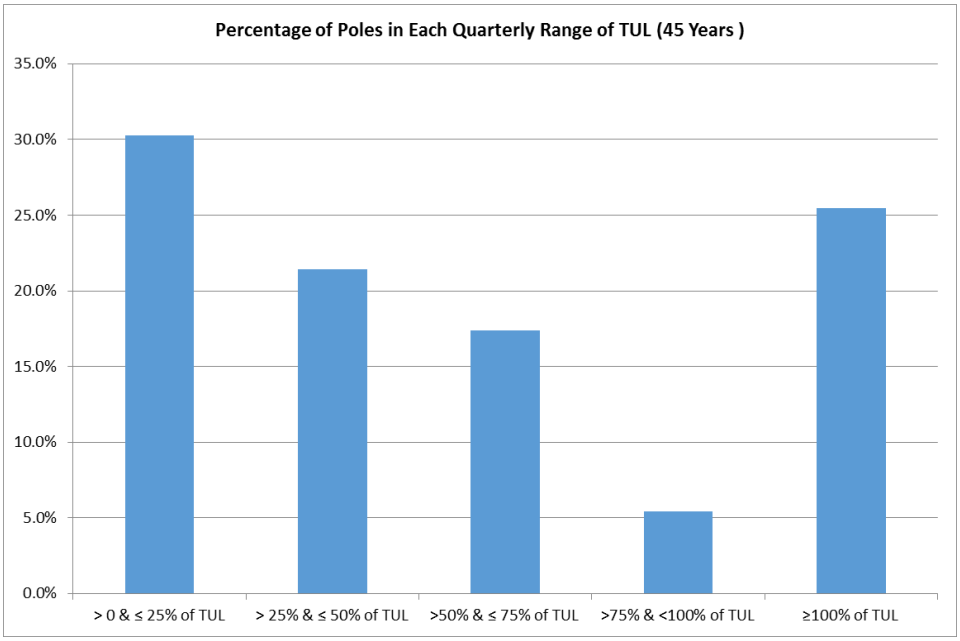


Figure 39

The replacements of "like-for-like" are planned based on pole age and condition criteria (to get an adjusted age and identify high severity defects). The projected pole replacements are planned based on the pole-adjusted age.

The table below illustrates GPIs adjusted age distribution of wood poles. From the data, it is apparent that GPI's wood poles are under forty five (45) years of age, and inspection indicates no high severity defects. GPI has completed around 14 000 inspections that resulted in **12** Sev 1 defects (require replacement within one week).

BIN	Total	Per Bin	%
<10	1061	1061	29%
<20	1680	619	17%
<30	2363	683	19%
<40	2577	214	6%
<50	3642	1065	29%
<60	3642	0	0%
<70	3642	0	0%
	3642		100%

Figure 40

BIN – Range of age for the assets in service (0 to 10, 10 to 20, 20 to 30, etc.)

Total – Cumulative number of assets

Per Bin - Number of assets within this range of age

% - Percentage of assets within this range of age

GPI'S WOOD POLES SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for wood poles. The method is described above.

GPI has selected investment Level 4 for wood poles, which provides for sustainment of performance levels over time.

Pole Expected Life	45	Kinectrics TUL			
Study Year	2014				
Average Age	27				
Average Adjusted Age	23				
Level	Total Identified	Years	Per Yr		
1	12	1	12	Minimum	Address Sev 1
2	1049	5	210	Sustain	Proactive EOL
3	1259	5	252	Improve	Catch Up (over 5 yrs)
4	1108	10	111	Optimize	Long Term Smooth

Figure 41

In addition to this analysis, GPI has identified locations where poles are located in the backyards of customers. These poles are typically at end of life, are difficult to access, and in some cases, pose a potential safety risk due to clearances. GPI is planning to address these locations over the planning period and an allocation has been added to this program to provide for and accommodate this effort, as identified as "BYR Adder" in the table below.

BUDGETS AND FORECAST

	Level			2015	2016	2017	2018	2019	2020
Wood Poles		4	Units	28	44	111	150	155	177
	Unit Cost	$1,500	Unit Cost w/Brdn	$ 1,683	$ 1,717	$ 1,751	$ 1,786	$ 1,822	$ 1,858
	Burden	$183	BYR* Adder w/Brdn	$ -	$ 49,985	$ 60,858	$ 89,639	$ 125,376	$ -
			Program Cost	$ 46,619	$ 126,068	$ 254,869	$ 356,791	$ 407,964	$ 329,416

Figure 42

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

CONCRETE POLES

RESULTS OF ASSET EVALUATION

Concrete Poles is a smaller group of assets within the distribution system. Fully 100 % of GPI's concrete poles are under fifty five (55) years of age. GPI has used a Typical Useful Life (TUL) of fifty five (55) years for concrete poles.

The table below provides information about the total number of concrete poles (68). The average pole age is 30.8 years.

Age		
Count	68	
Average	30.8	
Median	30.8	
TUL	55	
>54	0	0.0%
<55	68	100.0%
Maximum	54	
Minimum	7	

Figure 43

The table below provides information about the number of concrete poles at different age categories based on pole age. Note that 26.47% of the poles are approaching the TUL during the planning period, and GPI is planning for their replacement.

	Age at % of TUL	Age Range	# of Poles in Range	Percentage of Concrete Poles in Range	Cumulative Percentage
> 0 & ≤ 25% of TUL	13.75	0 to 13	2	2.94%	
> 25% & ≤ 50% of TUL	27.5	14 to 27	15	22.06%	25.0%
>50% & ≤ 75% of TUL	41.25	28 to 41	33	48.53%	73.5%
>75% & <100% of TUL	55	42 to 54	18	26.47%	100.0%
≥100% of TUL		55 or greater	0	0.00%	100.0%
Total # of Poles			68	100.00%	

Figure 44

The following graphic depicts the percentage of concrete poles in each quarterly range of TUL (55 years).

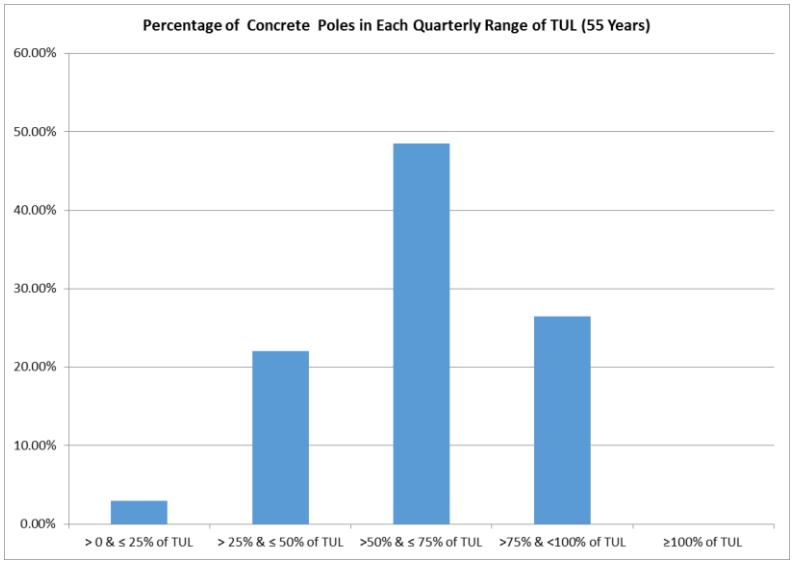


Figure 45

The replacements of "like-for-like" assets are planned based on pole age and condition criteria (to get an adjusted age and identify high severity defects). The projected pole replacements are planned based on the pole-adjusted age.

The table below illustrates GPIs adjusted age distribution of concrete poles. From the data, it is apparent that 97% of GPI's concrete poles are under fifty (50) years of age, and inspection indicates no high severity defects. Also 100% of the concrete poles are under fifty five (55) years of age.

BIN	Total	Per Bin	%
<10	2	2	3%
<20	17	15	22%
<30	17	0	0%
<40	46	29	43%
<50	66	20	29%
<60	68	2	3%
<70	68	0	0%
	68		100%

Figure 46

GPI'S CONCRETE POLES SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for concrete poles. The method is described above. GPI has selected Level 4 for concrete poles, which provides for sustainment of performance levels over time.

Pole Expected Life	**55**	Kinectrics TUL			
Study Year	2014				
Average Age	**31**				
Average Adjusted Age	**31**				
Level	Total Identified	Years	Per Yr		
1	0	1	0	Minimum	Address Sev 1
2	2	5	0	Sustain	Proactive EOL
3	2	5	0	Improve	Catch Up (over 5 yrs)
4	11	10	1	Optimize	Long Term Smooth

Figure 47

BUDGETS AND FORECAST

	Level			2015	2016	2017	2018	2019	2020
Concrete Poles		4	Units	1	1	1	1	1	1
	Unit Cost	**$2,000**	Unit Cost w/Brdn	$ 2,244	$ 2,289	$ 2,335	$ 2,381	$ 2,429	$ 2,478
	Burden	**$244.0**	Program Cost	$ 2,468	$ 2,518	$ 2,568	$ 2,619	$ 2,672	$ 2,725

Figure 48

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

POLE-MOUNTED TRANSFORMERS

RESULTS OF ASSET EVALUATION

Pole-Mounted Transformers, as a whole, constitutes a very large asset base. GPI has used a Typical Useful Life (TUL) of forty (40) years for Pole-Mounted Transformers. The table below provides information about the total pole-mounted transformers count (813). The average pole-mounted transformer age is 13.9 years, and 0.4% of the pole-mounted transformers are under TUL.

Age		
Count	813	
Average	13.9	
Median	15.0	
TUL	40	
>39	3	0.4%
<40	810	99.6%
Maximum	53	
Minimum	0	

Figure 49

The table below provides information about the number of pole-mounted transformers at different age categories. Note that 0.74% of pole-mounted transformers are approaching the TUL during the planning period and 0.37% are over the TUL. GPI is planning for their replacement.

	Age at % of TUL	Age Range	# of Transformers in Range	Percentage of Transformers in Range	Cumulative Percentage
> 0 & ≤ 25% of TUL	10	0 to 10	316	38.87%	
> 25% & ≤ 50% of TUL	20	11 to 20	298	36.65%	75.5%
>50% & ≤ 75% of TUL	30	21 to 30	190	23.37%	98.9%
>75% & <100% of TUL	40	31 to 39	6	0.74%	99.6%
≥100% of TUL		40 or greater	3	0.37%	100.0%
Total # of Poles			813	100.00%	

Figure 50

The graphic below shows the percentage of pole-mounted transformers in each quarterly range of TUL (40 years).

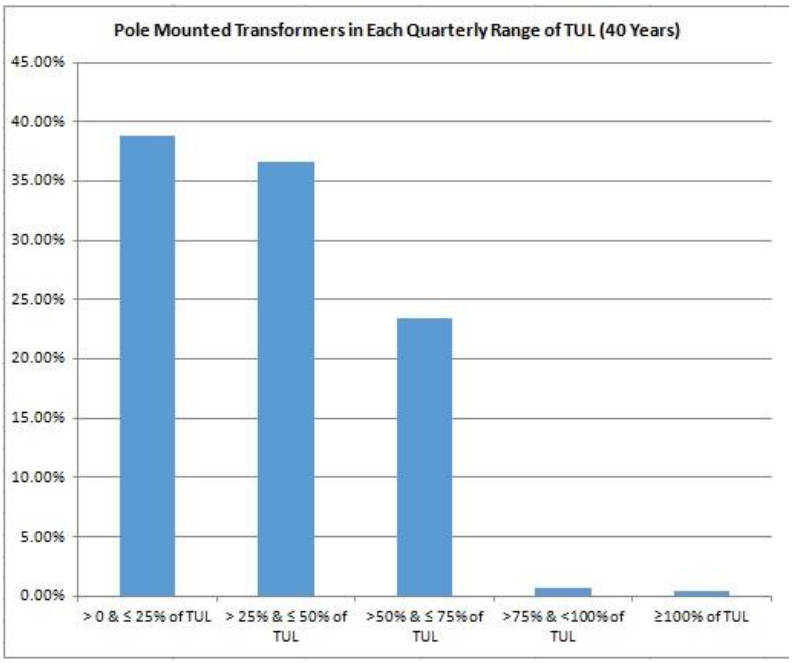


Figure 51

GPI is planning for pole-mounted transformers replacements based on transformer age and condition criteria (to get an adjusted age and identify high severity defects). The projected transformer replacements are planned based on the transformer-adjusted age.

The table below illustrates GPIs adjusted age distribution of pole-mounted transformers. The data indicates that these transformers are relatively new (majority under 30 years old), and inspection indicates no high severity defects.

BIN	Total	Per Bin	%
<10	285	285	35%
<20	569	284	35%
<30	799	230	28%
<40	807	8	1%
<50	813	6	1%
<60	813	0	0%
<70	813	0	0%
	813		100%

Figure 52

GPI'S POLE MOUNTED TRANSFORMERS SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for pole-mounted transformers. The method is described above.

GPI has selected Level 4 for pole-mounted transformers, which provides for sustainment of performance levels over time.

Trf Expected Life	**40**	Kinectrics TUL			
Study Year	2014				
Average Age	**14**				
Average Adjusted Age	**14**				
Level	Total Identified	Years	Per Yr		
1	0	1	0	Minimum	Address Sev 1
2	8	5	2	Sustain	Proactive EOL
3	10	5	2	Improve	Catch Up (over 5 yrs)
4	12	10	1	Optimize	Long Term Smooth

Figure 53

BUDGETS AND FORECAST

Level				2015	2016	2017	2018	2019	2020
Pole Mounted Transformers		4	Units	1	1	1	1	1	1
	Unit Cost	$3,000	Unit Cost w/Brdn	$ 3,366	$ 3,433	$ 3,502	$ 3,572	$ 3,643	$ 3,716
	Burden	$366.0	Program Cost	$ 4,039	$ 4,120	$ 4,202	$ 4,286	$ 4,372	$ 4,460

Figure 54

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

PAD-MOUNTED TRANSFORMERS

RESULTS OF ASSET EVALUATION

Single Phase Pad-Mounted Transformers, as a whole, constitutes a large asset base. GPI has used a Typical Useful Life (TUL) of forty (40) years for Pad-Mounted Transformers. The table below provides information about the total count of pad-mounted transformers (682). The average age is 12.8 years, and 99.7% of the pad-mounted transformers are under TUL.

Age		
Count	682	
Average	12.8	
Median	11.0	
TUL	40	
>39	2	0.3%
<40	680	99.7%
Maximum	114	
Minimum	0	

Figure 55

The table below provides information about the number of pad-mounted transformers at different age categories based. 1.91% of the transformers are approaching the TUL during the planning period, and 0.29% i over the TUL. GPI is planning for their replacement.

	Age at % of TUL	Age Range	# of Transformers in Range	Percentage of Transformers in Range	Cumulative Percentage
> 0 & ≤ 25% of TUL	10	0 to 10	298	43.70%	
> 25% & ≤ 50% of TUL	20	11 to 20	231	33.87%	77.6%
>50% & ≤ 75% of TUL	30	21 to 30	138	20.23%	97.8%
>75% & <100% of TUL	40	31 to 39	13	1.91%	99.7%
≥100% of TUL		40 or greater	2	0.29%	100.0%
Total # of Poles			682	100.00%	

Figure 56

The graphic below shows the percentage of pad-mounted transformers in each quarterly range of TUL (40 years).

