Anwaatin Inc. (Anwaatin) INTERROGATORY #001

Reference:

Exhibit A, Tab 9, Schedule 1
Exhibit A, Tab 5, Schedule 1, page 7 of 8
Exhibit 81, Tab 1, Schedule 2, page 10 of 13
Exhibit 82, Tab 1, Schedule 1, page 1,2
Exhibit 82, Tab 2, Schedule 1, Attachment 2-4

Interrogatory:

Hydro One Networks Inc. (Hydro One) has committed to business objectives including customer focus, operational effectiveness, public policy responsiveness and financial performance. The establishment of a scorecard is one of the key elements of performance measurement under the OEB's new Filing Requirements for Electricity Transmission Applications. Hydro One's evidence lists various "stakeholder sessions" in 2015 and 2016, including a session on April 27, 2016, to discuss a proposed transmission scorecard and cost efficiencies, productivity improvements and key performance indicators (KPis).

Hydro One is aware that Chiefs of Ontario leader Isadore Day has stated publicly that the Ontario government should have engaged in "extensive consultation" with First Nations governments about the semi-privatization of the company, which has numerous transmission and distribution lines running through First Nations' territory.

In its century-long history, Hydro One (previously Ontario Hydro) projects have caused serious disruption on First Nations' territories, and Hydro One has sought to address these "legacy issues" by implementing a strict consultation and grievance process for First Nations.

Hydro One has established partnerships with aboriginal communities for infrastructure projects, such as B2M Limited Partnership with the Saugeen Ojibway Nation. B2M Limited Partnership owns most of the assets relating to specific Bruce-to-Milton transmission line assets, and is a significant source of economic development and wealthbuilding for First Nations people.

First Nations have constitutionally recognized legal status within Ontario, and they and their members are important Hydro One customers who have unique insights on the performance of Hydro One's transmission business, the proposed transmission scorecard, cost efficiencies, productivity improvements and KPis. Transmission reliability and delivery performance are very important to First Nations.

Witness: Oded Hubert/Michael Vels

a) Please describe all measures undertaken by Hydro One to ensure First Nations inclusion in the stakeholder sessions that took place on February 11, 2015, August 6, 2015, and January 11, 2016, and the stakeholder session held on April 27, 2016, on Hydro One's proposed transmission scorecard and cost efficiencies, productivity improvements and KPis.

b) Please list which, if any, First Nation governments and First Nation organizations Hydro One invited to the stakeholder sessions listed in Question1(a).

c) Please describe any and all assistance Hydro One made available to First Nation entities to facilitate their attendance at the stakeholder sessions listed in Question 1(a).

d) Please provide all input that Hydro One has sought and received from First Nations governments, groups and businesses with respect to its proposed transmission scorecard and cost efficiencies, productivity improvements and KPis, and specifically from First Nations governments and organizations in the regions of Northwest Ontario and North/East of Sudbury.

Response:

a) Hydro One invited all intervenors of record from Hydro One's EB-2014-0140 transmission rates proceeding to the stakeholder sessions. This is consistent with the normal practice that is accepted by the OEB. Notice of Hydro One's EB-2014-0140 proceeding, to set 2015 and 2016 transmission rates, was provided to the public by the OEB. The OEB's Notice included an invitation to become an active participant in that proceeding.

b) Please see the response to part a) of this question.

c) As prescribed by the OEB, Hydro One pays the costs incurred for interested parties to participate in proceedings Hydro One brings before the OEB. Cost award Decisions are issued by the OEB at the conclusion of each proceeding. This includes participation in stakeholder sessions.

d) Please see the response to part a) of this question.

Anwaatin Inc. (Anwaatin) INTERROGATORY #002

Reference:

Exhibit H1, Tab 5, Schedule 1, Hydro One Notice of Application

Interrogatory:

Given the unique energy supply mix and the nature of heating, ventilation and cooling options and equipment used by non-remote First Nations in northern and southern Ontario, especially the many First Nations lacking access to low-cost natural gas for home and water heating, many First Nations households are not similar to the "typical residential customer" identified in Hydro One's Notice of Application.

a) Please confirm that Hydro One has all relevant data to be able to calculate the expected increase in a typical residential customer's bill in 2017 and 2018, and provide the related bill impacts.

b) Please confirm that Hydro One has the data to calculate the expected increase for remote First Nations and rural communities in northern Ontario and southern Ontario and provide the related bill impacts.

c) Please confirm that Hydro One has the data to calculate the expected increase for non-remote First Nations and rural communities in northern Ontario and southern Ontario and provide the related bill impacts.

d) Assuming that the rate application is approved as requested in the application, please describe (in $and %) how the proposed rate increase will impact the customer bill in 2017 and 2018 for a typical First Nation (non-remote) household without access to low-cost natural gas for home and water heating in the planning regions of Northwest Ontario and North/East of Sudbury. Please provide the same calculations for the average customer in the more densely-populated planning regions of southern Ontario.

Response:

a) Yes, Hydro One can estimate the expected increase in a typical residential customer’s bill in 2017 and 2018 caused by the proposed changes to the transmission rates. The expected increase for a typical Hydro One medium-density residential customer (R1) is shown in Table 3 in Exhibit H1, Tab 5, Schedule 1.

Witness: Henry Andre

b) Hydro One interprets "remote" to refer to customers that are not connected to the Grid, and therefore the proposed changes to the transmission charges will not have an impact on the bill of remote customers.

c) Yes, Hydro One can estimate the expected increase for typical residential customers in non-remote First Nations in 2017 and 2018 caused by the proposed changes to the Transmission rates. Non-remote First Nations residential customers are classified as either medium-density residential ("R1"), or low-density residential ("R2"). The bill impact of the proposed changes to transmission rates will depend on the residential class a customer is in, as well as the customer's monthly kWh consumption.

d) As stated in part (c), the non-remote First Nations residential customers are classified as either medium-density residential ("R1"), or low-density residential ("R2"). While the applicable rates are the same for both First Nations communities and non-First Nations communities within each rate class, consumption for customers in northern Ontario can be higher than their counterparts in southern Ontario. The bill impacts on low, typical and high consuming R1 and R2 customers in northern Ontario are determined using the same approach as Table 3 in Exhibit H1, Tab 5, Schedule 1, which looks at how the proposed changes to transmission rates will affect the Retail Transmission Service Rates ("RTSRs") for Hydro One's distribution-connected customers. The table below provides the bill impacts on typical Hydro One non-Remote First Nations residential customers in northern Ontario at low, typical and high consumption levels. Customers with electric space heating and electric water heating are commonly high consuming.

