

## **ONTARIO ENERGY BOARD**

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

**AND IN THE MATTER OF** an Application by Hydro One Networks Inc. (**Hydro One**) for electricity distribution rates beginning January 1, 2018, until December 31, 2022 (the **Application**).

**EB-2017-0049**

**Interrogatories From  
Anwaatin Inc. (Anwaatin)**

**January 24, 2018**

**Question:** 1

**Reference:**

- Exhibit A, Tab 4
- Exhibit A, Tab 4, Schedule 2

**Preamble:** Hydro One's distribution business serves the majority of the First Nations and Métis communities in Ontario.

In the Application, Hydro One states that it will be implementing a three-pronged strategy that is intended to increase system reliability within First Nations communities (increasing capital investments and replacing equipment that affects reliability; leveraging technology to allow Hydro One to better detect, limit the scope, and remotely respond to certain types of outages; and reducing planned outages by bundling work).

Hydro One indicates that, through its First Nations and Métis Strategy (Exhibit A, Tab 4, Schedule 2), communities would like to see an increase in procurement, investment/ownership opportunities, and other business partnership opportunities for Aboriginal businesses. Hydro One further indicates that First Nations communities have raised concerns about the high frequency and duration of power outages, particularly in Northern Ontario. Some communities have also indicated that the electricity supply is not sufficiently reliable to serve businesses on reserve and are concerned about degrading Hydro One asset conditions on reserve.

Hydro One also notes that First Nations communities and customers feel they are disproportionately impacted by high electricity costs. Many have raised concerns that their delivery charge is higher than their electricity consumption. In addition, First Nations customers are most sensitive to cost and place the greatest importance on cost over improvements in the service they receive.

Hydro One indicates that it hopes to address many of the Indigenous concerns with reliability and distributed energy resources, including Indigenous investment and ownership, and is developing a consolidated framework to guide First Nations and Métis relations and engagement across all lines of business.

- a) Please describe how Hydro One consulted First Nations on any and all investment/ownership opportunities and other business partnership opportunities related to DERs in grid-connected communities, and what

resulted from these consultation efforts.

- b) Please describe in detail and provide all reports, notes, memos and documents related to:
- (i) all processes Hydro One undertook to consult with Indigenous communities on this distribution rate application; and
  - (ii) the outcome of those consultations.
- c) Please list each and all distributed energy resources that:
- (i) Hydro One considered for Indigenous communities;
  - (ii) Hydro One consulted with First Nations on;
  - (iii) Hydro One implemented or intends to implement for Indigenous communities;
  - (iv) the Hydro One actions that result from them; and
  - (v) the quantified improvements in reliability and service that result from them.
- d) Since First Nations in Ontario have now acquired or will soon acquire more than 14 million shares of Hydro One (representing 2.4% of the outstanding common shares of Hydro One), please describe how Hydro One will address the significant concerns of Indigenous shareholders relating to the high frequency and duration of power outages in Indigenous communities and the disparate reliability afforded to this class of shareholder.

**Question: 2**

**Reference:** • Exhibit B1, Tab 1, Schedule 1, Section 3.5

**Preamble:** In 2015, the North American Electric Reliability Corporation (**NERC**) Essential Reliability Services Task Force (**ERSTF**) recognized that the power system resource mix is changing from the use of larger synchronous sources to the use of a more diverse fleet of smaller sized resources with varying characteristics.<sup>1</sup> NERC defines distributed energy resources (**DERs**) as any resource on the distribution system that produces electricity and is not otherwise

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<sup>1</sup> North American Electric Reliability Corporation (NERC), 2017 – Distributed Energy Resources, February 2017, online: < [http://www.nerc.com/comm/Other/essntlrbltysrvcsstskfrDL/Distributed\\_Energy\\_Resources\\_Report.pdf](http://www.nerc.com/comm/Other/essntlrbltysrvcsstskfrDL/Distributed_Energy_Resources_Report.pdf) >.

included in the formal NERC definition of the Bulk Electricity System (BES). DERs can include distributed generation (**DG**), behind the meter generation (**BTMG**), energy storage facilities (EFS), DER aggregation (DERA - aggregating multiple DG, BTMG, or ES devices at different points of interconnection on the distribution system), micro-grids, cogeneration, and emergency, stand-by and back-up generation (BUG).

Energy consumer demand for DERs is growing as customers are able to access or benefit from DERs in response to unexpected utility power outages, planned rolling blackouts, power quality problems, and increases in power costs. With the availability and increasing cost-effectiveness of DERs, distribution customers are seeking to take advantage of technologies for power generation, storage and back-up supply.