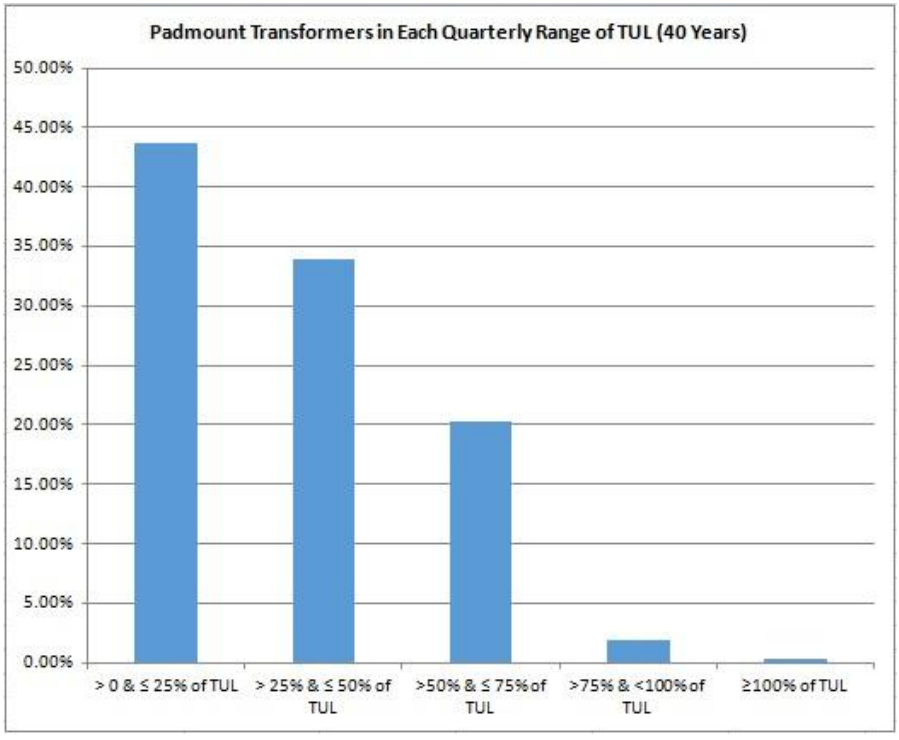


Figure 57

GPI is planning for pad-mounted transformer replacements based on transformer age and condition criteria (to get an adjusted age and identify high severity defects). The projected transformer replacements are planned based on the transformer-adjusted age.

The table below illustrates GPIs adjusted age distribution of pad-mounted transformers. The data indicates that these transformers are relatively new (majority under 30 years old), and inspection indicates no high severity defects.

BIN	Total	Per Bin	%
<10	271	271	40%
<20	510	239	35%
<30	663	153	22%
<40	676	13	2%
<50	682	6	1%
<60	682	0	0%
<70	682	0	0%
	682		100%

Figure 58

GPI'S PAD-MOUNTED TRANSFORMERS SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for pad-mounted transformers. The method is described above.

GPI has selected Level 4 for pad-mounted transformers, which provides for sustainment of performance levels over time.

Trf Expected Life	**40**	Kinectrics TUL			
Study Year	2014				
Average Age	**13**				
Average Adjusted Age	**13**				
Level	Total Identified	Years	Per Yr		
1	0	1	0	Minimum	Address Sev 1
2	14	5	3	Sustain	Proactive EOL
3	17	5	3	Improve	Catch Up (over 5 yrs)
4	18	10	2	Optimize	Long Term Smooth

Figure 59

BUDGETS AND FORECAST

		Level		2015	2016	2017	2018	2019	2020
Pad Mounted Transformers		4	Units	2	2	2	2	2	2
	Unit Cost	$6,000	Unit Cost w/Brdn	$ 6,000	$ 6,120	$ 6,242	$ 6,367	$ 6,495	$ 6,624
	Burden	$732.0	Program Cost	$ 10,800	$ 11,016	$ 11,236	$ 11,461	$ 11,690	$ 11,924

Figure 60

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

METERS

RESULTS OF ASSET EVALUATION

There are 10,995 meters within the distribution system. GPI has used a Typical Useful Life (TUL) of fifteen (15) years for meters. Meter age range is from newly installed to below ten (10) years of age. GPI has complied with Ministry of Energy's directive[8] from 2004 and has provided smart meters to all its residential and GS<50kW customers. GPI has upgraded all of its meters. The bulk replacement of these meters took place in 2010.

The table below provides information about the average meter age of 3.5 years. Fully 100 % of the meters are under TUL.

[8] OEB Smart Metering Initiative

Age		
Count	10995	
Average	3.5	
Median	4.0	
TUL	15	
>14	0	0.0%
<15	10995	100.0%
Maximum	5	
Minimum	0	

Figure 61

The table below provides information about the number of meters at different age categories.

	Age at % of TUL	Age Range	# of Meters in Range	Percentage of Meters in Range	Cumulative Percentage
> 0 & ≤ 25% of TUL	3.75	0 to 3	1915	17.42%	
> 25% & ≤ 50% of TUL	7.5	4 to 7	9080	82.58%	100.0%
>50% & ≤ 75% of TUL	11.25	78to 11	0	0.00%	100.0%
>75% & <100% of TUL	15	12 to 15	0	0.00%	100.0%
≥100% of TUL		15 or greater	0	0.00%	100.0%
Total # of Poles			10995	100.00%	

Figure 62

The graphic below shows the percentage of meters in each quarterly range of TUL (15 years).

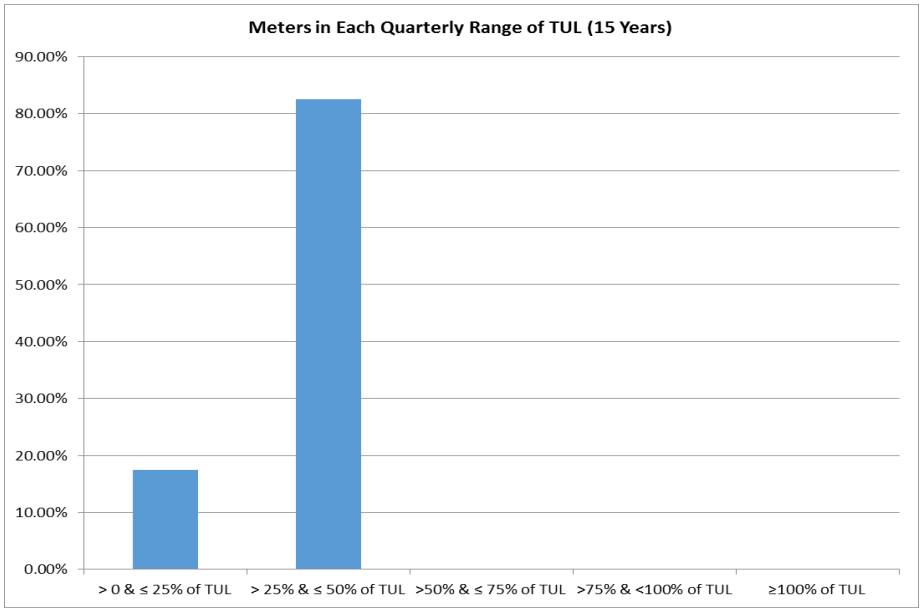


Figure 63

GPI is currently in the process of upgrading its entire base of commercial (over 50 kW) meters. This explains the relative young age distribution of this asset group. GPI has used a Typical Useful Life (TUL) of fifteen (15) years for meters. The replacements are planned, based on meter age and condition criteria as well as current meter failure rate experience to predict future needs. The meter replacements are planned based on the meter-adjusted age. The table below shows the meter failure rate from 2010 to 2014. The complete meter failure rates data are included in Appendix M.

	Count of Removals	Count of Meters	Fail Rate
2010	14	10,231.00	0.137%
2011	17	10,388.00	0.164%
2012	11	10,565.00	0.104%
2013	3	10,668.00	0.028%
2014	0	11,112.00	0.000%
Average			0.087%

Figure 64

In addition, GPI is in the process of initiating a meter-sampling program to meet Measurement Canada protocols where meters have been bundled into sample groups for re-verification testing. An allotment to accommodate this testing is included below; however, GPI cannot predict the results, and therefore, has not included any replacement level assumptions at this time. Further, at present, the meter provider of GPI's smart meters has not been approved for an extended 10-year seal period. The request for extension is in queue with Measurement Canada, but the outcome is unknown at this time. These items pose a potential risk to the plan.

The table below illustrates GPIs adjusted age distribution of meters.

BIN	Total	Per Bin	%
<10	10995	10995	100%
<20	10995	0	0%
<30	10995	0	0%
<40	10995	0	0%
<50	10995	0	0%
<60	10995	0	0%
<70	10995	0	0%
	10995		100%

Figure 65

GPI'S METERS SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for meters. The method is described above.

GPI has selected Level 4 for meters, which provides for sustainment of performance levels over time.

Expected Life	15	Kinectrics TUL				
Study Year	2014					
Average Age	3.5					
Average Adjusted Age	3.5					
Level	Total Identified	Years	Per Yr	FR / MC SR		
1	0	1	0		Minimum	Address Known Sev 1
2	0	5	10	0.087%	Sustain	Sev 1, EOL, Fail Rate (FR)
3	0	5	19	0.174%	Sustain	Sev 1, EOL, Fail Rate (FR)
4	0	10	229	2.000%	Optimize	LT EOL Smooth + L2 FR + MC Sampling

Figure 66

BUDGETS AND FORECAST

	Level			2015	2016	2017	2018	2019	2020
Meters		4	Units	229	229	229	229	229	229
	Unit Cost	$200	Unit Cost w/Brdn	$ 224	$ 229	$ 233	$ 238	$ 243	$ 248
	Burden	$24.40	Program Cost	$ 51,492	$ 52,522	$ 53,572	$ 54,644	$ 55,737	$ 56,851

Figure 67

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

OVERHEAD SWITCHES

RESULTS OF ASSET EVALUATION

Overhead Switches are a group of 62 assets within the distribution system. The average age of the Overhead Switches is 24 years. GPI has used a Typical Useful Life (TUL) of forty five (45) years for Overhead Switches. The replacements are planned based on asset age and condition criteria (to get an adjusted age and identify high severity defects). The Overhead Switch replacements are planned based on the switch-adjusted age.

The table below illustrates that the number of switches reaching end of life over the plan period (installed prior to 1974) is 2, and over a 10 year period (installed before 1979) is 3. GPI is planning to change out the 2 switches reaching end of life before the end of 2020.

Average Age	24	
Count	62	
	Yr	Sum
5 year Cut	1974	2
10 year cut	1979	3

Figure 68

GPI'S OVERHEAD SWITCHES SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for overhead switches. The method is described above. GPI has selected Level 4 for overhead switches, which provides for sustainment of performance levels over time.

Trf Expected Life	**45**	Kinectrics TUL			
Study Year	2014				
Average Age	**24**				
Average Adjusted Age	**24**				
Level	Total Identified	Years	Per Yr		
1	0	1	0.0	Minimum	Address Sev 1
2	2	5	0.4	Sustain	Proactive EOL
3	2	5	0.4	Improve	Catch Up (over 5 yrs)
4	3	10	0.3	Optimize	Long Term Smooth

Figure 69

BUDGETS AND FORECAST

		Level		2015	2016	2017	2018	2019	2020
Overhead Switches		2	Units	1	0	0	0	0	1
(direct from GPI)	Unit Cost	**$28,000**	Unit Cost w/Brdn	$ 31,416	$ 32,044	$ 32,685	$ 33,339	$ 34,006	$ 34,686
	Burden	**$3,416.0**	Program Cost	$ 31,416	$ -	$ -	$ -	$ -	$ 34,686

Figure 70

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

PAD-MOUNTED SWITCHES

RESULTS OF ASSET EVALUATION

Pad-mounted Switches are a group of 11 assets within the distribution system. The average age of the Pad-mounted Switches is 15 years. GPI has used a Typical Useful Life (TUL) of thirty (30) years for Pad-mounted Switches. The replacements are planned based on asset age and condition criteria (to get an adjusted age and identify high severity defects). The Pad-mounted Switch replacements are planned based on the switch-adjusted age.

The table below illustrates that the number of switches reaching end of life over the plan period (installed prior to 1989) is 1, and over a 10 year period (installed before 1994) is 4. GPI is planning to change out the 1 pad-mount switchgear reaching end of life, before the end of 2020.

Average Age	15	
Count	11	
	Yr	**Sum**
5 year Cut	1989	1
10 year cut	1994	4

Figure 71

GPI'S PAD-MOUNT SWITCHES SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for pad-mounted switches. The method is described above. GPI has selected Level 4 for pad-mounted switches, which provides for sustainment of performance levels over time.

Trf Expected Life	30	Kinectrics TUL			
Study Year	2014				
Average Age	15				
Average Adjusted Age	15				
Level	Total Identified	Years	Per Yr		
1	0	1	0.0	Minimum	Address Sev 1
2	1	5	0.2	Sustain	Proactive EOL
3	1	5	0.2	Improve	Catch Up (over 5 yrs)
4	4	10	0.4	Optimize	Long Term Smooth

Figure 72

BUDGETS AND FORECAST

Level				2015	2016	2017	2018	2019	2020
Padmount Switches		2	Units	0	0	1	0	0	0
(direct from GPI)	Unit Cost	$50,000	Unit Cost w/Brdn	$ 56,100	$ 57,222	$ 58,366	$ 59,534	$ 60,724	$ 61,939
	Burden	$6,100.0	Program Cost	$ -	$ -	$ 58,366	$ -	$ -	$ -

Figure 73

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

CROSS-LINKED POLYETHYLENE (XLPE) UNDERGROUND CABLES

RESULTS OF ASSET EVALUATION

Underground (UG) cables are installed in mostly residential subdivisions. Small portions of cable serve as distribution feeder cable from GPI's overhead distribution system where necessary. The condition of these cables is generally good (no high severity defects have been identified). GPI has used a Typical Useful Life (TUL) of thirty (30) years for underground cables. Adjusted cable age is calculated, based on risk factors. Cable injection projects have reduced the risks of failure and have added to the cable useful life (currently assumed at an additional 20 years). GPI performs, and will continue to perform, approximately 2500 meters per year of cable segment rejuvenation by injecting cables with CableCURE XL fluid (known in the industry as Silicon Injection). The cable rejuvenation should extend cable life of the remaining sections.

The cable rejuvenation was considered during the planning process and when calculating the adjusted cable age for replacement forecasts. Based on the asset condition assessment for optimal program performance, GPI is planning

to replace 2.45 km of underground cable length per year during the five year planning period. This quantity of 2.45 km of underground cable is leveled with other capital investments. The table below, figure 73, illustrates GPIs adjusted age distribution of UG Cables.

Similar to wood poles, cables are also one of the largest investment categories, and have been used to moderate annual large changes in capital spending primarily tied to one-off projects that are predominant in the early part of the DSP. As a result the table below also shows an increasing level of cables being replaced over the plan period, but the average does tie to Level 4 or 2447 meters of cable replaced per year. It is expected this level of expenditure will remain the same after the initial DSP as well.

BIN	Total	Per Bin	%
<10	16	16	24%
<20	40	24	36%
<30	57	17	25%
<40	67	10	15%
<50	67	0	0%
<60	67	0	0%
<70	67	0	0%
	67		100%

Figure 74

GPI'S UNDERGROUND CABLES SUSTAINMENT LEVELS

The following table provides the potential level (units) of investment for underground cable. The method is described above. GPI has selected Level 4 for underground cable, which provides for sustainment of performance levels over time.