Typical Hydro One FN R1 and R2 Residential Customer Bill Impacts in Northern Ontario

	R1 Residential Customer			**R2 Residential Customer**		
	500 kWh	**1150 kWh**	**2300 kWh**	**500 kWh**	**1150 kWh**	**2300 kWh**
Total Bill as of Jan 1, 2016[1]	$ 131.61	$ 255.80	$ 475.51	$ 151.36	$ 83.98	$ 518.62
RTSR included in 2016 R1 Customer's Bill	$ 6.24	$ 14.35	$ 28.71	$ 6.13	$ 14.11	$ 28.21
Estimated 2017 RTSR[2]	$ 6.46	$ 14.86	$ 29.72	$ 6.35	$ 14.60	$ 29.21
2017 increase in Monthly Bill	**$ 0.22**	**$ 0.51**	**$ 1.01**	**$ 0.22**	**$ 0.50**	**$ 1.00**
2017 increase as a % of total bill	*0.2%*	*0.2%*	*0.2%*	*0.1%*	*0.2%*	*0.2%*
Estimated 2018 Monthly RTSR[2]	$ 6.79	$ 15.61	$ 31.23	$ 6.67	$ 15.34	$ 30.69
2018 increase in Monthly Bill	**$ 0.33**	**$ 0.75**	**$ 1.51**	**$ 0.32**	**$ 0.74**	**$ 1.48**
2018 increase as a % of total bill	*0.2%*	*0.3%*	*0.3%*	*0.2%*	*0.3%*	*0.3%*

[1]Total bill including HST, based on time-of-use commodity pricing effective May 1, 2016 and 2016 distribution rates approved per Distribution Rate Order EB-2015-0079
[2]The impact on RTSR is assumed to be the net impact on average Transmission rates, as per Table 2, adjusted for Hydro One's revenue disbursement allocator per approved 2016 UTRs

Hydro One residential customers in more densely-populated areas, such as southern Ontario, are typically classified as an R1 customer. The bill impacts on low, typical and high consuming R1 customers in are provided in the table below using the same approach as Table 3 in Exhibit H1, Tab 5, Schedule 1.

Typical Hydro One R1 Residential Customer Bill Impacts in Southern Ontario

	R1 Residential Customer		
	400 kWh	**900 kWh**	**1850 kWh**
Total Bill as of Jan 1, 2016[1]	$ 112.50	$ 208.03	$ 389.54
RTSR included in 2016 R1 Customer's Bill	$ 4.99	$ 11.23	$ 23.09
Estimated 2017 RTSR[2]	$ 5.17	$ 11.63	$ 23.91
2017 increase in Monthly Bill	**$ 0.18**	**$ 0.40**	**$ 0.82**
2017 increase as a % of total bill	*0.2%*	*0.2%*	*0.2%*
Estimated 2018 Monthly RTSR[2]	$ 5.43	$ 12.22	$ 25.12
2018 increase in Monthly Bill	**$ 0.26**	**$ 0.59**	**$ 1.21**
2018 increase as a % of total bill	*0.2%*	*0.3%*	*0.3%*

[1]Total bill including HST, based on time-of-use commodity pricing effective May 1, 2016 and 2016 distribution rates approved per Distribution Rate Order EB-2015-0079
[2]The impact on RTSR is assumed to be the net impact on average Transmission rates, as per Table 2, adjusted for Hydro One's revenue disbursement allocator per approved 2016 UTRs

Anwaatin Inc. (Anwaatin) INTERROGATORY #003

Reference:

Exhibit B1, Tab 1, Schedule 3, pages 22-29 of 29
Exhibit B1, Tab 1, Schedule 3, Attachment 1

Interrogatory:

Regional and customer-specific data on reliability and related price is relevant to establishing the value of the services that Hydro One provides relative to the price/bills that customers pay.

a) Given the importance Hydro One has attached to reliability measures in this application (including frequency of momentary interruptions, frequency of sustained interruptions, overall frequency of interruptions, duration of sustained interruptions, delivery point unreliability, delivery point unreliability and customer delivery point performance outliers, and customer delivery point performance standards (CDPP)), Hydro One's focus on customers, and that Hydro One conducts a detailed annual assessment of the performance measures described above, please provide detailed data and calculations for (i) all Hydro One service territory, (ii) northern and remote communities, and (iii) First Nation communities, including Aroland First Nation, Moose Factory and Moosonee, Rocky Bay First Nation, and Red Rock Indian Band, Geraldton and Beardmore in the planning regions of Northwest Ontario and North/East of Sudbury, on the following:

(i) the frequency of momentary interruptions;
(ii) the frequency of sustained interruptions;
(iii) overall frequency of interruptions, including both momentary and sustained interruptions;
(iv) the duration of sustained interruptions;
(v) delivery point unreliability;
(vi) delivery point unreliability outliers; and
(vii) CDPP outliers.

b) Please provide Hydro One's CDPP standards.

c) Please provide a description of how Hydro One measures customer focus and any and all related data and results pertaining to customer focus.