- a) Please describe how Hydro One consulted First Nations on increasing Hydro One capital investments in DERs to improve system reliability for First Nation customers in grid-connected communities and what resulted from these consultation efforts.
- b) Please describe how Hydro One's consolidated framework to guide its First Nations and Métis relations and engagement is inclusive of DERs and responsive to the growth in the application of DERs.
- c) Given Hydro One's findings that some First Nation communities indicate that the electricity supply is not sufficiently reliable to serve businesses on reserve and are concerned about degrading Hydro One asset conditions on reserve, please describe and provide any and all of Hydro One's plans, timing and cost to:
  - (i) effectively address reliability on all reserves;
  - (ii) facilitate businesses on reserves; and
  - (iii) integrate DERs into areas of Northern Ontario that experience high frequency and duration of power outages to improve system reliability.
- d) Given: (i) Hydro One's process of developing a consolidated framework to guide First Nations and Métis relations and engagement across all lines of business, and (ii) Hydro One's expansion into US markets, please provide a detailed listing of each and all Hydro One efforts to obtain, consider and integrate information, experience and knowledge from tribal utilities in the U.S. and U.S. electricity distributors that serve Native American tribes into Hydro

One's First Nations and Métis Strategy, Framework and Guidance. Please highlight any and all information and initiatives relating to DERs.

- e) Please describe how Hydro One's investment planning process considers appropriate planning criteria for the increasing scale of demand for DERs, especially for rural and First Nation customers seeking relief from reliability issues and increasing costs.
- f) Please describe how Hydro One is accommodating the demand for DERs connected to the distribution system in terms of making its distribution network and customer services "DER-friendly", especially in areas where system reliability is a significant issue, such as northern Ontario.

**Question: 3**

Reference: • Exhibit B1, Tab 1, Schedule 1, Section 3.5

- a) Please list any and all First Nation communities that are concerned about historical, present and future compensation (or the lack thereof), for Hydro One assets on reserve land and/or within traditional territories and treaty lands.
- b) Please list and describe in detail any and all measures that Hydro One has taken with respect to DERs and business partnerships with DERs as a means of accommodating First Nation communities that are concerned about historical, present and future compensation (or the lack thereof), for Hydro One assets on reserve land and/or within traditional territories and treaty lands.
- c) Please list any and all DER assets, projects or initiatives that Hydro One has:
  - (i) in its rural distribution networks in non-First Nation communities in Ontario;
  - (ii) in its urban distribution networks in Ontario; and
  - (iii) in its rural distribution networks in Washington, Oregon, Idaho, Alaska and Montana.
- d) Please provide all power quality and reliability metrics and results for the Hydro One distribution system for:
  - (i) all Ontario;
  - (ii) Northern Ontario; and
  - (iii) the Anwaatin communities.

- e) Please provide a complete list, and the cost, of any and all distribution system upgrades in:
  - (i) Northern Ontario; and
  - (ii) the Anwaatin communities.
- f) Please describe how Hydro One plans to adopt and/or scale any and all DER projects, or other lesson from Avista related to Indigenous communities, in rural Ontario and for First Nation communities.
- g) Has Hydro One sought information from other North American regulated electricity distributors on their applications and experiences where DERs may be solutions for customers are dealing with rural power quality problems, and increases in power costs? Please describe any and all applications and experiences that Hydro One is investigating further or seeking to apply to its distribution networks. Please provide any information that Hydro One has received from other entities regarding same.

**Question: 4**

Reference: • Exhibit A, Tab 4, Schedule 2, page 3

Preamble:

- a) Please provide the presentation, all notes, memos, reports and related documents from Hydro One's First Nations engagement session, including any and all reports to the Board of Directors.
- b) Please provide any and all communications between Hydro One Transmission and Hydro One Distribution relating to:
  - (i) the needs of Indigenous communities;
  - (ii) reliability in Indigenous communities; and
  - (iii) any other matter relating to Indigenous communities.

**Question: 5**

Reference: • Exhibit A, Tab 4, Schedule 2, page 5

- a) Please identify precisely which of the issues identified Hydro One considers to be beyond Hydro One's authority, jurisdiction and mandate and the rationale for that determination in chart format.

**Question: 6**

Reference: • Exhibit A, Tab 4, Schedule 2, page 6

*"Under this new service model that was launched in September 2016, representatives from Hydro One's Customer Service team visit First Nations communities around the province to meet with Chiefs and Councils, conduct community information sessions, and have one-on-one sessions with individual customers. During these sessions, Hydro One helps customers by providing information about conservation programs and resources that may assist low-income customers and ensure that qualifying customers are aware of and accessing the Province of Ontario's Electricity Support Program."*

- a) Please provide copies of:
- (i) any and all materials provided to customers during these sessions; and
  - (ii) any and all notes, memos, reports, and documents resulting from these sessions.

**Question: 7**

Reference: • Exhibit A, Tab 4, Schedule 2, page 6

*"In the past year, Hydro One has also made submissions to the Ontario Energy Board, at the request of the Minister of Energy, to provide advice on options for an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity customers."*

- a) Please provide a copy of each and all such submissions or other communications.