Cable Expected Life	**30**	Per report IFRS - Useful Lives - Final Determination			
Study Year	2014				
Average Age	**18**				
Average Adjusted Age	**17**				
Level	Total Identified	Years	M. Per Yr		
1	0	1	0	Minimum	Address Sev 1
2	18273	5	3655	Sustain	Proactive EOL
3	21927	5	4385	Improve	Catch Up (over 5 yrs)
4	24468	10	2447	Optimize	Long Term Smooth

Figure 75

BUDGETS AND FORECAST

	Level			2015	2016	2017	2018	2019	2020
UG Cable	4	Units		734	1223	3058	3058	3181	3425
Unit Cost	$125	Unit Cost w/Brdn	$	140	$ 143	$ 146	$ 149	$ 152	$ 155
Burden	$15.25	Program Cost	$	102,947	$ 175,011	$ 446,277	$ 455,203	$ 482,879	$ 530,424

Figure 76

- Replacements under a reactive approach are part of the Operations and Maintenance budget.
- Replacements under a preplanned approach are part of the Capital Budget.

STATION TRANSFORMERS

CONDITION ASSESSMENT

Niagara West Transformer Station (NWTS) (or sometimes referred to as Niagara West MTS by Hydro One now owned by GPI) is a Dual Element Spot Network (DESN) transformer station comprised of two 40/53.2/66.4, (ONAN/ONAF/ONAF) MVA transformers. It is a typical design utilized by Hydro One elsewhere in the province and was built to Hydro One's technical standards and specifications. NWTS is connected to two 230kV circuits from Hydro One's transmission system the Q23BM and Q25BM. The station is located at 3021 Regional Road # 12 in the Town of West Lincoln. The station supplies 4 - 27.6kV circuits to two local distribution companies (LDCs), Grimsby Power Inc. (GPI) and Niagara Peninsula Energy Inc. (NPEI). Each LDC has two distribution circuits; the station, commissioned in 2004, is located in NPEI's service territory. GPI has taken ownership of this asset Oct 1, 2015.

Technical elements of the NWTS are as follows:

- 2 – 245kV 2000Amp - CGVB Alstom Disconnect Switches
- 2 Sets of 245kV Type N6H-900 - Trench Metering Transformers
- 2 – 215.5 – 27.6kV 40/53.2/66.4 MVA (ONAN/OFAF/OFAF) Wye – ZigZag - Pauwels Power Transformer
- 2 Sets of - S&C Station Service Switchgear
- 2 – 28kV/120/208V 150kVA - ASEA Brown Boveri Pad Mounted Station Service Transformers
- A 12 cell 27.6/16kV 2000Amp 3 Phase 16kA - Alstom/ARIVA/Schneider-Electric SF6 Gas Insulated Switchgear Line-up
- 1 Set of Current Limiting Reactors – 27.6kV 17kA 1.5Ohm by Alstom
- The switchgear and associated equipment is housed in a heated metal-clad building

GPI manages the operation of the station through a number of key third party service providers. The Controlling Authority for the station is contracted to Hydro One. The station is controlled remotely via Hydro One's Ontario Grid Control Centre (OGCC) in Barrie. Local operation, weekly and monthly inspection, and emergency response is contracted to Rondar Inc.. Rondar is a Hamilton-based electrical service provider of high voltage management,

power on services, commissioning & acceptance testing, engineering, and thermography services to commercial, industrial, institutional, and government markets. Annual maintenance for the station is contracted to Rondar. Rondar is currently executing a five-year maintenance plan, which began in 2014 and extends through to the end of 2018. The station security is locally monitored by Ontario Security Systems, a Grimsby-based business.

The amalgamation on Oct 1 2015 of NWTC will permit GPI to provide a more efficient and cost-effective operation of the assets, and will avoid the additional costs associated with a duplicate administrative structure and another layer of (transmitter-related) regulatory compliance. The amalgamation will result in anticipated annual savings of approximately $35,000.

Since 2004, there have been no material capital investments in the station equipment because all of the equipment is relatively new. The scope of work will be provided by Rondar and will help to ensure that the station maintains its reliable operation; this scope is as described in Appendix G

The latest maintenance report (Appendix G) for the station dated November 11, 2014 as prepared by Rondar, indicates that the "electrical equipment was found to be in satisfactory condition for continued service" with only minor non-material exceptions. Rondar also performs weekly and monthly inspections, designed to identify any emergent issues. There are no material outstanding issues resulting from these inspections.

GPI SUSTAINMENT STRATEGY

GPI's sustainment strategy is predicated on the following factors:

- Typical Useful Life (TUL) for power transformers is 45 years.
- The "electrical equipment was found to be in satisfactory condition for continued service" with only minor non-material exceptions.
- Rondar will continue to perform weekly and monthly inspections, designed to identify any emergent issues.
- Maintaining stations over the long-term.
- Station transformers have adequate capacity to back each other up in case of failure.
- Inspection and testing of station transformers oil is a very good predictor of when a transformer is reaching the end of its life. Regular inspection and testing allow time to make decisions about capital investment based on a proactive approach.

BUDGETS AND FORECAST

The impact of the above strategy on GPI's budget and or forecast is as follows:

- There are no replacements scheduled for station transformers

TOTAL CAPITAL COST FOR SYSTEM RENEWAL

The asset replacement cost for the period from 2015 to 2020 amounts to total of $4.2M over the DSP period.

	2015	2016	2017	2018	2019	2020
System Renewal (Programs)	$ 249,782	$ 371,254	$ 831,091	$ 885,004	$ 965,313	$ 970,486

Figure 77

SYSTEM SERVICE AND GENERAL PLANT MATERIAL INVESTMENTS

PROJECT PRIORITIZATION

General information concerning planned capital projects is provided in Appendix J. Each project activity includes a description, general project information and project drivers. A 'Do nothing alternative' has been considered through the project definition and for each capital investment over the materiality threshold of $50,000. Additionally, strong considerations have been given to the risk associated with the corresponding alternatives. The projects were identified with attributes and project elements, i.e. main driver, planned start date, planned in-service date and expenditure timing over the planning horizon. Project elements have been standardized in order to facilitate the comparison based on pre-selected criteria fulfilling OEB evaluation requirements.

The prioritization metrics (Appendix I) are based on a combined score in 3 areas: Strategic Fit, System Needs, and Feasibility. The ranking criteria form the total project score through a preselected weighting scale. Each project is scored in the scale from 1 to 5.

- The ranking criteria "Alignment with Goals and Objectives" evaluate the degree of alignment, of the project, to corporate goals and objectives (mission and values).
- The ranking criteria "Customer Focus" evaluates how the project is positioned in relation to customer preferences (customer survey).
- The ranking criteria "Public Policy Responsiveness" evaluates if the project aligns with REG, CDM, and GEA requirements.
- The ranking criteria "Criticality'' evaluates if the project or action addresses assets critical to the business and critical to customer satisfaction.

- The ranking criteria "Asset Health (Age/Condition)"evaluates the assets expected useful life for the project.
- The ranking criteria "H&S, Environmental" evaluates if there are health, safety and environmental risks.
- The ranking criteria "Cost Benefit" evaluates the project cost benefits.
- The ranking criteria "Operational and Technology Risk" evaluates if the project will address operational or technology risks and issues.
- The ranking criteria "Resources – People" rates the availability of required skills & other resources to execute the project.

Visual representation of the project prioritization scoring for all projects is included in the bubble chart in Appendix I. The Chart presents GPI's top priorities as a vehicle replacement and the completion of voltage conversion.

The table below provides a material investment summary based on Capital projects from 2015 to 2020 in System Service and the General Plant Category.

Projects		2015	2016	2017	2018	2019	2020
Escalation	2%	1.0200	1.0404	1.0612	1.0824	1.1041	1.1262
Burden	12.2%	1.14444	1.16733	1.19068	1.21449	1.23878	1.26355
	System Service (Projects)						
	Bal Harbour	$72,192					
	CNR 18M4 Feeder	$85,833	$116,733	$119,068	$121,449	$123,878	$126,355
	Park Road	$79,453					
	Horizon Feeder	$114,444					
	Reclosures	$91,555	$116,733	$119,068	$121,449	$123,878	$126,355
	OMS		$116,733				
	Other	$5,795	$58,366	$59,534	$60,724	$61,939	$63,178
	50 KW Meter Replacement	$40,628					
	Upgrade Wholesale ITS on 18M3	$38,969					
	Convert Delta to Wye	$11,789					
	PVI Replacement	$53,095					
	&50KVA Spare	$34,333					
	NWTS		$15,000	$15,000	$15,000	$15,000	$15,000
	General Plant						
	Fleet		$408,565	$83,347	$48,580	$49,551	$50,542
	Tools	$123,600					
	Misc GP Improvements	$214,079	$116,733	$119,068	$121,449	$123,878	$126,355

Figure 78

SYSTEM SERVICE CAPITAL PROJECTS

BAL HARBOUR 2014/15

A. GENERAL INFORMATION ON THE PROJECT

This project will eliminate a ground mounted three-phase step-down transformer, and increase the voltage from 8KV to 27.6KV. This project is part of a large voltage conversion project targeting improvement of system reliability and loss reduction. A total of 13 of the 16 pad mounts have been replaced, and cleanup was completed April 2015. The original system was installed in 1977, and some of the assets are approaching end of useful life. There have been few outages and the system is due for replacement based on condition assessment of the cables. The inspection of the cable has raised safety concerns related to the small size of the vaults and the transformers.

The project scope includes replacement and renewal of the current assets with an upgrade to transformers to accommodate increased power demands. Current records indicate that this project required 13 scheduled outages in the subdivision lasting about 5 hours each time. The final planned outage is expected to complete the 27.6 kV conversions with the replacement of the ground mounted three-phase step-down transformer. The scheduled 2-hour outage has been communicated to 184 residential customers via advanced notice. The operations of Region of Niagara Water Commission will be also affected by the outages, during this construction. GPI has completed advanced planning, communication and coordination of this project with the municipal operations team, and is expecting to avoid any municipal service interruptions via the use internal generator.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

   This voltage conversion project will result in increased reliability, reduced number of unscheduled outages, reduced number of trouble calls and transformer upgrades/replacements.

2. SAFETY

   There are safety concerns related to the poor condition of the cables and the small size of the vaults.

3. CYBER-SECURITY, PRIVACY

   N/A

4. CO-ORDINATION, INTEROPERABILITY

GPI coordinates designs and upgrades with various third parties, as required, in the review and approval process. This may include any combination of municipal operations, road authorities, planning bodies and government ministries. This process ensures coordinated planning with third parties in relation to road activities, other utilities and regulatory requirements. GPI is always invited to development meetings with the town Planning Department, Niagara Region, Fire Department etc. To ensure that all facets of safety and utilities are working together to ensure that all designs and builds are built according to USF and our standards.

5. ECONOMIC DEVELOPMENT

Project work will be completed using GPI employees and contractors. GPI is optimizing each transformer, to ensure that the future needs are met. GPI plans industrial parks and residential areas with expansion in mind in order to ensure that the capacity for extra services will be installed initially. GPI is currently expanding along the northern border (Lake Ontario) and with each new construction we ensure that we plan for the next development and we also run studies within our LDC's borders to ensure that we have adequate capacity.

6. ENVIRONMENTAL BENEFITS

GPI builds efficiencies into the construction process by incorporating additional related work to take advantage where possible of optimal utilization of heavy equipment to the area. Reduced utilization and set-up of this equipment minimizes emissions and potential environmental impact. GPI understands when it has to perform maintenance or installations in environmentally sensitive areas and that we have to take precautions when doing so. GPI ensures that only the equipment and people that need to be on site are and that we minimize the footprint. GPI has minimized the impact by boring under driveways and around trees as needed within the subdivision and splitting the crew's time between lunches and breaks in order to complete the installations in the least amount of time possible.

C. CATEGORY SPECIFIC REQUIREMENTS

GPI aims to provide safe, reliable, and high-quality service to its customers. Voltage conversion and replacement of old assets involves assets that have a high risk of failure and/or high performance risk. As a result of the high risks associated with assets, these replacements are considered a priority, and the do-nothing option is not a reasonable alternative. Replacement with transformers upgrade resolves safety concerns with undersized vaults.

18M4 CNR FEEDER

A. GENERAL INFORMATION ON THE PROJECT

The project scope is a rebuild of the 18M4 feeder, which is fed from the Beamsville TS. This circuit runs along a railroad right-of–way, which stretches across GPI's entire service territory from the east to west. The circuit was constructed in 1949, and some poles have already been replaced due to damage. The total number of poles to be replaced is 165. This is GPI's oldest existing line in the distribution system. There have been outages over the years due to broken poles, which have been replaced on a run-to-fail basis. The line will be heightened, and the conductor will also be upgraded upon rebuild. The primary driver of this project is the planned increased reliability, from replacement of end of life assets combined with the new standard system upgrades.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

   Overall asset condition indicates that short-term failure is likely, and the safety, environmental, reliability, and/or cost impacts of unplanned failure are considered unacceptable. System upgrades will lead to loss reduction and increased customer value. GPI customers require reliable and consistent service.

2. SAFETY

   There are safety concerns due to equipment deterioration and asset age. All design and construction work is completed in accordance with the requirements of Ontario Regulation 22/04 and to ensure that no undue safety hazards exist.

3. CYBER-SECURITY, PRIVACY

   N/A

4. CO-ORDINATION, INTEROPERABILITY

   GPI coordinated designs and upgrades with various third parties as required. Advanced notifications are provided for all scheduled outages. CNR has been contacted regarding GPI's workscope.

5. ECONOMIC DEVELOPMENT

Project work will be completed using GPI employees and contractors. GPI is upgrading the poles and conductor to accommodate the higher voltage and to ensure that the future needs are met.

6. ENVIRONMENTAL BENEFITS

GPI builds efficiencies into the construction process by incorporating additional related work to take advantage, where possible, of optimal utilization of heavy equipment to the area. Reduced utilization and set-up of this equipment minimizes emissions and potential environmental impact. GPI will contract tree trimming and bush removal in this area for accessibility.

C. CATEGORY SPECIFIC REQUIREMENTS

"Do-nothing" option is not a reasonable alternative due to the age of the assets and their condition.

PARK ROAD

A. GENERAL INFORMATION ON THE PROJECT

The primary purpose of this project was to upgrade the capacity of the circuit to 27.6KV by installing a larger conductor and increase pole height. Project was completed in July 2015. This project relates to system reliability. The construction includes a 4 km distribution line from Sobie Road to Main St., which connects into 18M3 feeder. Sixty-eight (68) poles will be replaced. GPI anticipates that this project will affect 60 residential customers. Current assets were 30 years old.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

This voltage conversion project will result in increased reliability, reduced number of unscheduled outages, reduced number of trouble calls and transformer replacements.

2. SAFETY

The project will lead to improved safety due to replacement of old assets in deteriorated condition, with higher poles and larger conductor size.

3. CYBER-SECURITY, PRIVACY

N/A

4. CO-ORDINATION, INTEROPERABILITY

GPI coordinates designs and upgrades with various third parties, as required, in the review and approval process. GPI ensures coordinated planning with third parties in relation to road activities, other utilities and regulatory concerns. Advanced notice is provided to customers for all scheduled outages.

5. ECONOMIC DEVELOPMENT

Project work will be completed using GPI employees and contractors. GPI is upgrading the poles and conductor to accommodate the higher voltage and to ensure that the future needs are met.