Response:

a) For Hydro One Service Territory performance, please refer to Figures in Exhibit B1, Tab 1, Schedule 3, for following measures:

Figure	Page	Question	Measure
Figure 8a	23	(i)	the frequency of momentary interruptions
Figure 8b	23	(ii)	the frequency of sustained interruptions
Figure 9	24	(iii)	overall frequency of interruptions, including both momentary and sustained interruptions
Figure 10	24	(iv)	the duration of sustained interruptions
Figure 11	25	(v)	delivery point unreliability
Figure 14	28	(vii)	CDPP outliers

For (vi), delivery point unreliability outliers, please refer (vii) for details.

2. The performance data in the filing doesn't include remote communities since it is not integrated with the bulk electric system and we don't have readily available performance data for the system supplying remote communities.

Following tables are provided for Northern transmission system performance:

i) Frequency of Momentary Interruptions

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# of momentary interruptions	285	313	370	219	304	253	270	368	217	272
# of DPs in Northern Region	150.5	150.0	150.6	149.2	147.5	146.4	146.7	148.6	149.2	148.6
T-SAIFI-m*	1.89	2.09	2.46	1.47	2.06	1.73	1.84	2.48	1.45	1.83

**T-SAIFI-m= Total number of momentary interruptions / total number of DP monitored*

ii) Frequency of Sustained Interruptions:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# of sustained interruptions	375	330	276	233	174	222	267	198	180	244
# of DPs in Northern Region	150.5	150.0	150.6	149.2	147.5	146.4	146.7	148.6	149.2	148.6
T-SAIFI-s*	2.49	2.20	1.83	1.56	1.18	1.52	1.82	1.33	1.21	1.64

**T-SAIFI-s= Total number of sustained interruptions / total number of DP monitored*

iii) Overall Frequency of Interruptions:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# of overall interruptions	660	643	646	452	478	475	537	566	397	516
# of DPs in Northern Region	150.5	150.0	150.6	149.2	147.5	146.4	146.7	148.6	149.2	148.6
T-SAIFI-all*	4.38	4.29	4.29	3.03	3.24	3.24	3.66	3.81	2.66	3.47

**T-SAIFI-all= Total number of momentary and sustained interruptions / total number of DP monitored*

iv) Duration of Sustained Interruptions:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Duration of sustained interruptions (minutes)	23108	22555	29650	14167	37063	86609	52229	29136	17466	26512
# of DPs in Northern Region	150.5	150.0	150.6	149.2	147.5	146.4	146.7	148.6	149.2	148.6
T-SAIDI*	153.5	150.4	196.9	95.0	251.2	591.6	356.0	196.1	117.1	178.4

**T-SAIDI= Total duration of sustained interruptions / total number of DP monitored*

v) Delivery Point Unreliability Index:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Unsupplied Energy (MW× minutes)	142549	127241	126905	62776	125811	297938	215415	194942	111602	125489
System Peak Load (MW)	2179.6	2079.2	1952.0	1971.8	2025.7	2054.7	1995.3	2010.5	1856.1	1822.7
DPUI*	65.4	61.2	65.0	31.8	62.1	145.0	108.0	97.0	60.1	68.8

**DPUI =Total unsupplied energy / system peak load*

vi) Delivery point Unreliability Outliers: please refer to (vii) for details

vii) CDPP Outliers:

	2010	2011	2012	2013	2014	2015
Total # of DPs in Northern Region	148	149	149	150	152	149
# of Outliers in Northern Region	64	56	53	53	65	not available

3. First Nation Communities, as provided in this IR, plus Nipigon provided in Anwaatin IR #5 are supplied by following Hydro One transmission delivery points:

- Beardmore DS #2
- Long Lac TS
- Moosonee DS
- Nipigon DS
- Red Rock DS

Moosonee and Moose Factory Community is also supplied by Kashechewan CTS and Fort Albany CTS which are not in Hydro One's transmission service territory and they are excluded from the performance study.

Following tables are provided for the transmission system supplying First Nation Communities:

i) Frequency of Momentary Interruptions

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# of momentary interruptions	8	13	6	2	8	12	5	9	3	7
# of DPs Supplying First Nation Communities	5	5	5	5	5	5	5	5	5	5
T-SAIFI-m*	1.60	2.60	1.20	0.40	1.60	2.40	1.00	1.80	0.60	1.40

**T-SAIFI-m = Total number of momentary interruptions / total number of DP monitored*

ii) Frequency of Sustained Interruptions:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# of sustained interruptions	9	20	6	10	12	9	7	13	6	5
# of DPs supplying First Nation Communities	5	5	5	5	5	5	5	5	5	5
T-SAIFI-s*	1.80	4.00	1.20	2.00	2.40	1.80	1.40	2.60	1.20	1.00

**T-SAIFI-s = Total number of sustained interruptions / total number of DP monitored*

iii) Overall Frequency of Interruptions:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# of overall interruptions	17	33	12	12	20	21	12	22	9	12
# of DPs supplying First Nation Communities	5	5	5	5	5	5	5	5	5	5
T-SAIFI-all*	3.40	6.60	2.40	2.40	4.00	4.20	2.40	4.40	1.80	2.40

**T-SAIFI-all = Total number of momentary and sustained interruptions / total number of DP monitored*

iv) Duration of Sustained Interruptions:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Duration of sustained interruptions (minutes)	427	1303	1144	570	4251	1855	759	3449	2784	2614
# of DPs supplying First Nation Communities	5	5	5	5	5	5	5	5	5	5
T-SAIDI*	85.4	260.6	228.8	114.0	850.2	371.0	151.8	689.8	556.8	522.8

**T-SAIDI = Total duration of sustained interruptions / total number of DP monitored*

v) Delivery Point Unreliability Index:

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Unsupplied Energy (MW×minutes)	1452	6951	962	4164	19869	15267	3171	13996	15206	14828
System Peak Load (MW)	41.5	39.5	38.6	35.3	29.5	31.0	29.7	32.5	32.0	32.0
DPUI*	35.0	175.9	24.9	118.1	673.8	492.6	106.7	430.2	474.8	463.9