**Question:** 8

**Reference:** • Exhibit A, Tab 4, Schedule 2, page 7

*"In the past year, Hydro One has mapped out all transmission lines and distribution stations and feeders serving First Nations communities and collected relevant system reliability data in order to make sound and targeted investments to improve system reliability for First Nations communities. First Nation communities served by Hydro One are supplied from 55 transmission lines and 89 distribution lines. Historically, approximately 77% of power failures on these transmission lines were caused by deteriorated equipment (e.g., insulators, wood poles, conductor, etc.) or caused by adverse weather (freezing rain, ice, lightning, etc.) Approximately 50% of power failures on distribution lines occur from tree contacts which lead to equipment failures (e.g., poles, transformers, lines failures, etc.).*

*"Hydro One will be implementing a three-pronged strategy that is intended to increase system reliability within First Nations communities. The strategy consists of: increasing capital investments and replacing equipment that affects reliability; leveraging technology to allow Hydro One to better detect, limit the scope, and remotely respond to certain types of outages; and reducing planned outages by bundling work."*

- a) Please provide maps of all the transmission lines, distribution stations and feeders serving First Nations communities referenced above and a description of each such asset, its age, useful life, and planned replacement date.
- b) Please provide all system reliability data collected identifying what applies to distribution lines and highlight the relevant data, stations and feeders serving First Nations communities referenced above and the Anwaatin communities.
- c) Please provide a chart comparing the reliability data in referred to in (b) with the data for Hydro One's R1, R2, and UR customers on a year-by-year basis for the last 10 years.
- d) Please provide a chart delineating which power failures were on transmission lines, distribution lines/assets and the cause of the failure for each distribution

asset or mixed distribution/transmission asset serving

- (i) First Nations communities; and
  - (ii) the Anwaatin communities.
- e) Please provide the same chart for Hydro One's R1, R2, and UR customers on a year-by-year basis for the last 10 years.
- f) Please also provide system reliability averages and trends over the 2007-2017 and 2006-2016 10-year periods for each of the following: First Nations communities, the Anwaatin communities, Hydro One's R1 customers, Hydro One's R2 customers, and Hydro One's UR customers.
- g) Please provide a chart comparing the percentage of power failures on distribution lines serving: (i) First Nations communities and (ii) the Anwaatin communities that were caused by or related to trees with the percentage of failures caused by or related to trees on distribution lines serving Hydro One's R1, R2, and UR customers on a year-by-year basis for the last 10 years.
- Please also provide averages of these percentages over the 10-year period for each of the following: First Nations communities, Hydro One's R1 customers, Hydro One's R2 customers, and Hydro One's UR customers.
- h) Please provide a detailed list of the causes of the power failures on distribution lines and assets serving: (i) First Nations communities and (ii) the Anwaatin communities that were not related to trees.
- i) Please provide the percentage of the total power failures on distribution lines and assets serving: (i) First Nations communities, (ii) the Anwaatin communities, and (iii) the rest of Ontario that were attributable to the causes outlined in (h) above.

**Question: 9**

Reference: • Exhibit H1, Tab 2, Schedule 3

- a) Please explain in detail and provide supporting calculations for Hydro One's method of determining and calculating connection impact charges for:
  - (i) Aboriginal energy projects that require new lines to be built; and
  - (ii) joint-venture Aboriginal energy projects that require new lines to be built.
  
- b) Please explain in detail and provide supporting calculations for Hydro One's method of determining and calculating service charges for:
  - (i) Aboriginal energy projects that require new lines to be built; and
  - (ii) joint-venture Aboriginal energy projects that require new lines to be built.
  
- c) Please explain in detail and provide supporting calculations for how Hydro One assesses charges when multiple projects require the same line.

**Question: 10**

Reference: • Exhibit H1, Tab 2, Schedule 3

- a) Please describe in detail the process that Hydro One Distribution undertakes to evaluate the nature and costs for the connection of a single new, small (FIT size), renewable energy facility to its distribution system:
  - (i) in Southern Ontario;
  - (ii) in Northern Ontario;
  - (iii) in a First Nation community; and
  - (iv) in a remote community.
  
- b) Please provide the same information requested in (a) for the connection of multiple (5-10) new small (FIT size) renewable energy facilities where all such facilities are connecting to the same new distribution line.

- c) Please identify, for the situation set out in (b), whether the evaluation is a two-step process (evaluate the distribution requirements separately for each renewable facility, evaluate all facilities together) or a one-step process (evaluate the reality of all facilities) and how the costs of the connection impact assessment are affected. Specifically, please describe in detail how costs are determined and provide illustrative example of what they are likely to be.

ALL OF WHICH IS RESPECTFULLY  
SUBMITTED THIS

24<sup>th</sup> day of January, 2018



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