6. ENVIRONMENTAL BENEFITS

GPI builds efficiencies into the construction process by incorporating additional related work to take advantage, where possible, of optimal utilization of heavy equipment to the area. Reduced utilization and set-up of this equipment minimizes emissions and potential environmental impact. GPI is working with the region of Niagara on the specific area with ridge access.

C. CATEGORY SPECIFIC REQUIREMENTS

GPI aims to provide safe, reliable, and high-quality service to its customers. Voltage conversion and replacement of old assets involves assets that have a high risk of failure and/or high performance risk. As a result of the high risks associated with the assets, these replacements are considered a priority, and the do-nothing option is not a reasonable alternative.

HORIZON FEEDER

A. GENERAL INFORMATION ON THE PROJECT

This project is a part of an effort to improve GPI's overall service reliability by improving service for customers supplied from the Beamsville feeder. The main driver is to increase system reliability. This project will result in building a backup feeder from Horizon, which will be metered temporarily when used. GPI is planning to install 14 poles and Horizon will have to install 7 poles. This requires coordinated efforts from both utilities, as both utilities have to extend a 3-phase conductor to the borderline of their respective service area. Thus, the project will add another supply point, which will increase system reliability by reducing the length of outages.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

   This project will result in building switching capabilities and reducing the length of outages.

2. SAFETY

   This is a system upgrade that will ensure that all safety requirements of Regulation 22/04 are met.

3. CYBER-SECURITY, PRIVACY

   N/A

4. CO-ORDINATION, INTEROPERABILITY

   Coordinated design and planning activities with Horizon and coordinated line extension to the border of utility service area.

5. ECONOMIC DEVELOPMENT

   Project work will be completed using GPI employees and contractors. GPI is upgrading the poles and conductor to accommodate and installing a manual switch and temporary meter to ensure that the future needs are met.

6. ENVIRONMENTAL BENEFITS

   GPI builds efficiencies into the construction process by incorporating additional related work to take advantage, where possible, of optimal utilization of heavy equipment to the area. Reduced utilization and set-up of this equipment minimizes emissions and potential environmental impact.

C. CATEGORY SPECIFIC REQUIREMENTS

GPI aims to provide reliable service to its customers. Building smart backup capabilities reduces performance risk. A "do nothing "alternative has been considered; however, if the project is completed, GPI will be able to address customer preferences for reliable and consistent service.

RECLOSERS

A. GENERAL INFORMATION ON THE PROJECT

GPI's business objective is to enhance the distribution system with automation and to respond quickly to outages. Therefore, GPI is planning to replace manual gang-operated switches with automatic reclosers in order to upgrade and add system adaptability. Reclosers have the ability to be integrated into an automated self-healing system. The reclosers will be installed over the next 5 years to smooth the capital expenditure. The equipment will be installed in strategic locations in order to best isolate and coordinate the overall system supply during outages and maintenance. The new system design will provide downstream automated reclosing sequences and self-healing. The reclosers will be automated so that GPI would be able to control its operation remotely.

GPI is also planning to integrate the recloser controls with the Outage Management System (OMS) system. These smart grid elements will enhance GPI's distribution system by optimizing its performance, minimizing supply interruptions, thus reducing the number of customers affected during outage by quickly switching via remote controls. This project is driven by the intent for increased reliability, and also ensures protection and control upgrades.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

   The primary driver for this project is reliability. Secondary drivers are operational efficiencies, improved system performance, maintainability and operability. Reclosers will provide access to system information and outage data. This relates to GPI's customer preferences for reliable and consistent service. GPI also aims to provide safe and high-quality supply.

2. SAFETY

   The improvements to reliability and contingency performance due to these investments are expected to reduce the safety risks that may be associated with outage restoration efforts in unfavourable conditions due to weather, time of day, or other factors. Overall reliability improvements and the ability to remotely control certain assets is expected to lead to a decreased frequency of outage responses, as well as more efficient response (less travel between switches). A reduction in these activities would reduce the overall exposure to the associated hazards.

3. CYBER-SECURITY, PRIVACY

GPI evaluates build in by design security options.

4. CO-ORDINATION, INTEROPERABILITY

5. GPI coordinates designs and upgrades with various third parties, as required, in the review and approval process. GPI ensures coordinated planning with third parties in relation to road activities, other utilities and regulatory concerns. Advanced notice is provided to customers for all scheduled outages.

6. ECONOMIC DEVELOPMENT

   All associated work will be completed using GPI employees and contractors.

7. ENVIRONMENTAL BENEFITS

   GPI builds efficiencies into the construction process by incorporating additional related work to take advantage, where possible, of optimal utilization of heavy equipment to the area. Reduced utilization and set-up of this equipment minimizes emissions and potential environmental impact.

C. CATEGORY SPECIFIC REQUIREMENTS

A "do nothing "alternative has been considered; however, it does not align with GPI's objectives of upgrading the system with smart grid elements to increase system reliability.

OUTAGE MANAGEMENT SYSTEM (OMS)

A. GENERAL INFORMATION ON THE PROJECT

GPI plans to implement an automated system that can help track outages and control GPI's reclosers during an outage. The main drivers are increased reliability and customer preferences for improvement of customer communication. GPI has started assessing available software solutions that could serve the needs for outage management. The OMS will support and automate a wide range of GPI's operations and outage management processes designed to reduce costs, improve network operations, reduce impact of outages and provide secure coordinated communications amongst GPI's personnel, third party stakeholders and customers.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

These investments are driven by customer feedback, indicating a desire for sustained reliability and improved communication during outages. As a result, the primary drivers are reliability improvement and improved customer communication. The secondary driver relates to operational efficiencies. In addition to improving reliability and operational efficiencies, GPI expects that continued development and integration of OMS with other systems will improve various components of the asset management process and accuracy of outages reporting.

2. SAFETY

Overall reliability improvements and the ability to remotely control certain assets is expected to lead to a decrease in the frequency of outage responses as well as more efficient response (less travel between switches). A reduction in these activities would reduce the overall exposure to the associated health and safety hazards.

3. CYBER-SECURITY, PRIVACY

GPI will ensure that safety and privacy are built into the software design. Consideration will be given to the security of any communication methods or networks associated with system implementation and integration. Additionally, the privacy implications of system integration will be evaluated to ensure that sensitive or confidential information is not inadvertently exchanged between systems.

4. CO-ORDINATION, INTEROPERABILITY

The development and integration of OMS could be coordinated with municipal operations in order to minimize both the initial implementation and long-term management costs. This is dependent on availability of feasible technical solutions and resources.

5. ECONOMIC DEVELOPMENT

Where possible, system design, implementation and integration efforts will be completed using GPI employees and contractors.

6. ENVIRONMENTAL BENEFITS

Integration with GIS and other systems will allow planning optimization of capital projects and maintenance programs, which affect environmental aspects.

C. CATEGORY SPECIFIC REQUIREMENTS

GPI is proposing continued investment in the implementation of OMS. A passive "do nothing "approach has been also considered as a non-workable alternative. This would result in maintaining a large variety of paper-based process, various databases and spreadsheets to manage the data sources and processes associated with GPI's asset management system. GPI's goal is to eliminate administrative inefficiencies and potential sources of error where information required by multiple systems must be manually populated in more than one location.

GENERAL PLANT CAPITAL PROJECTS

FLEET PURCHASES

A. GENERAL INFORMATION ON THE PROJECT

A truck replacement schedule has been created utilizing industry best practices in terms of equipment age, kilometers and cost of repairs (details in Appendix K) to understand the general timing of equipment replacements. Replacement schedules are based on the following useful lives:

- Large Trucks with Mounted Equipment – 15 years
- Medium Trucks with Mounted Equipment – 12 years
- Small Trucks – 8 years
- Trailers – As required

Industry best practice replacement schedules noted above have been established and determined to:

- Minimize repair costs
- Minimize truck down time
- Maximize re-sale value
- Maximize efficiencies by taking advantage of changes in design technology

The most significant risk to continue to use a unit beyond its useful life is the risk of having a major truck component failure, which requires a major expense. Examples of failure for large trucks would be an engine replacement, failure of the aerial device hydraulic systems, or a boom structure failure. Spending a significant amount on a truck repair when the truck is beyond its optimum age is not cost-effective. Based on the useful lives

and consideration of other risk factors, GPI has determined a vehicle replacement schedule. GPI has identified that a bucket truck, pickup truck, passenger van, engineering van and SUV need to be replaced over the next five years. The vehicle replacement program is detailed in Appendix K.

B. EVALUATION CRITERIA AND INFORMATION REQUIREMENTS

1. EFFICIENCY, CUSTOMER VALUE, RELIABILITY

The main driver for this capital investment is related to replacement of end of life distribution system maintenance support assets. The fleet vehicles are required to allow for inspections, patrols and emergency response through various seasons and ground conditions. System reliability is directly dependent on GPI's ability to access its assets.

2. SAFETY

GPI's overall lifecycle management of fleet assets results in the availability of safe, reliable vehicles to support operational activities.

3. CYBER-SECURITY, PRIVACY

N/A

4. CO-ORDINATION, INTEROPERABILITY

N/A

5. ECONOMIC DEVELOPMENT

GPI sources new vehicle purchases through Ontario dealers.

6. ENVIRONMENTAL BENEFITS

Newer fleet assets are generally more fuel-efficient than the units being replaced. As a result, GPI's fleet is expected to become more fuel-efficient over time.

C. CATEGORY SPECIFIC REQUIREMENTS

Investment in fleet replacements is planned at a sustaining pace based on an optimized lifecycle management approach to each fleet item.

SYSTEM ACCESS

NEW CONNECTIONS

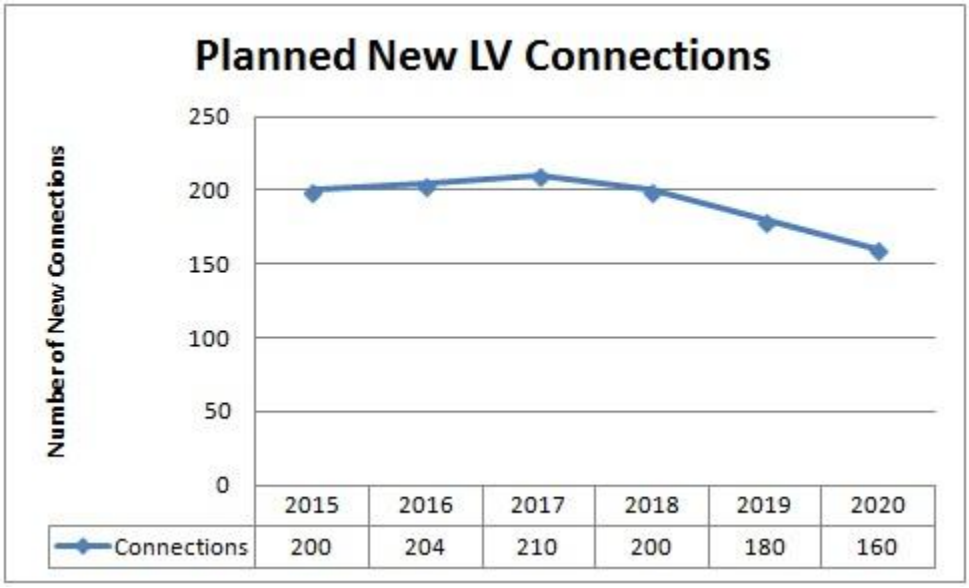


Figure 79

To calculate capital requirements for new connections, GPI relies on historic unit cost information and escalates at the expected cost of inflation. A burden rate reflecting corporate overheads and related allocations is also added. The following table summarizes our expected System Access costs.

New Connects				2015	2016	2017	2018	2019	2020
Escalation	2%								
Burden	12.2%								
Demand Capital			Units	200	204	210	200	180	160
	Unit Cost	$300	Unit Cost w/Brdn	$ 337	$ 343	$ 350	$ 357	$ 364	$ 372
	Burden	$36.60	Program Cost	$ 67,320	$ 70,040	$ 73,542	$ 71,441	$ 65,582	$ 59,461

Figure 80

At time of writing GPI is not aware of any other third party driven requests.

NEW CONNECTIONS COSTS

GPI has shown an increasing amount of growth in LV connections. GPI's average cost per lot paid by GPI to the developers from 2012 – 2014 is $1,254.70 and the developers average cost per lot is $3,045.85.

CAPITAL EXPENDITURE SUMMARY (5.4.4)

GPI has described its approach for major capital investments. Specifically, in the area of System Renewal GPI relies on asset demographic and condition data to develop investment levels, which are then tied to portfolio performance and relative reliability outcomes. For System Service projects, a prioritization method is used to objectively assess material investments against corporate objectives as described. In addition, projections for System Access have been developed that include a forecast of new connections over the plan period, against which historic unit costs have been applied. The following table summarizes GPI's capital plan over the DSP period.

	2016	2017	2018	2019	2020	Total	Average
	$ '000						
System Access	1,110	995	967	906	839	4,818	964
System Renewal	273	918	976	1,062	1,067	4,294	859
System Service	178	399	409	421	428	1,835	367
General Plant	711	202	170	173	177	1,434	287
Contributed Capital	(561)	(572)	(554)	(518)	(482)	(2,688)	(538)
TOTAL EXPENDITURE	**1,710**	**1,943**	**1,968**	**2,044**	**2,029**	**9,693**	**1,939**
Percent Change from Previous Year		13.6%	1.3%	3.9%	-0.7%		4.5%
Percent Change Not Including 2016			1.3%	3.9%	-0.7%		1.5%

Figure 81

Note: the table above reflects dollars for the year, using an escalation year-over-year of 1.5% (excluding 2016 and reflecting CPI). In addition, a burden rate of 12.2% is added to adjust to the cost to include related corporate overheads and other allocations.

Refer to Appendix H for an additional detailed Capital Expenditure Summary by category.

JUSTIFYING CAPITAL EXPENDITURES (5.4.5)

OVERALL PLAN (5.4.5.1)

The investment levels in Capital for New Connections (System Access) and Capital Programs (System Renewal) are required to meet regulatory requirements, sustainable replacement requirements for in-service assets, and day-to-day business and operational activities. Future plans in Capital Projects (System Service) and General Plant categories relate to increases in the automation of the distribution system, system reliability and customer preferences. Capital investments are also justified through peer analysis showing room for improvement in the customer service area, and respond to the priorities of our customers. Investment drivers vary by category, and are summarized in the project definitions on a project–per-project basis (see Appendix J).

Capital for New Connections (System Access)

System Access includes costs related to the connection of new customers. This category includes capitalization of costs related to Smart Metering. Costs for the forecast period are in line with historical costs in this category. The major drivers of projects in this category are regulatory requirements under DSC and customer requirements. The total planned expenditure in the category, for the 2015 to 2020 period, amounts to $2,723,000.

Capital Programs (System Renewal)

The forecasted expenditure for system renewal for the period from 2015 to 2020 amounts to $3,925,000. This category includes system renewal programs and replacement assets “like-for-like”. The program model is based on long-term expenditure smoothing. The replacement of assets are planned based on equipment adjusted age, according to various risk criteria and the condition of the asset.

Capital Projects (System Service)

The total planned expenditure is $1,465,000. The major driver for capital projects in this category includes improving system reliability with automation and smart grid elements. The projects include completion of voltage conversion projects, installation of a backup feeder, reclosers and purchasing of an Outage Management System (OMS), which will increase system reliability and will respond to customer preferences to improve communication.

General Plant

The total planned expenditure for 2015 to 2020 period is $1,434,000. This category includes fleet purchases to replace a bucket truck, pickup truck, passenger van, engineering van and SUV over the next five years.