**DPUI =Total unsupplied energy / system peak load*

vi) Delivery point Unreliability Outliers: please refer (vii) for details

vii) CDPP Outliers:

Year	Hydro One Delivery Points
2010	LONGLAC TS, MOOSONEE DS
2011	LONGLAC TS, MOOSONEE DS
2012	LONGLAC TS, MOOSONEE DS
2013	MOOSONEE DS
2014	LONGLAC TS, MOOSONEE DS, BEARDMORE #2 DS
2015	not available

b) Please refer to Exhibit B1, Tab 1, Schedule 3, Attachment 1 for Hydro One's CDPP Standard.

c) Customer focus is best described as an attribute or value that is an integral part of Hydro One's corporate culture rather than a separate process and metric. As such, the measurement of customer focus is reflected in the proposed Transmission Regulatory Scorecard in Exhibit B2, Tab 1, Schedule 1, Attachment 1. The Performance Outcomes, Performance Categories and Measures proposed in this Scorecard measure overall corporate performance which in turn is driven by underlying processes and actions. Thus the specific measures that directly relate to customer outcomes and experience in this proposed Scorecard illustrate Hydro One's emphasis and measure of customer focus. The Performance Categories that directly relate to customer outcomes are Service Quality, Customer Satisfaction and System Reliability. The results for the corresponding Measures are listed in Attachment 1 for the years 2011 to 2015.

Anwaatin Inc. (Anwaatin) INTERROGATORY #004

Reference:

Exhibit B 1, Tab 1, Schedule 3, Attachment 1
Exhibit 81, Tab 1, Schedule 2, pages 9-10 of 13

Interrogatory:

Hydro One has committed to business objectives including customer focus, operational effectiveness, public policy responsiveness and financial performance. Transparency with respect to delivery charges is essential for ratepayers to understand whether these objectives have been met.

The First Nations community members affiliated with Anwaatin's intervention experience significant delivery charges that may not be transparent.

a) Please provide a detailed explanation and calculations for each and all of the delivery charges on a typical bill sent to ratepayers located in each of the Aroland First Nation, Moose Factory and Moosonee, Rocky Bay First Nation, Red Rock Indian Band, Geraldton, Nipigon and Beardmore in the planning regions of Northwest Ontario and North/East of Sudbury (Please ensure that the calculations are accurate to the penny and clearly show the fixed and variable rates for time-of-use pricing and tiered pricing and winter versus summer rates).

b) Please compare the calculations provided in response to Question 4(a) to delivery charges in bills sent to ratepayers in more densely-populated areas of southern Ontario.

Response:

a) The Delivery charges for Distribution-connected residential customers served by Hydro One include the following:

   a. Distribution Service Charge ($/customer/month)
   b. Distribution Volumetric Rate ($/kWh)
   c. Retail Transmission Rates (“RTSR”) ($/loss-adjusted kWh)
   d. Cost of Line Losses ($/kWh line losses)

   The applicable distribution and transmission (“RTSR”) rates vary by customer rate class. The year-round residential customers in the specified communities, which include First Nations communities, consist of customers in R1 and R2 rate classes. Hydro One

Distribution's currently approved 2016 Delivery Rates are available on the following Hydro One website:

http://www.hydroone.com/RegulatoryAffairs/Documents/EB-2015-0079/Rate_Order_HONI_Dx%20_20160114.pdf

Only the cost of electricity associated with distribution losses are included in the Delivery line. Residential customers pay the cost of electricity losses at the Regulated Price Plan ("RPP"), which is either Time of Use or Tiered Prices, depending on the metering services available at the customer's service point. Details on RPP rates are available on the following OEB website:

http://www.ontarioenergyboard.ca/OEB/Consumers/Electricity/Electricity+Prices

This application deals ***only*** with proposed changes to the transmission charges, which will affect the RTSRs for Hydro One's distribution connected customers. The following table provides the 2016 Delivery charges for year-round residential customers in northern Ontario communities which typically consume 1150 kWh of electricity per month. The impacts are determined using the same method as Table 3 in Exhibit H1, Tab 5, Schedule 1.

Community	Rate Class (density based)	Average Residential Consumption in Northern Ontario (kWh)	Dx Service Charge	Dx Volumetric Charge	Tx (RTSR) Charges	Cost of Line Losses*	Total Delivery
Moose Factory and Moosonee, Red Rock Indian Band, Rocky Bay First Nations, Nipigon, Geraldton, Beardmore	R1	1150	30.11	34.39	14.35	9.77	88.62
Aroland First Nation	R2	1150	41.36	48.99	14.11	13.00	117.46

** Based on TOU prices for electricity*

b) Residential customers in more densely-populated areas, such as southern Ontario are typically classified as medium density (R1). The Delivery charges for an R1 customer consuming 900 kWh is provided in the table below.

Rate Class	Consumption (kWh)	Dx Service Charge	Dx Volumetric Charge	Tx (RTSR) Charges	Cost of Line Losses*	Total Delivery
R1	900	30.11	26.91	11.23	7.65	75.90

** Based on TOU prices for electricity*

Anwaatin Inc. (Anwaatin) INTERROGATORY #005

Reference:

Exhibit B 1, Tab 1, Schedule 3, page 25 of 29
Exhibit B1, Tab 1, Schedule 3, Attachment 1
Office of the Auditor General of Ontario, 2015 Annual Report, Chapter 3: Reports on Value-for-money Audits, section 3.06 "Hydro One-Management of Electricity Transmission and Distribution Assets", pages 248-261 (Attachment 2)

Interrogatory:

Ontario's Auditor General (AG) found that Hydro One was not replacing assets it had determined were in very poor condition and at very high risk of failing and that it used these assets in successive rate applications to the Ontario Energy Board to justify and receive rate increases.