In the short-term, GPI will invest to sustain the distribution infrastructure and will concentrate more on investing in general assets that support the type of services customers have been requesting (e.g., OMS and related outage reporting systems, social media, etc.). The assessment of the distribution system is supporting the decision to delay some distribution infrastructure investments in the short-term. GPI's longer-term plans are to level the investment in distribution assets and invest more in automation (e.g., self-healing HV switches).

System Investment on System O&M Costs (5.4.5.1)

System OM&A Costs for the next five years is forecasted at the total amount of $8,899,000. GPI customer's feedback has been incorporated into the budget plans. The OM&A expenditures include the cost of a new IT employee who will enhance GPIs website, implement the OMS system, and help to drive efficiencies with technology throughout the utility. Another addition to GPI is an Engineering Supervisor with a Professional Engineer's licence to allow better control over GPI's internal systems, design development and the NWTS that will be acquired by GPI in 2015. A new Customer Service Representative is also needed due to the volume of calls based upon customer growth and number of relocations to the area. All enhancements will be implemented in 2015 and ensure that GPI provides efficient services to its customers.

INVESTMENT STRATEGY

As described in the section above, GPI has built its Distribution System Plan using both a bottom-up (tied to asset needs, requirements of third parties and projects tied to customer needs and business objectives) and top-down approach. For the latter approach, Grimsby Power uses a long-term planning framework where it is able to model multiple planning scenarios and predict trends on customer rates, shareholder returns and financial viability.

Not only does this approach provide GPI with context to make decisions by understanding outcomes, it also provides information for customers, shareholders and stakeholders, allowing them to provide more effective input into the GPI planning process.

In this DSP process, GPI has assessed investments under 4 scenarios:

1. Base case tied to historic operations, trend information, and capital structure
2. Merging with NWTC and adding associated operating cost, revenues and cost of capital
3. DSP 1 which includes high priority projects designed to accommodate load growth and asset replacement programs set at a level to maintain current performance (as elaborated on in the preceding sections)

4. DSP 2 which includes the additional projects tied to customer expressed needs obtained via engagement activities and smart grid

The following paragraphs summarize the results of the analysis and the resulting impacts and actions.

The first table below (Figure 81) examines the impact on average rates over the long-term, calculated as average revenue per customer with no customer class differentiation (this would normally be done as part of an extensive cost of service and cost allocation study). The information is presented to show the average impact on the distribution component of customers' bills, as well as the impact on the total bill.

Observations and Conclusions:

There is a marked difference in distribution revenue and rates once the merger with NWTC is included. This is expected, and reflects the asset and related recovery of costs being moved from a transmission charge to distribution. The bulk of the cost to Grimsby power customers is offset by tariffs to other distributors using the assets of the former NWTC. As can be seen, the impact of the change on the total bill is marginal, at approximately 1.6%, as a result of the "in and out" nature of costs as they are reallocated for cost of power (transmission tariff) to distribution.

The additional scenarios include the rolling on of the bottom-up planning contained in this DSP for two levels of overall plan funding. As evidenced, the impact over the period is marginal and based on this, Grimsby Power has an added level of confidence that the plan objectives (maintaining system performance and delivering on customers expressed needs) can be done without any significant variation in rate levels over the longer-term period.

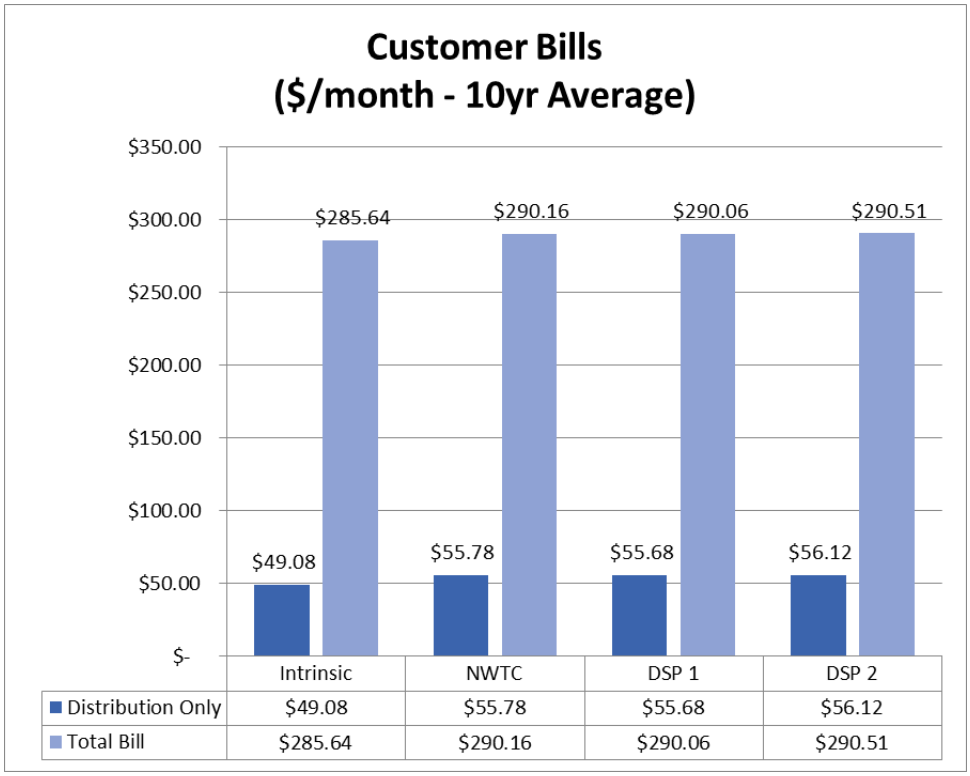


Figure 82

In addition to rates, Grimsby power has also looked at the value of the business as defined in this case by the cash flow generated and available to the shareholder. Discounted and undiscounted views are provided in the following table (Figure 82).

Observations and Conclusions:

Similar to rates, the main driver of change in value is the merger with NWTC. As can be expected, the value of the business is further enhanced in the DSP scenarios where additional capital is expended, resulting in an increase in rate base and the associated cost of capital over the plan horizon.

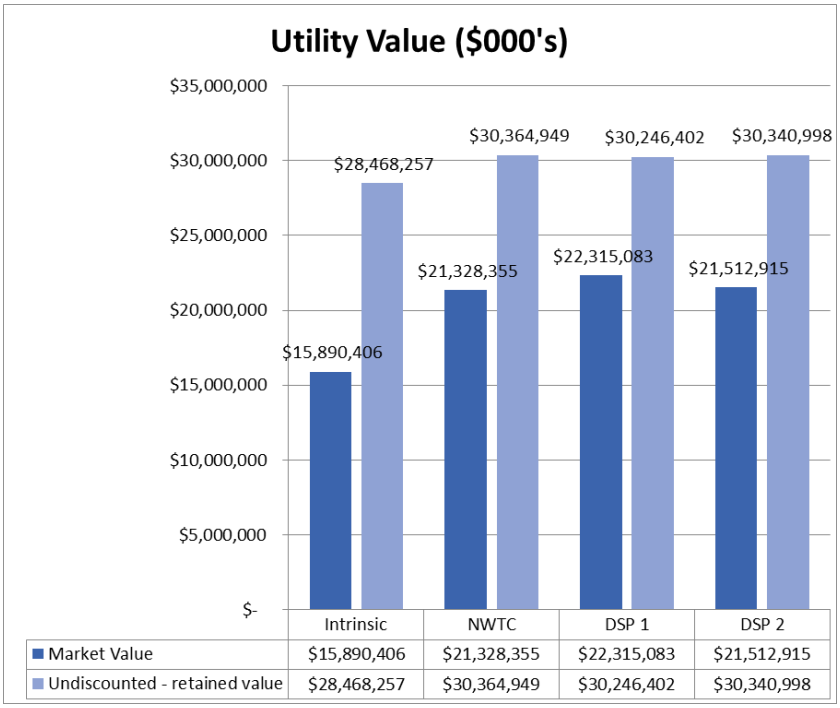


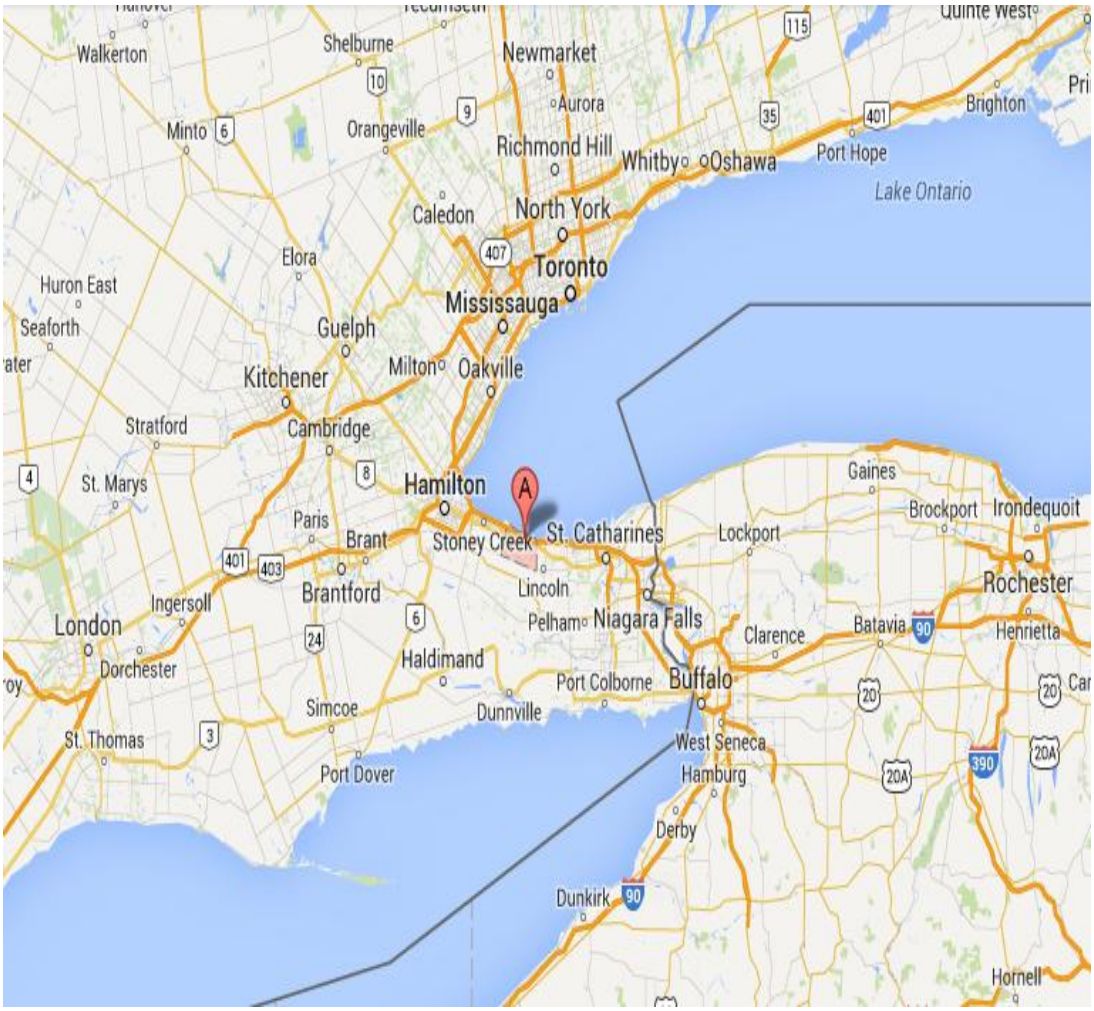
Figure 83

Grimsby Power has implemented a robust process underlying the results presented in this DSP. As discussed in detail throughout the plan, GPI has provided information reflective of bottom-up planning, by examining asset needs, resulting in asset replacement program levels and projects tied to growth and other priorities as described above. In addition, GPI has also viewed the longer-term impact on rates and shareholder value.

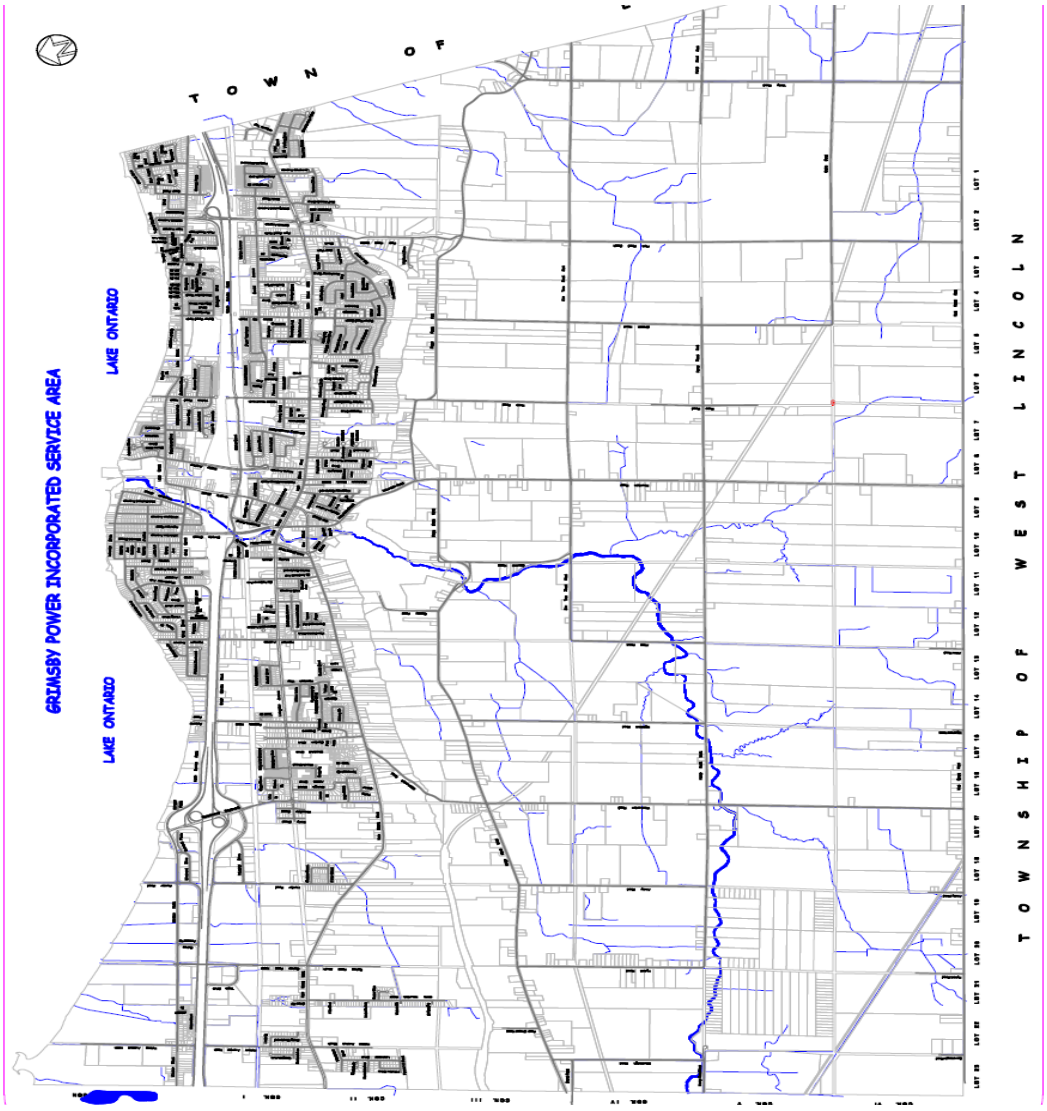
The result is a plan that balances the multiple levers of customer rates, customers' requirements for reliability and information, shareholder returns and, of course, asset needs.