The AG further found that significant transmission assets beyond their expected service life were still in use and that Hydro One's distribution system was consistently one of the least reliable among large Canadian electricity distributors between 2010 and 2014 (pages 249; 260-261). The AG also found that 47% of Hydro One's transmission outages between 2010 and 2014 occurred in northern Ontario, even though fewer than 20% of Hydro One's delivery points are located there (page page 254). The AG further noted that:

"In Northern Ontario, 86% of the delivery points are single circuit supplied. As it is costly to build additional towers and lines, Hydro One does not attempt to convert rural single-circuit delivery points that serve fewer, or smaller, customers to multi-circuit delivery points because it does not consider it cost effective to do so, even if it would improve system reliability for these customers." (Page 254)

In EB-2013-0416, the Board also concluded that Hydro One's distribution investment planning does not yet appear to be properly aligned with the actual condition of its assets; that its vegetation management does not show sufficient efficiencies or productivity improvements; and that its productivity commitments do not show the company to have a strong enough orientation toward continuous improvement.

a) Please provide the following information for customers in the territory of Aroland First Nation, Moose Factory and Moosonee, Rocky Bay First Nation, Red Rock Indian Band, Geraldton, Nipigon and Beardmore areas:

i. transmission system reliability trends plotted on a graph showing each of the last 1 0 years;

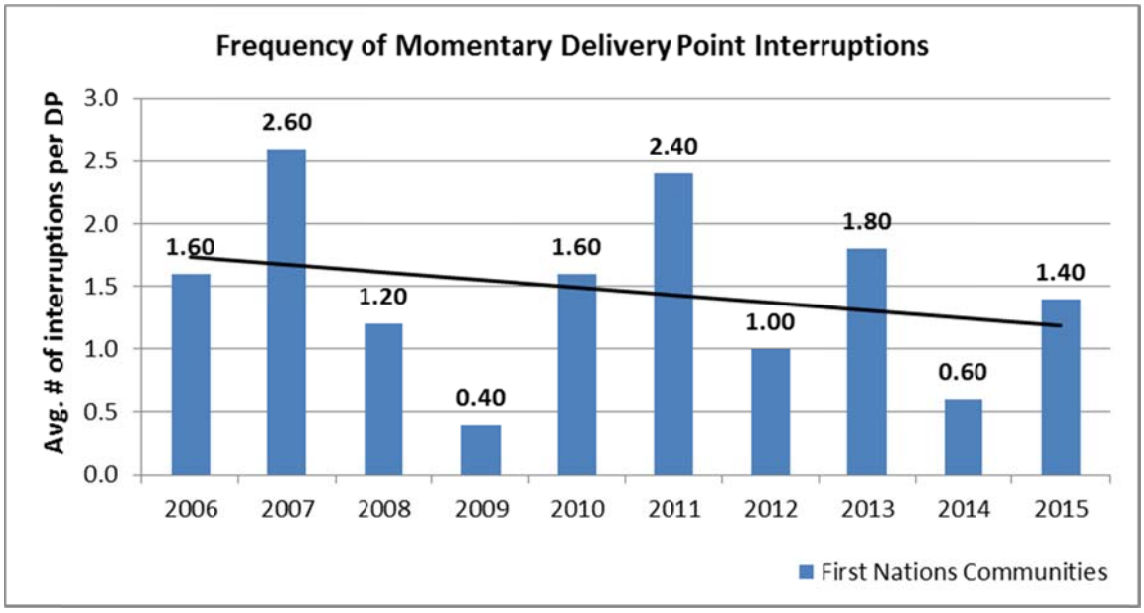
ii. the annual backlog, if any, of preventative maintenance for transmission lines, including vegetation management, plotted on a graph, showing each of the last 10 years;

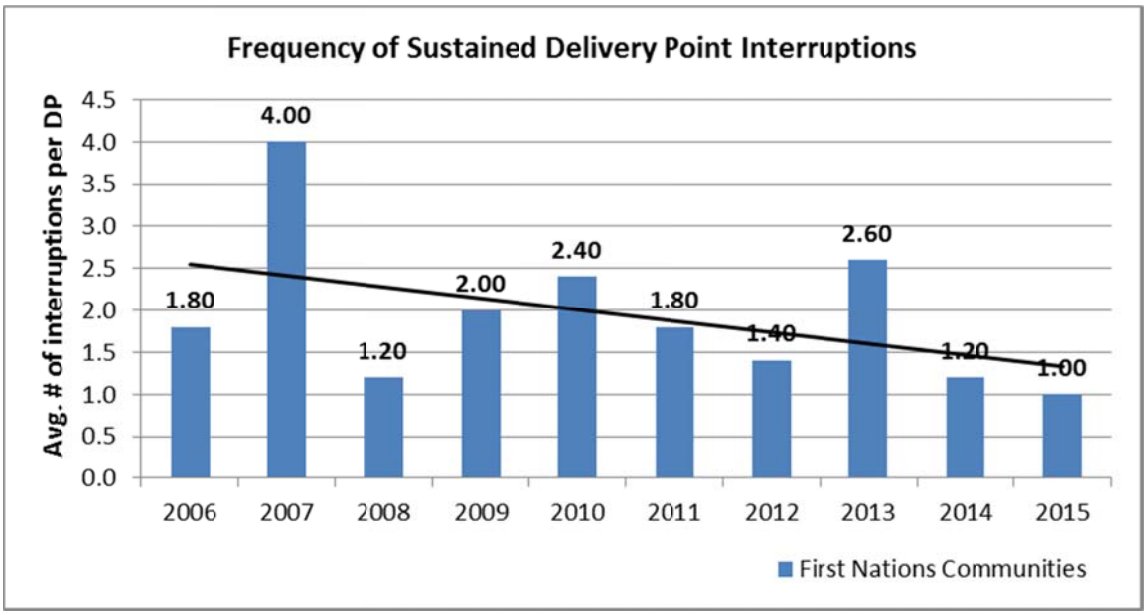
iii. please provide a list of any high risk assets in sub-optimal condition; and

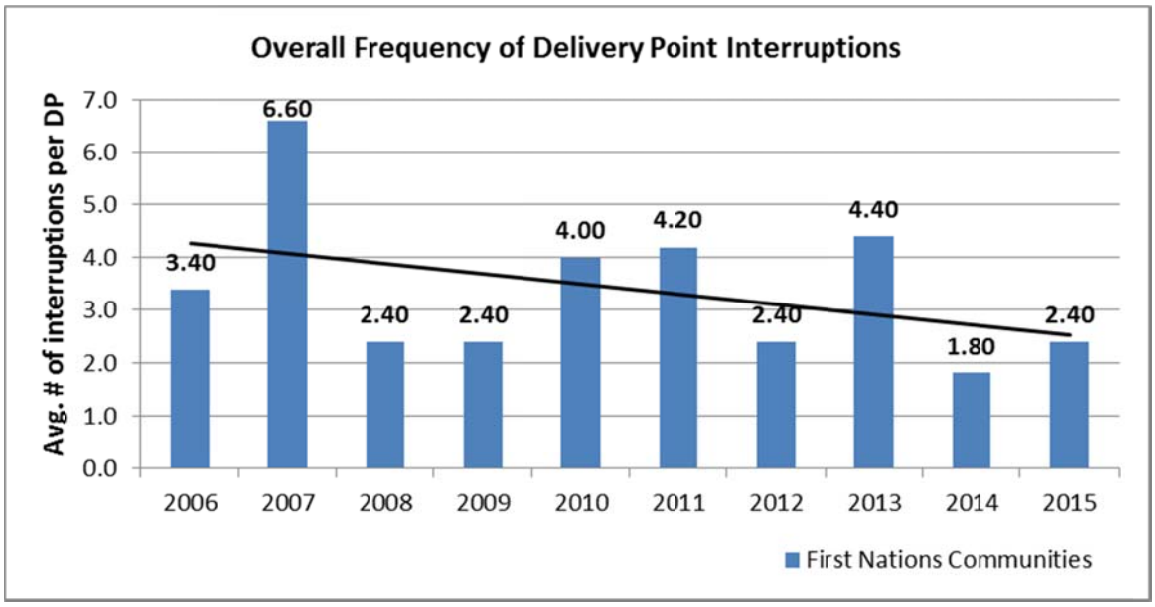
iv. a table showing a list of all of Hydro One's transmission assets, their age, their originally-anticipated replacement date and their actual or anticipated replacement date.

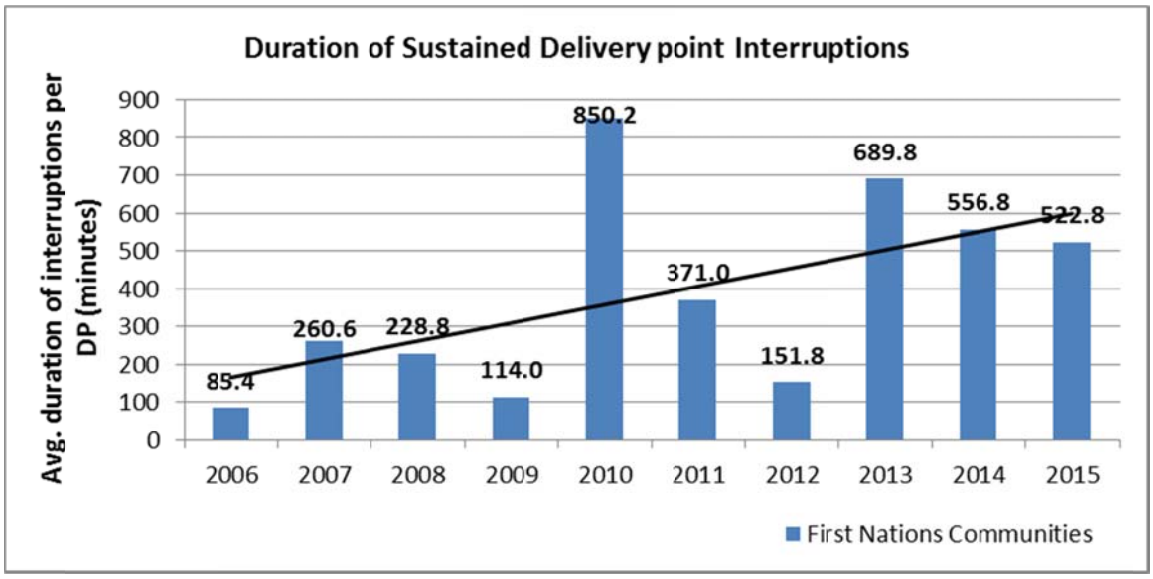
Response:

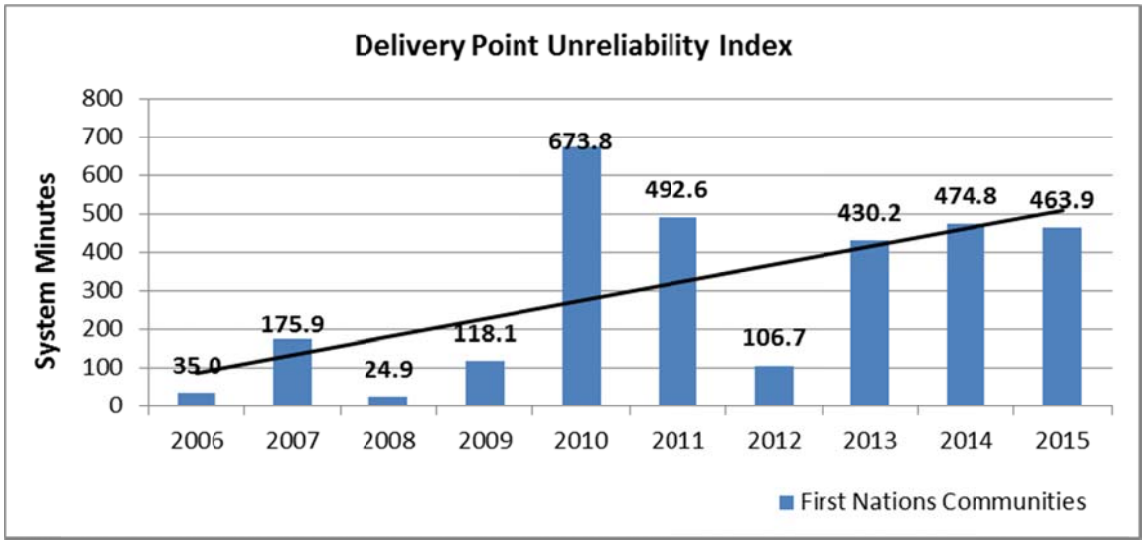
i. Following graphs provide transmission reliability performance and trends for five delivery points serving the identified territories.