APPENDIX A

LOCATION OF THE TOWN OF GRIMSBY



GPI'S SERVICE TERRITORY



APPENDIX B

CUSTOMER BASE -DETAILS

Year	Residential Customers	GS<50	GS>50 (including Interval	Flat Rate	Streetlights (Customers)	Total Customers	Streetlight Connections
2006	8,715	639	114	85	2	9,555	2,493
2007	8,825	657	102	84	2	9,670	2,493
2008	9,007	656	105	85	2	9,855	2,529
2009	9,147	662	100	82	2	9,993	2,486
2010	9,290	669	102	80	2	10,143	2,512
2011	9,435	668	111	81	2	10,297	2,544
2012	9,636	687	108	78	2	10,511	2,579
2013	9,720	691	110	76	2	10,599	2,611
2014	9,977	727	109	74	2	10,889	2,644

APPENDIX C

DETAILED BREAKDOWN OF THE MONTHLY RATES & CHARGES

RESIDENTIAL SERVICE CLASSIFICATION

MONTHLY RATES AND CHARGES - Delivery Component

Monthly Service Charge	$	15.69
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	$	0.79
Distribution Volumetric Rate	$/kWh	0.0121
Low Voltage Service Rate	$/kWh	0.0007
Retail Transmission Rate - Network Service Rate	$/kWh	0.0076
Retail Transmission Rate - Line and Transformation Connection Service Rate	$/kWh	0.0057
Rate Rider for Deferral/Variance Accounts Disposition - effective until December 31, 2015	$/kWh	0.0032
Rate Rider for Disposition of Global Adjustment - effective until December 31, 2015	$/kWh	(0.0033)
Applicable only for Non-RPP Customers		

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	$/kWh	0.0044
Rural or Remote Electricity Rate Protection Charge (RRRP)	$/kWh	0.0013
Standard Supply Service - Administrative Charge (if applicable)	$	0.25

GENERAL SERVICE LESS THAN 50 KW SERVICE CLASSIFICATION

MONTHLY RATES AND CHARGES - Delivery Component

Monthly Service Charge	$	26.67
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	$	0.79
Distribution Volumetric Rate	$/kWh	0.0131
Low Voltage Service Rate	$/kWh	0.0006

Retail Transmission Rate - Network Service Rate	$/kWh	0.0071
Retail Transmission Rate - Line and Transformation Connection Service Rate	$/kWh	0.0050
Rate Rider for Deferral/Variance Accounts Disposition - effective until December 31, 2015	$/kWh	0.0032
Rate Rider for Disposition of Global Adjustment - effective until December 31, 2015	$/kWh	(0.0033)
Applicable only for Non-RPP Customers		

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	$/kWh	0.0044
Rural or Remote Electricity Rate Protection Charge (RRRP)	$/kWh	0.0013
Standard Supply Service - Administrative Charge (if applicable)	$	0.25

GENERAL SERVICE 50 TO 4,999 KW SERVICE CLASSIFICATION

MONTHLY RATES AND CHARGES - Delivery Component

Monthly Service Charge	$	172.24
Distribution Volumetric Rate	$/kW	1.7672
Low Voltage Service Rate	$/kW	0.2555
Retail Transmission Rate - Network Service Rate	$/kW	2.8217
Retail Transmission Rate - Line and Transformation Connection Service Rate	$/kW	2.0135
Retail Transmission Rate - Network Service Rate - Interval Metered	$/kW	2.8578
Retail Transmission Rate - Line and Transformation Connection Service Rate - Interval Metered	$/kW	2.1223
Rate Rider for Disposition of Deferral/Variance Accounts (2015) - effective until December 31, 2015	$/kW	1.1465
Rate Rider for Deferral/Variance Accounts Disposition - effective until December 31, 2015	$/kW	1.1465
Rate Rider for Disposition of Global Adjustment - effective until December 31, 2015	$/kW	(1.1886)
Applicable only for Non-RPP Customers		

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	$/kWh	0.0044
Rural or Remote Electricity Rate Protection Charge (RRRP)	$/kWh	0.0013
Standard Supply Service - Administrative Charge (if applicable)	$	0.25

STREET LIGHTING SERVICE CLASSIFICATION

MONTHLY RATES AND CHARGES - Delivery Component

Monthly Service Charge (per connection)	$	2.13
Distribution Volumetric Rate	$/kW	5.2987
Low Voltage Service Rate	$/kW	0.1975
Retail Transmission Rate - Network Service Rate	$/kW	2.1281
Retail Transmission Rate - Line and Transformation Connection Service Rate	$/kW	1.5565
Rate Rider for Deferral/Variance Accounts Disposition - effective until December 31, 2015	$/kW	1.1292
Rate Rider for Disposition of Global Adjustment - effective until December 31, 2015	$/kW	(1.1673)
Applicable only for Non-RPP Customers		

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	$/kWh	0.0044
Rural or Remote Electricity Rate Protection Charge (RRRP)	$/kWh	0.0013
Standard Supply Service - Administrative Charge (if applicable)	$	0.25

UNMETERED SCATTERED LOAD SERVICE CLASSIFICATION

MONTHLY RATES AND CHARGES - Delivery Component

Monthly Service Charge (per connection)	$	18.39
Distribution Volumetric Rate	$/kWh	0.0116
Low Voltage Service Rate	$/kWh	0.0006
Retail Transmission Rate - Network Service Rate	$/kWh	0.0071
Retail Transmission Rate - Line and Transformation Connection Service Rate	$/kWh	0.0050
Rate Rider for Deferral/Variance Accounts Disposition - effective until December 31, 2015	$/kWh	0.0032
Rate Rider for Disposition of Global Adjustment - effective until December 31, 2015	$/kWh	(0.0033)
Applicable only for Non-RPP Customers		0.0050

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	$/kWh	0.0044
Rural or Remote Electricity Rate Protection Charge (RRRP)	$/kWh	0.0013
Standard Supply Service - Administrative Charge (if applicable)	$	0.25

MICROFIT SERVICE CLASSIFICATION

MONTHLY RATES AND CHARGES - Delivery Component

Monthly Service Charge	$	5.40

ALLOWANCES

Transformer Allowance for Ownership - per kW of billing demand/month	$/kW	(0.60)
Primary Metering Allowance for transformer losses – applied to measured demand and energy	%	(1.00)

SPECIFIC SERVICE CHARGES

Customer Administration

Arrears certificate	$	15.00
Statement of Account	$	15.00
Pulling Post Dated Cheques	$	15.00
Duplicate Invoices for previous billing	$	15.00
Easement Letter	$	15.00
Account History	$	15.00
Credit check (plus credit agency costs)	$	15.00
Returned cheque charge (plus bank charges)	$	15.00
Charge to certify cheque	$	15.00
Legal letter charge	$	15.00
Account set up charge/change of occupancy charge (plus credit agency costs if applicable)	$	30.00
Special meter reads	$	30.00

Meter dispute charge plus Measurement Canada fees (if meter found correct)	$	30.00
Interval Meter Interrogation	$	20.00
Non-Payment of Account		
Late Payment – per month	%	1.5000
Late Payment – per annum	%	19.5600
Collection of account charge – no disconnection	$	30.00
Collection of account charge – no disconnection – after regular hours	$	165.00
Disconnect/Reconnect Charge – At Meter – During Regular Hours	$	65.00
Disconnect/Reconnect Charge – At Meter – After Hours	$	185.00
Disconnect/Reconnect Charge – At Pole – During Regular Hours	$	185.00
Disconnect/Reconnect Charge – At Pole – After Hours	$	415.00
Service call – customer owned equipment	$	30.00
Service call – after regular hours	$	165.00
Install/Remove load control device – during regular hours	$	65.00
Install/Remove load control device – after regular hours	$	185.00
Temporary service install & remove – overhead – no transformer	$	500.00
Temporary Service – Install & remove – underground – no transformer	$	300.00
Temporary Service Install & Remove – Overhead – With Transformer	$	1,000.00
Specific Charge for Access to the Power Poles - $/pole/year	$	22.35

RETAIL SERVICE CHARGES (if applicable)

One-time charge, per retailer, to establish the service agreement between the distributor and the retailer	$	100.00
Monthly Fixed Charge, per retailer	$	20.00
Monthly Variable Charge, per customer, per retailer	$/cust.	0.50
Distributor-consolidated billing monthly charge, per customer, per retailer	$/cust.	0.30
Retailer-consolidated billing monthly credit, per customer, per retailer	$/cust.	(0.30)
Service Transaction Requests (STR)		
Request fee, per request, applied to the requesting party	$	0.25
Processing fee, per request, applied to the requesting party	$	0.50
Request for customer information as outlined in Section 10.6.3 and Chapter 11 of the Retail Settlement Code directly to retailers and customers, if not delivered electronically through the Electronic Business Transaction (EBT) system, applied to the requesting party		
Up to twice a year	$	no charge
More than twice a year, per request (plus incremental delivery costs)	$	2.00

LOSS FACTORS

If the distributor is not capable of prorating changed loss factors jointly with distribution rates, the revised loss factors will be implemented upon the first subsequent billing for each billing cycle.

Total Loss Factor – Secondary Metered Customer < 5,000 kW	1.0526
Total Loss Factor – Primary Metered Customer < 5,000 kW	1.0421

APPENDIX D

TOTAL BILLED KW PER CUSTOMER

2006 -2014 Actual

	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual
Residential									
Customers	8,715	8,825	9,007	9,147	9,290	9,435	9,636	9,720	9,977
kWh	85,590,832	86,770,665	86,978,306	86,819,996	92,147,820	92,485,342	93,908,436	92,183,860	91,571,086
GS<50									
Customers	639	657	656	662	669	668	687	691	727
kWh	17,886,710	18,502,908	18,161,547	18,343,495	18,797,358	17,886,498	17,958,297	18,436,579	18,767,140
GS>50									
Customers	114	102	105	100	102	111	108	110	109
kWh	63,517,727	65,799,685	64,972,194	63,520,024	67,164,677	68,948,029	70,328,520	70,070,546	67,963,114
kW	175,422	176,460	172,781	172,057	174,346	180,394	183,322	186,328	180,748
Streetlights									
Connections	2,493	2,493	2,529	2,486	2,512	2,544	2,579	2,611	2,644
kWh	1,602,773	1,584,019	1,611,475	1,560,091	1,575,356	1,585,167	1,581,519	1,528,363	1,218,697
kW	4,425	4,378	4,443	4,322	4,359	4,411	4,368	4,230	3,646
USL									
Customers	85	84	85	82	80	81	78	76	74
kWh	427,433	411,704	352,317	376,487	382,232	386,473	379,842	375,824	370,830
Total									
Customers (streetlight not included)	9,555	9,670	9,855	9,993	10,143	10,297	10,511	10,599	10,889
kWh (Residential, GS<50, GS>50, Streetlight, USL)	169,025,475	173,068,981	172,075,839	170,620,093	180,067,443	181,291,509	184,156,613	182,595,172	179,890,867
kW from applicable classes (GS>50 and Streetlight)	179,846	180,838	177,224	176,379	178,705	184,805	187,690	190,557	184,395

2015-2020 Forecasted KW Usage

	2015 Weather Normal	2016 Weather Normal	2017 Weather Normal	2018 Weather Normal	2019 Weather Normal	2020 Weather Normal
Residential						
Customers	10,142	10,310	10,751	10,949	11,150	11,355
kWh	93,143,745	92,176,362	91,928,292	91,522,314	91,114,228	91,003,126
GS<50						
Customers	739	751	793	809	825	841
kWh	19,013,815	18,710,886	18,596,955	18,410,541	18,224,259	18,100,070
GS>50						
Customers	108	108	109	108	108	107
kWh	69,569,461	69,935,930	65,122,396	65,274,823	65,428,198	65,726,972
kW	186,362	187,343	177,431	177,846	178,264	179,078
Streetlights						
Connections	2,662	2,680	2,681	2,694	2,707	2,719
kWh	1,181,727	1,145,878	1,111,117	1,077,411	1,044,727	1,013,034
kW	3,536	3,428	3,324	3,224	3,126	3,031
USL						
Customers	74	74	70	69	68	67
kWh	372,087	373,349	375,173	376,631	378,096	379,566
Total						
Customers (streetlight not included)	11,065	11,245	11,725	11,937	12,152	12,372
kWh (Residential, GS<50, GS>50, Streetlight, USL)	183,280,836	182,342,406	177,133,933	176,661,720	176,189,507	176,222,768
kW from applicable classes (GS>50 and Streetlight)	189,897	190,772	180,755	181,070	181,390	182,109

APPENDIX E

HONI REGIONAL PLANNING LETTER

Planning Status Letter for Grimsby Po

IESO LETTER

IESO Ltr of Comment
Grimsby Power 2015-

APPENDIX F

SCORECARD

Scorecard - Grimsby Power Incorporated

9/4/2015

Performance Outcomes	Performance Categories	Measures		2010	2011	2012	2013	2014	Trend	Target Industry	Target Distributor
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	New Residential/Small Business Services Connected on Time		100.00%	100.00%	100.00%	100.00%	100.00%	flat	90.00%	
		Scheduled Appointments Met On Time		100.00%	100.00%	100.00%	100.00%	100.00%	flat	90.00%	
		Telephone Calls Answered On Time		72.40%	77.80%	85.50%	87.00%	69.30%	up	65.00%	
	Customer Satisfaction	First Contact Resolution						99.79%			
		Billing Accuracy						99.98%	flat	98.00%	
		Customer Satisfaction Survey Results						92.00%			
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	Safety	Level of Public awareness [measure to be determined]									
		Level of Compliance with Ontario Regulation 22/04		C	C	C	C	C	flat		C
		Serious Electrical Incident Index	Number of General Public Incidents	0	0	0	0	0	flat		0
			Rate per 10, 100, 1000 km of line	0.000	0.000	0.000	0.000	0.000	flat		0.000
	System Reliability	Average Number of Hours that Power to a Customer is Interrupted		3.00	2.09	1.23	2.38	0.73	down		at least within 1.23 - 3.00
		Average Number of Times that Power to a Customer is Interrupted		1.06	1.24	1.73	1.70	0.52	down		at least within 1.06 - 1.73
	Asset Management	Distribution System Plan Implementation Progress						76.90%			
	Cost Control	Efficiency Assessment				2	2	2			
		Total Cost per Customer [1]		$483	$517	$568	$538	$554			
		Total Cost per Km of Line [1]		$20,349	$22,193	$25,010	$23,739	$24,953			
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Conservation & Demand Management	Net Annual Peak Demand Savings (Percent of target achieved) [2]			24.65%	40.19%	50.49%	55.44%	target not met		2.06MW
		Net Cumulative Energy Savings (Percent of target achieved)			53.60%	91.58%	123.10%	137.08%	target met		7.76GWh
	Connection of Renewable Generation	Renewable Generation Connection Impact Assessments Completed On Time			100.00%			100.00%			
		New Micro-embedded Generation Facilities Connected On Time					100.00%	100.00%		90.00%	
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)		1.73	1.28	1.30	1.32	0.76			
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		1.20	1.18	1.25	1.07	1.24			
		Profitability: Regulatory Return on Equity	Deemed (included in rates)		9.00%	9.42%	9.42%	9.42%			
			Achieved		2.35%	12.04%	7.20%	5.89%			

Notes:
1. These figures were generated by the Board based on the total cost benchmarking analysis conducted by Pacific Economics Group Research, LLC and based on the distributor's annual reported information.
2. The Conservation & Demand Management net annual peak demand savings include any persisting peak demand savings from the previous years.