Frequency of Sustained Delivery Point Interruptions
Avg. # of interruptions per DP
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1.80
4.00
1.20
2.00
2.40
1.80
1.40
2.60
1.20
1.00
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
First Nations Communities


Overall Frequency of Delivery Point Interruptions
Avg. # of interruptions per DP
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
3.40
6.60
2.40
2.40
4.00
4.20
2.40
4.40
1.80
2.40
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
First Nations Communities


Duration of Sustained Delivery point Interruptions
Avg. duration of interruptions per DP (minutes)
900
800
700
600
500
400
300
200
100
0
85.4
260.6
228.8
114.0
850.2
371.0
151.8
689.8
556.8
522.8
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
First Nations Communities


Delivery Point Unreliability Index
System Minutes
800
700
600
500
400
300
200
100
0
35.0
175.9
24.9
118.1
673.8
492.6
106.7
430.2
474.8
463.9
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
First Nations Communities

ii. The following table shows the status of all transmission lines preventative maintenance in the subject territories.

Maintenance Activity	Sub-Category	Status	Comments
Vegetation Management	All categories	Up-to-date	
Overhead Lines Maintenance	Helicopter Patrol	Up-to-date	
	Foot Patrol	Up-to-date	
	Thermovision	Up-to-date except for M9K & M3K	M9K & M3K are scheduled for thermovision in 2017
	Detailed Helicopter Inspection	Up-to-date	
Overhead Lines Condition Assessment	Conductor	28.3% require assessment	The system wide conductor assessment need is 31%
	Wood pole	1.4% require assessment	The system wide pole assessment need is 6%

iii. There are no high risk transmission class transformers that supply customers in the territory of Aroland First Nation, Moose Factory and Moosonee, Rocky Bay First Nation,Red Rock Indian Band, Geraldton, Nipigon and Beardmore.

Approximately 70 km of line is near end-of-life and is being targeted for refurbishment in the next 5 years.

iv. The below table shows a list of all of Hydro One's transmission assets, their age, their originally-anticipated replacement date and their actual or anticipated replacement date.

Hydro One's Transmission Asset	Age (Year)	Original/Anticipated Replacement Date	Actual / Plan Replacement Date
Longlac TS			
Power Transformer -T2	5	2010	2011
Power Transformer - T3	5	2010	2011
Breaker -116M1	5	2010	2011
Breaker -116M2	5	2010	2011
Breaker - SC1Z	5	2010	2011
Breaker - SC2Z	5	2010	2011
M2 feeder protection	5	Beyond 2018	Beyond 2018
Moosonee SS			
M9K A protection	9	Beyond 2018	Beyond 2018
M9K B protection	9	Beyond 2018	Beyond 2018
OtterRapid SS			
Breaker -L6L7	9	2005	2007
Breaker -L6L8	6	2005	2010
Alexander SS			
A4L A protection	24	2017/2018	
A4L B protection	15	2017/2018	
A6P A protection	15	2017/2018	
A6P B protection	14	2017/2018	
HL6 BF protection	19	2017/2018	
L5L6 BF protection	19	2017/2018	

Hydro One's Transmission Asset	Age (Year)	Original/Anticipated Replacement Date	Actual / Plan Replacement Date
Port Arthur TS			
Power Transformer -T1	42	Beyond 2018	Beyond 2018
Power Transformer - T2	42	Beyond 2018	Beyond 2018
Breaker -2A6P	62	Beyond 2018	Beyond 2018
Breaker -2L3P	70	Beyond 2018	Beyond 2018
Breaker -2L4P	70	Beyond 2018	Beyond 2018
Breaker -2P1P	66	Beyond 2018	Beyond 2018
Breaker -2P1T	68	Beyond 2018	Beyond 2018
Breaker -2P3B	63	Beyond 2018	Beyond 2018
Breaker -2P5M	64	Beyond 2018	Beyond 2018
Breaker -2P7B	64	Beyond 2018	Beyond 2018
Breaker -BY	65	Beyond 2018	Beyond 2018
Breaker -M1-27	67	Beyond 2018	Beyond 2018
Breaker -M2	64	Beyond 2018	Beyond 2018
Breaker -M3	64	Beyond 2018	Beyond 2018
Breaker -M4	68	Beyond 2018	Beyond 2018
Breaker -M5	67	Beyond 2018	Beyond 2018
Breaker -M6	68	Beyond 2018	Beyond 2018
Breaker -T1B	59	Beyond 2018	Beyond 2018
Breaker -T2B	59	Beyond 2018	Beyond 2018
A6P A protection	16	Beyond 2018	Beyond 2018
A6P B protection	18	Beyond 2018	Beyond 2018
2A6P BF protection	47	Beyond 2018	Beyond 2018

Elliot Lake TS			
Power Transformer -T1	59	Beyond 2018	Beyond 2018
Power Transformer - T2	68	Beyond 2018	Beyond 2018
Power Transformer - T3	20	Beyond 2018	Beyond 2018
Breaker -M1	61	Beyond 2018	Beyond 2018
Breaker -M2	66	Beyond 2018	Beyond 2018
Breaker -M3	35	Beyond 2018	Beyond 2018

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Hydro One's Transmission Asset	Average Age (Year)	Original/Anticipated Replacement Date	Actual / Plan Replacement Date
M9K circuit/conductor	41	2045 (ESL of 70 years)	
M3K circuit/conductor	12	2074 (ESL of 70 years)	
A4L circuit/conductor	74	2012 (ESL of 70 years)	A portion of this line is scheduled for refurbishment in 2017-2022 business plan. Some sections require assessments
T1B circuit/conductor	63	2023 (ESL of 70 years)	Requires assessment
56M1 circuit/conductor	19	2067 (ESL of 70 years)	
57M1 circuit/conductor	19	2067 (ESL of 70 years)	

Anwaatin Inc. (Anwaatin) INTERROGATORY #006

Reference:

Exhibit B1, Tab 1, Schedule 1, page 1 of 9
Exhibit B 1, Tab 1, Schedule 2, pages 10 of 13
Exhibit 01, Tab 1, Schedule 3
Manitoba Hydro, "Residential Earth Power Loan",
<https://www.hydro.mb.ca/your_home/power_smart/earth_power_loan/index.shtml>
(Attachment 3)
Manitoba Hydro, "Power Smart and First Nations",
<https://www.hydro.mb.ca/your_homelfirst_nations/index.shtml>
(Attachment 4)

Interrogatory:

Hydro One is committed to supporting the sustainable development of the Ontario economy and sustainably manage its environmental footprint.

In Ontario, combined heat and power (CHP) and micro CHP (MCHP) adoption, energy efficiency, and other alternative HVAC options may be hindered by regulatory rules and the lack of programs. In Manitoba, Manitoba Hydro provides ratepayers with financing options to access affordable financing for energy efficiency upgrades and energy-efficient heating systems to reduce electricity costs through its Residential Earth Power Loan program (with special programs for First Nation households and communities). This program includes financing for geothermal heat pump systems, air source heat pumps and solar thermal water heaters that can lower annual heating costs by 50 to 70%. Loans may include a term of up to 15 years, no down payment, and payments transferrable to future tenants through the billing system.

a) Please describe any and all measures that Hydro One is undertaking to facilitate affordable financing options for energy efficiency, CHP and alternative HVAC options.

b) Please describe any and all initiatives that Hydro One is undertaking to promote energy efficiency, CHP, and alternative HVAC options to enable First Nations households and communities to access affordable financing for energy efficiency upgrades and energy-efficient heating systems.

Response:

a) and b) This application relates to Hydro One's transmission business. These questions relate to Hydro One's distribution business which is not being evaluated as part of this application.

Anwaatin Inc. (Anwaatin) INTERROGATORY #007

Reference:

Exhibit 81, Tab 2, Schedule 3, page 6 of 20

Interrogatory:

As part of the regional planning process, Hydro One undertakes extensive consultation with local distribution companies and the Independent Electricity System Operator to identify needs and develop plans as envisioned by the Board in its Renewed Regulatory Framework. Hydro One also reaches out to its large transmission-connected customers to obtain and update their future plans and electricity load forecasts.

In the Northwest Ontario region, the working group established by Hydro One includes stakeholder groups such as the Northwestern Ontario Municipal Association, Common Voice, Ontario Mining Association and municipalities.

a) Please describe what measures, if any, Hydro One is undertaking to include First Nations governments and ratepayers as part of its Regional Planning Customer Consultation Process and Needs Assessments. Please provide any and all information on specific inclusion efforts with First Nations governments and ratepayers in the regions of Northwest Ontario and North/East of Sudbury.

Response:

a) The regional planning process was established by the OEB as part of its Renewed Regulatory Framework for Electricity Distributors with the objective of supporting the investment planning work and rate submissions of distributors and also transmitters. The regional planning process, that was developed by the OEB Planning Process Working Group and endorsed by the OEB, was mainly intended for the direct participation of distributors, transmitters and the IESO (formerly the OPA). As a result, in August 2013, the OEB made changes to the Transmission System Code, Distribution System Code and the IESO (OPA) license that established specific regional planning deliverables and timelines to support the regional planning process. Hydro One undertakes its regional planning activities consistent with this OEB process, and therefore does not directly undertake broader plan level consultation during the regional planning process. However, Hydro One does conduct extensive stakeholdering and consultation at the project level, as it develops specific transmission projects, in the form of Environmental Assessment and/or Leave to Construct approvals as noted in Exhibit B1, Tab 2, Schedule 3.

Witness: Bing Young

Anwaatin Inc. (Anwaatin) INTERROGATORY #008

Reference:

Exhibit H1, Tab 5, Schedule 1, page 2 of 3

Interrogatory:

In Quebec, distribution rates are uniform, regardless of population density.

Hydro One's delivery charges are postage stamp based on service territory.

a) Please describe any and all measures or initiatives that Hydro One has undertaken to assess the value of its current delivery rate model and any exploration of alternate rate recovery models, such as that in Quebec.

Response:

a) The delivery charges that distribution connected customers pay include a flow through of transmission system costs, as well as the cost of the distribution system. The determination of transmission and distribution rates is treated differently.

Transmission rates are uniformly applied to all transmission connected customers in Ontario, regardless of location in the province or which transmitter the customer is connected to. The current transmission rate design methodology combines the cost and charge determinants of all transmitters in the province and is based on a methodology approved by the OEB as part of proceeding RP-1999-0044 in 2000 which has not materially changed since it was first approved.

Hydro One Distribution’s rate-setting methodology follows the OEB filing guidelines which apply to all distributors in Ontario. Unlike Quebec, Ontario has a large number of distributors, each serving different communities and each with their own delivery rates. All Ontario distributors are subject to the OEB approved methodology for establishing distribution delivery rates.

As such, any changes to the transmission or distribution delivery rate recovery models would have to be undertaken by the OEB as part of a generic proceeding, and as such Hydro One has not independently explored any alternate rate recovery models.

Witness: Henry Andre