Legend: up, down, flat, target met, target not met

APPENDIX G

DISTRIBUTION SYSTEM MAINTENANCE AND INSPECTION PROGRAM

Appendix G - GPI - Maintenance and Insp

RONDAR MAINTENANCE REPORT

Appendix G 2014 Rondar Maintenance

APPENDIX H

SUMMARY OF FIVE-YEAR PLAN FOR CAPITAL-RELATED EXPENDITURES (2015 – 2020)

	2016				2017				2018				2019				2020				Total	Average
	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total	GPI	Assumed	Alloc	Total		
System Access	173	817	120	1,110	74	835	86	995	71	805	91	967	66	744	96	906	60	683	97	839	4,818	964
System Renewal	153		120	273	831		86	918	885		91	976	965		96	1,062	970		97	1,067	4,294	859
System Service	58		120	178	313		86	399	319		91	409	325		96	421	331		97	428	1,835	367
General Plant	711			711	202			202	170			170	173			173	177			177	1,434	287
Contributed Capital		(561)		(561)		(572)		(572)		(554)		(554)		(518)		(518)		(482)		(482)	(2,688)	(538)
TOTAL EXPENDITURE	**1,095**	**256**	**359**	**1,710**	**1,420**	**263**	**259**	**1,943**	**1,445**	**251**	**272**	**1,968**	**1,529**	**226**	**289**	**2,044**	**1,538**	**201**	**290**	**2,029**	**9,693**	**1,939**

The graph above describes 2016 – 2020 in the same categories as the other tables. However, it also includes GPI assumed plant and allocations. Assumed plant refers to residential subdivision development or expansion of the distribution system that is partially paid for by the owner or developer but becomes a distribution asset. The portion of the asset paid by the owner or developer is offset by contributed capital.

In terms of allocation a portion of some overhead expenses are allocated to both OM&A and capital. In any given year the percentage of allocation that is capitalized is dependent on where Grimsby Power's Line staff spends there working hours – either on capital work or OM&A work. The allocation percentage for Lineman Expenses (capital vs. OM&A) is calculated by taking the sum total of hours for the Lines staff booked to capital and OM&A and deriving the percentage split between the two. Allocated expenses are then split between OM&A and capital accounts.

Appendix 2-AB
Table 2 - Capital Expenditure Summary from Chapter 5 Consolidated Distribution System Plan Filing Requirements

First year of Forecast Period: 2016

CATEGORY	Historical Period			Forecast Period (planned)				
	2015			2016	2017	2018	2019	2020
	Plan [1]	Actual [2]	Var					
	$ '000		%	$ '000				
System Access	N/A	971	--	1,110	450	430	388	346
System Renewal	N/A	505	--	273	831	885	965	970
System Service	N/A	1,605	--	178	313	319	325	331
General Plant	N/A	340	--	711	202	170	173	177
TOTAL EXPENDITURE	-	3,421	--	2,271	1,796	1,803	1,851	1,824
System O&M		$ 1,425	--	$ 1,643	$ 1,709	$ 1,777	$ 1,848	$ 1,922

Notes to the Table:
1. Historical "previous plan" data is not required unless a plan has previously been filed
2. Indicate the number of months of 'actual' data included in the last year of the Historical Period (normally a 'bridge' year):

Explanatory Notes on Variances (complete only if applicable)
Notes on shifts in forecast vs. historical budgets by category
Notes on year over year Plan vs. Actual variances for Total Expenditures
Notes on Plan vs. Actual variance trends for individual expenditure categories

APPENDIX I

PROJECT PRORITIZATION MODEL

SELECTION CRITERIA

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The sections colored in blue can be modified based on the project or program portfolio

Selection Criteria
BURMAN ENERGY

	Strategic Fit			System Needs			Feasibility			Total
Selection Criteria	Alignment with Goals and Objectives	Customer Focus	Public Policy Responsiveness	Criticality	Asset Health (Age/Condition)	H&S , Environmental	Cost Benefit	Operational and Technology Risk	Resources - People	Weight
Weighting Scale	5%	15%	5%	20%	25%	10%	10%	5%	5%	100%

equal to 100%

Ranking Criteria:	Definitions:
Alignment with Goals and Objectives	Rate how aligned this project or action, is to corporate goals & objectives (mission and values)
Customer Focus	Rate how this project or action positions GPI better in relation to customer preferences (customer survey)
Public Policy Responsiveness	Rate if this project or action aligns with REG, CDM, GEA requirements
Criticality	Rate if this project or action addresses assets critical to the business and critical to satisfaction
Asset Health (Age/Condition)	Rate the asset expected useful life for this project or action
H&S , Environmental	Rate if there are health, safety and environmental risks
Cost Benefit	Rate project or action cost benefits
Operational and Technology Risk	Rate if the project or action will address operational or technology risks and issues
Resources - People	Rate the availability of required skills & other resources to execute this project or action

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Ranking Criteria
BURMAN ENERGY

Definitions						
Ranking Criteria	1	2	3	4	5	Critical Projects List
Fast Track	Low Business Impact	Below Average Business Impact	Average Business Impact	Above Average Business Impact	High Business Impact	Extremely Critical
Alignment with Goals and Objectives	Poor project or action alignment with corporate goals & objectives (mission and values)	Below average project or action alignment with corporate goals & objectives (mission and values)	Average project or action, action alignment with corporate goals & objectives (mission and values)	Above average project or action alignment with corporate goals & objectives (mission and values)	Good project or action alignment with corporate goals & objectives (mission and values)	
Customer Focus	Poor project or action positioning in relation to customer preferences (customer survey)	Below average project or action positioning in relation to customer preferences (customer survey)	Average project or action positioning in relation to customer preferences (customer survey)	Above average project or action positioning in relation to customer preferences (customer survey)	Good project or action, positioning in relation to customer preferences (customer survey)	
Public Policy Responsiveness	Poor project or action alignment with GEA and RRFE (REG, CDM, GEA) requirements	Below average project or action alignment with GEA and RRFE (REG, CDM, GEA) requirements	Average project or action alignment with GEA and RRFE (REG, CDM, GEA) requirements	Above average project or action alignment with GEA and RRFE (REG, CDM, GEA) requirements	Good project or action alignment with GEA and RRFE (REG, CDM, GEA) requirements	The project or action is addressing regulatory requirement or legal compliance obligation
Criticality	The project or action is not critical to the business or to the customer	The project or action has below average business or customer impact	The project or action has average business or customer impact	The project or action has above average business impact	The project or action is critical to the business or to the customer	
Asset Health (Age/Condition)	Good asset condition or below minimum useful life range (below MIN UL)	Above average asset condition or below medium useful life range below TUL)	Average asset condition or medium useful life range (TUL)	Below average asset condition or above medium useful life range (above TUL)	Poor asset condition or beyond maximum useful life range (above MAX UL)	
H&S , Environmental	There are no health, safety or environmental risks	There are below average health, safety or environmental risks	There are average health, safety or environmental risks	There are above average health, safety or environmental risks	There are high health, safety or environmental risks	There are imminent health, safety or environmental risks
Cost Benefit	Low project or action cost benefits	Below average project or action cost benefits	Average project or action cost benefits	Above average project or action cost benefits	Very high project or action cost benefits	
Operational and Technology Risk	The project or action is not addressing operational or technology issues	The project or action is addressing below average operational or technology risks	The project or action is addressing average operational or technology risks	The project or action is addressing above average operational or technology risks	The project or action is addressing insurmountable operational or technology issues	
Resources - People	The project or action requires high skill level or resources are not available	The project or action requires above average skill level or resources	The project or action requires average skill level or resources	The project or action requires below average skill level or resources	The project or action requires low skill level or resources are readily available	

PROJECT SCORING

Project Scoring

Rank each Project on a scale of 1-5 for each criteria. There is a drop-down box for each cell.

ID	Project Description	Strategic Fit			System Needs			Feasibility		
		Alignment with Goals and Objectives	Customer Focus	Public Policy Responsiveness	Criticality	Asset Health (Age/Condition)	H&S, Environmental	Cost Benefit	Operational and Technology Risk	Resources - People
	Weighting	5%	15%	5%	20%	25%	10%	10%	5%	5%
#1	Bal Harbour 2014/15	5	5	3	5	5	5	3	2	5
#2	18M4 CNR feeder	5	4	1	5	5	3	3	1	5
#3	Park Road	5	5	3	2	5	5	3	2	5
#4	Horizon feeder	5	5	1	5	1	5	5	1	5
#5	Reclosers	5	5	3	5	3	1	5	3	5
#6	OMS purchase	5	5	4	5	1	1	5	4	5
#7	Fleet Vehicles	5	5	1	5	5	3	5	3	5

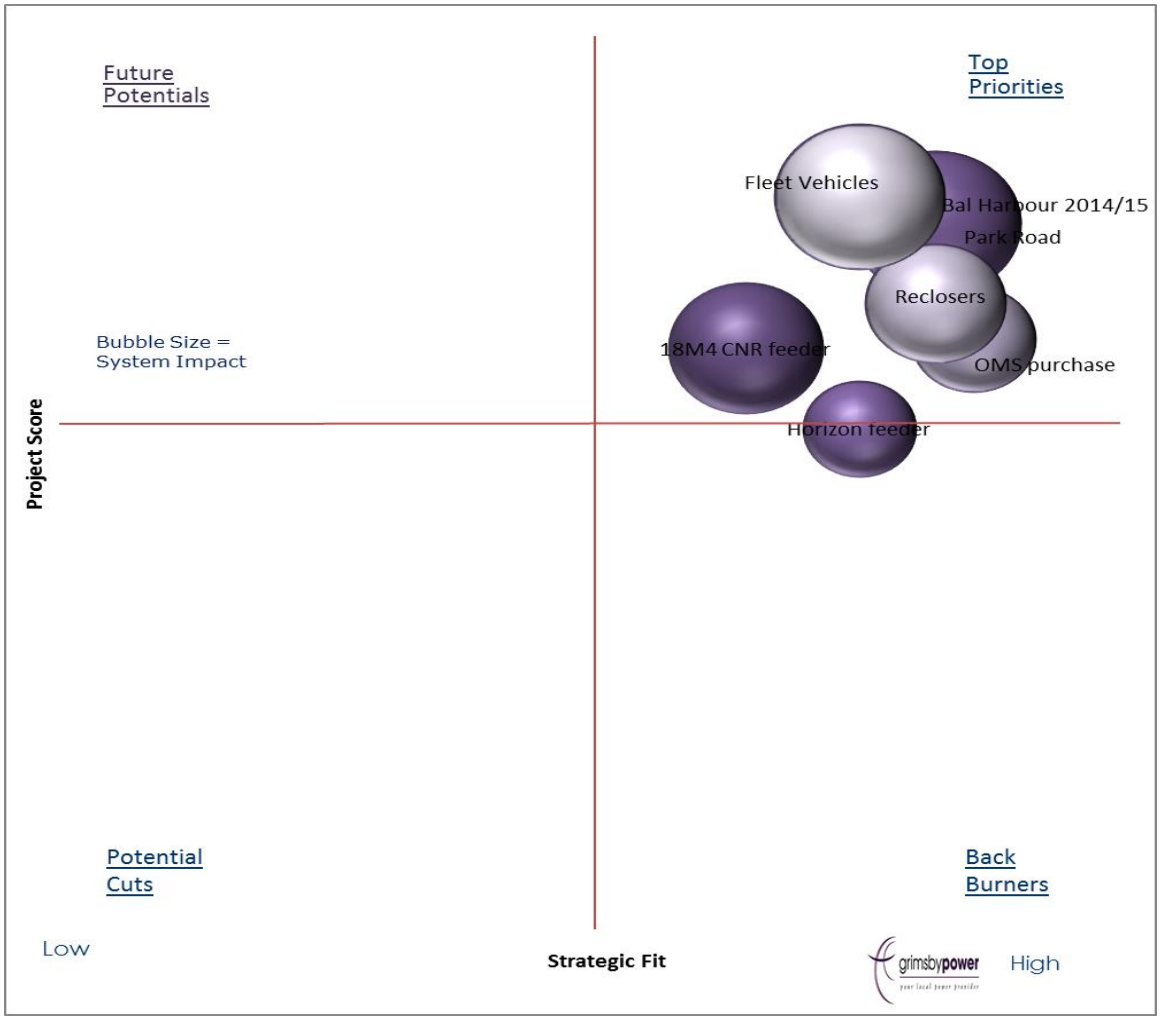
PROJECT RANKING

Rankings

Sort by selecting all Projects & Initiatives, Project Score, Strategic Fit, Economic Impact and Feasibility cells. Click "Data" and "Sort", and sort by Project Score (Largest to Smallest).

ID	Project Description	Project Score	Strategic Fit	System Needs	Feasibility
#7	Fleet Vehicles	4.1	1.1	2.2	0.9
#1	Bal Harbour 2014/15	4.0	1.2	2.2	0.7
#3	Park Road	4.0	1.2	2.2	0.7
#5	Reclosers	3.5	1.2	1.5	0.9
#6	OMS purchase	3.3	1.2	1.2	1.0
#2	18M4 CNR feeder	3.3	0.9	1.8	0.6
#4	Horizon feeder	2.8	1.1	1.0	0.8

PROJECT PRIORITIZATION



APPENDIX J

CAPITAL PROJECT ACTIVITIES

Appendix J - GPI MATRIX DSP Capital p

APPENDIX K

TRUCKS AND MOBILE EQUIPMENT

GENERAL OVERVIEW

A truck replacement schedule has been created, utilizing industry best practices in terms of equipment age, to understand the general timing of equipment replacements. Replacement schedules are based on the following useful lives:

- Large Trucks with Mounted Equipment – 15 years
- Medium Trucks with Mounted Equipment – 12 years
- Small Trucks – 8 years
- Trailers – As required

Industry best practice replacement schedules noted above have been established and determined to:

- Minimize repair costs
- Minimize truck down time
- Maximize re-sale value
- Maximize efficiencies by taking advantage of changes in design technology

The most significant risk in continuing to use a unit beyond its useful life is the risk of having a major truck component failure, which requires a major expense. Examples for large trucks would be an engine replacement, failure of the aerial device hydraulic systems, or a boom structure failure. Spending a significant amount on a truck repair, when the truck is beyond its optimum age, is not cost-effective.

A chart has been prepared to capture all of GPI's mobile equipment data. Based on the useful lives noted above, the replacement schedule would be as indicated by the letter S in the following chart.

Truck Replacement Schedule:

GPI - Truck Replacement Schedul

A schedule based solely on age does not, however, take into consideration other factors, which are important to the decision process. An individual truck's level of reliability, repair, and maintenance history changes with each progressive year and thus, other factors need to be considered in the decision process.

An evaluation matrix (shown below) has been created to assist with making decisions regarding truck replacements. This system was created using best practices presented at a Fleet Management Conference and Equipment Show in the United States in 2007. The matrix takes into consideration the age of the vehicle, mileage, type of service, reliability, maintenance and repair cost, and the condition of the vehicle. Points are allocated for each vehicle in each category (truck class) and summed together to provide a total point score.

Factor	Fleet Evaluation Matrix for 2014 Budget Process				
	Description of Evaluation Criteria				
Age	One point for each year of service based on in service date				
Mileage	One point for each 16093 kilometers (10000miles) of use				
Type of Service	Light duty - Small Vehicles - Engineering or Administrator Use - Large vehicles - on road use only and lightly loaded.	n/a	Medium Duty - Small Vehicles - trucks used by trades which are commonly loaded - Large vehicles - mainly on road use and with average payload	n/a	Heavy Duty - Small & Large Vehicles - Trades use and commonly loaded for road and off road use
Reliability	Repair once every 3 months or less	n/a	Repair two or three times in 3 month period	n/a	Repair two or more times per month on average
Maintenance and Repair Costs	Accumulated cost as compared to original purchase cost - ≤ 20%	Accumulated cost as compared to original purchase cost - > 20% & ≤ 47%	Accumulated cost as compared to original purchase cost - > 47% & ≤ 74%	Accumulated cost as compared to original purchase cost - > 74% & < 100%	Accumulated cost as compared to original purchase cost - ≥ 100%
	Take into consideration body condition, rust, interior condition, anticipated repairs, and accident history				
Condition	Excellent - Truck has no signs of deterioration and is close to like new condition	Very Good - Truck is no longer in new condition but is still in very good shape	Good - Truck has signs of regular use	Fair - Truck is showing signs of early deterioration with advanced signs of rust, & worn interior components.	Poor - Truck has signs of rust perforation, seat covers are worn thru, and repairs have been postponed due to age and cost benefit.

The point ranges have been divided into action categories to assist with the replacement decision. The action items associated with the scoring result ranges are noted below:

Scoring Results	
Point Ranges	**Action**
Under 18	Excellent - Continue to Monitor
18-22	Good - Continue to Monitor
23-27	Qualifies for Replacement - Schedule Detailed Evaluation
over 27	Needs Immediate Consideration - Perform Detailed Evaluation

An evaluation matrix is utilized to track the scores for each individual piece of equipment. Final truck replacement decisions will be based on five components, as follows, and each of these factors will be reviewed annually:

- Age of Truck(s) – The older the truck the greater the risk of increased maintenance and repair expenditures – one point for each year of service;
- Mileage of the Truck(s) – One point for each 16,093 kilometers;
- Type of Service – What kind of duty can be expected in daily use? Point ranges 1 thru 5;

- Reliability – How often is the truck down due to repair? Point ranges 1 thru 5;
- Maintenance and Repair Cost – The accumulated cost as function of original purchase price. Point ranges 1 thru 5;
- Condition - Detailed assessment of the condition of the Truck(s) prior to setting current year's budget.

In addition to the evaluation matrix the two following factors are also taken into account:

- An assessment of current and future needs – is the truck suited for current needs, and what type of vehicle will be suitable for GPI's future needs as opposed to replacing the truck with a like for like replacement;
- Capital expenditures year over year – Truck expenditures should be smoothed out to even the spend, year over year.

GRIMSBY POWER'S FLEET

All trucks have been assessed, and the resulting scoring is shown below:

Fleet Evaluation Matrix:

Factor	Fleet Evaluation Matrix for 2015 Budget Process					Fleet Evaluation Matrix for 2015 Budget Process						
	Description of Evaluation Criteria					Large Trucks			Small Trucks			
						9	10	11	1	12	19	20
Age	One point for each year of service based on in service date					20	12	3	10	7	8	8
Mileage	One point for each 16093 kilometers (10000miles) of use					4	9	1	7	5	4	6
Type of Service	Light duty - Small Vehicles - Engineering or Administrator Use - Large vehicles - on road use only and lightly loaded.	n/a	Medium Duty - Small Vehicles - trucks used by trades which are commonly loaded - Large vehicles - mainly on road use and with average payload	n/a	Heavy Duty - Small & Large Vehicles - Trades use and commonly loaded for road and off road use	3	5	3	5	1	1	1
Reliability	Repair once every 3 months or less	n/a	Repair two or three times in 3 month period	n/a	Repair two or more times per month on average	5	5	1	1	1	1	1
Maintenance and Repair Costs	Accumulated cost as compared to original purchase cost - ≤ 20%	Accumulated cost as compared to original purchase cost - > 20% & ≤ 47%	Accumulated cost as compared to original purchase cost - > 47% & ≤ 74%	Accumulated cost as compared to original purchase cost - > 74% & < 100%	Accumulated cost as compared to original purchase cost - ≥ 100%	3	3	1	1	1	1	1
	Take into consideration body condition, rust, interior condition, anticipated repairs, and accident history											
Condition	Excellent - Truck has no signs of deterioration and is close to like new condition	Very Good - Truck is no longer in new condition but is still in very good shape	Good - Truck has signs of regular use	Fair - Truck is showing signs of early deterioration with advanced signs of rust, & worn interior components.	Poor - Truck has signs of rust perforation, seat covers are worn thru, and repairs have been postponed due to age and cost benefit.	4	5	1	3	3	3	3
					Total Score	39	39	10	27	18	18	20

It should be noted that maintenance and repair costs, as a percentage of original book value in the above table, is a qualitative assessment. Expense history is currently not tabulated prior to 2006. However, information that is available is as follows:

Accumulated Truck Expenses:

GRIMSBY POWER INC. VEHICLES

YEAR		SMALL VEHICLES				LARGE VEHICLES									TOTAL
		Truck 1	Truck 12	Truck 19	Truck 20	Truck 10	Truck 9	Truck 15	Truck 16	Truck 11	Pole and Reel Trailers	Forklift	New Utility Trailer	Truck Supplies	
2006		446.29	1,455.97	76.67	728.49	2,596.08	1,575.64	262.79	1,568.68						8,710.61
2007		552.32	737.98	-	91.64	6,204.27	934.37	65.00	109.96						8,695.54
2008		429.83	744.92	37.75	37.20	4,161.35	3,879.47	5,871.83	5,123.54						20,285.89
2009		1,116.72	-	-	-	5,379.68	13,978.66	-	2,573.80						23,048.86
2010		424.32	516.37	179.24	1,346.12	12,224.32	11,181.08	7,492.61	15,878.84						49,242.90
2011		1,280.30	1,441.50	555.30	1,527.74	10,103.66	8,356.53	4,674.58	8,663.36		825.50	755.70		963.20	39,147.37
2012		1,407.60	3,133.10	1,787.88	2,918.76	5,256.52	11,092.82	4,484.85	2,056.63	2,894.24	4,548.42	1,575.41	850.96	3,400.67	45,407.86
2013		1,685.89	2,622.45	611.20	1,858.48	7,810.53	17,634.04	-	-	2,882.83		1,588.19	579.48	1,680.60	38,953.69
2014		146.25	1,637.00	316.98	626.60	15,875.33	8,363.68			1,092.46	3,283.59	2,705.17	400.00		34,447.06
Accumulated Maintenance & Repair Cost	A	5,657.38	8,029.84	2,636.84	6,649.95	45,925.88	50,998.57	22,851.66	35,974.81	2,894.24	5,373.92	2,331.11		4,363.87	194,539.03
Original Book Value	B	27,128.00	21,795.00	22,173.00	26,409.00	134,551.00	205,925.00	157,370.00	124,501.00	309,925.92	27,119.89	27,025.02		10,009.44	1,093,932.27
A divided by B		20.9%	36.8%	11.9%	25.2%	34.1%	24.8%	14.5%	28.9%	0.9%	19.8%	8.6%		43.6%	0.17783462

For the older vehicles, the percentages shown are much lower than they should be, given that a large portion of the history is unknown. Please note that some vehicles show no expenses in a given year. Prior to 2010, some expenses, such as oil changes, were kept in a separate account with expenses that were not all truck maintenance and repair. These other expenses have not been separated into appropriate accounts, and therefore, are not included for years prior to 2010.

Based on the scoring system, Trucks 9 and 10 should be considered for replacement. A detailed assessment for each truck is as follows.

Truck 10 – Single Bucket Telescoping Man-Lift (out of Service as of Nov 2015)

- **Evaluation Matrix Rating** - 39
- **Age** – Was purchased as a new vehicle and was put into service in 2003. The chassis is a Ford F550 with a Versalift single bucket aerial device and steel body.
- **Mileage** – 151898 km as of November 1, 2015.
- **Type of Service** - Utilized as a primary service truck and is the most utilized bucket truck in the fleet.
- **Reliability** - This truck on average needs to be repaired 2 or 3 times in a 3 month period. In 2015, this truck was out of service for approximately 2 months while parts and repairs were being sourced.
- **Maintenance and Repair Costs** – Information on repair costs prior to 2006 have not been tabulated. However, costs since 2006 total $65,692 plus another $10,000 in 2015.
- **Condition**
    - Interior – fair condition – seats worn – floor worn.
    - Cab – good to fair condition – electrical wiring on lighting circuits showing signs of overheating and spot lighting are not working properly
    - Engine – fair to poor condition – oil leaking and had to replace seals, transmission slipping in reverse (will require repair in near future)
    - Body – showing advanced signs of corrosion. Large areas of spalling are noticeable everywhere on the body
    - Aerial Device – fair to poor condition – bucket levelling system is beginning to fail (will require repair in near future), and boom functions not as precise as they should be, this is a sign of advanced wear

Replacement Decision for Truck 10 – Single Bucket Truck – 2016 Budget

The line staff operate this truck daily, and the configuration of the truck (light duty chassis with heavy loading) is wearing quicker than expected. The useful life of this vehicle is 12 years, and it was 12 years old in 2015. When this unit was purchased, the intended use was service work, street light work, and work on 8kV circuits. The unit is not certified for work on 27kV. Since 2003, GPI has been investing heavily in the elimination of 8kV circuits with scheduled decommissioning of the last two substations in 2013, and in 2012, discontinued work on the street light assets owned by the Town of Grimsby. Since this unit is near its end of life (in terms of useful life (12 years) and is fully depreciated) and the type of work would be better suited to a different style of aerial device, the decision to replace is recommended.

- Design and order the truck in 2016
- Delivery of truck in late 2016 (dependent on manufacturing availability)

The design of the truck would change so that the unit could be used for both service work and work on 27kV, increasing the versatility without making the truck too big. A similar vehicle utilized in the industry as a standard service truck is shown in the photo below:

Benefits of this over the current design are as follows:

- Can be used as back-up to main line truck due to 27kV capability – can fill in for main line truck when the main line truck is being serviced
- Side by side boom reduces maintenance issues compared with T10's extension boom
- Small enough to fit into confined areas where the main line truck is limited
- Full size truck chassis (which is not fully loaded with normal stock levels) – increases longevity
- Useful life of truck is 15 years – same as main line truck

Replacement Decision for Truck 9 – Radial Boom Derrick

- **Evaluation Matrix Rating** - 39
- **Age** – Was purchased as a new vehicle and was put into service in mid-1995. The chassis is a Freightliner FL80 with an Altec D2055 derrick.
- **Mileage** – 58481 km as of December 31, 2014 – low mileage.
- **Type of Service** - Utilized to transport equipment and lift equipment into place. Is used when installing poles. Use has been reduced because main line truck now has lifting capacity for transformers.

- **Reliability** - This truck, on average, needs to be repaired 2 or 3 times in a 3-month period. This truck had one major issue in 2013 - an engine rebuild was necessary due to a faulty head gasket. In 2014, the derrick portion of the vehicle required several minor repairs, and multiple hoses required replacement.
- **Maintenance and Repair Costs** – Information on repair costs prior to 2006 have not been tabulated. However, costs since 2006 amount to $59,718.
    - Interior – fair condition – showing signs of normal wear and tear.
    - Cab – fair condition.
    - Engine – good condition.
    - Body – good condition.
    - Derrick – fair condition.

Replacement Decision for Truck 9

This truck is in good to fair condition and is constructed to today's standards. A replacement at this time is not required. Placed in the replacement schedule in 2017, but will be evaluated on a year-to-year basis.

APPENDIX L

CUSTOMER SURVEY (UTILITY PULSE)

Appendix L Grimsby Power Customer Surv

DISTRIBUTION SYSTEM PLANNING CUSTOMER SURVEY (BURMAN ENERGY)

Appenxdix L Grimsby Power DSP Survey Fir

APPENDIX M

METER FAILURE RATES DATA

Material	Serial Number	Model number	Install date	Removal date
000000000000001064	407993	iSA2	29/03/2010	05/04/2010
000000000000001064	405620	iSA2	21/04/2010	10/05/2010
000000000000001064	405515	iSA2	19/04/2010	11/05/2010
000000000000001064	408131	iSA2	07/04/2010	27/05/2010
000000000000001064	402335	iSA2	26/05/2010	07/06/2010
000000000000001064	403964	iSA2	08/06/2010	05/07/2010
000000000000001064	406054	iSA2	12/04/2010	06/07/2010
000000000000001064	403495	iSA2	17/06/2010	09/07/2010
000000000000001064	403866	iSA2	31/05/2010	30/07/2010
000000000000001064	404404	iSA2	03/06/2010	02/09/2010
000000000000001064	402682	iSA2	15/06/2010	14/10/2010
000000000000001064	405158	iSA2	14/04/2010	05/11/2010
000000000000001064	409824	iSA2	26/04/2010	08/11/2010
000000000000001064	404642	iSA2	14/06/2010	10/11/2010
000000000000001064	406042	iSA2	12/04/2010	16/03/2011
000000000000001064	406041	iSA2	12/04/2010	02/05/2011
000000000000001065	409892	iNA2	23/06/2010	20/05/2011
000000000000001064	403949	iSA2	31/05/2010	31/05/2011
000000000000001064	405892	iSA2	21/04/2010	16/06/2011
000000000000001064	406322	iSA2	04/05/2010	16/06/2011
000000000000001064	401983	iSA2	11/05/2010	16/06/2011
000000000000001064	401902	iSA2	01/06/2010	16/06/2011
000000000000001064	407076	iSA2	05/05/2010	28/07/2011
000000000000001064	402892	iSA2	13/05/2010	08/08/2011
000000000000001064	404198	iSA2	15/06/2010	16/08/2011

Material	Serial Number	Model number	Install date	Removal date
000000000000001064	409163	iSA2	28/04/2010	18/08/2011
000000000000001064	409606	iSA2	29/04/2010	18/08/2011
000000000000001064	407208	iSA2	29/03/2010	13/09/2011
000000000000001064	401181	iSA2	14/06/2010	13/09/2011
000000000000001065	409934	iNA2	23/06/2010	28/09/2011
000000000000001064	403237	iSA2	03/06/2010	11/10/2011
000000000000001064	404914	iSA2	19/04/2010	06/02/2012
000000000000001064	403505	iSA2	18/06/2010	02/04/2012
000000000000001064	409345	iSA2	27/04/2010	05/06/2012
000000000000001064	403664	iSA2	11/06/2010	22/06/2012
000000000000001064	404188	iSA2	15/06/2010	07/07/2012
000000000000001064	403743	iSA2	08/06/2010	05/09/2012
000000000000001064	404906	iSA2	19/04/2010	06/09/2012
000000000000010022	410103	isa2	03/03/2011	19/09/2012
000000000000001064	409417	iSA2	29/04/2010	11/10/2012
000000000000001064	403365	iSA2	15/10/2010	15/10/2012
000000000000001064	404829	iSA2	19/04/2010	21/11/2012
000000000000001064	403954	iSA2	31/05/2010	04/01/2013
000000000000001064	409703	iSA2	03/05/2010	08/04/2013
000000000000001064	404492	iSA2	16/06/2010	09/07/2013

APPENDIX N

LOAD FORECAST MODEL

2016 Load Forecast Model Version 11.xlsx