

EB-2017-0049

ONTARIO ENERGY BOARD

Hydro One Networks Inc.

**Application for electricity distribution rates beginning
January 1, 2018 until December 31, 2022.**

**COMPENDIUM OF MATERIALS OF THE
CITY OF HAMILTON**

FOR WITNESS PANEL 7

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TAB 1

Table E.4: Number of Customers History and Forecast

Rate Class	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Generator	106	248	477	633	893	907	1,034	1,152	1,272	1,396	1,508	1,608
General Service - Demand Billed	7,183	6,550	6,669	6,504	6,098	5,323	5,379	5,406	5,457	5,511	5,563	5,612
General Service - Energy Billed	98,095	98,513	98,568	95,503	87,686	88,878	88,817	88,484	88,423	88,405	88,435	88,515
Residential - Medium Density	402,173	403,304	409,901	416,493	432,519	441,836	446,636	446,102	449,958	453,821	457,608	461,272
Residential - Low Density	368,479	370,995	373,980	373,551	328,170	328,766	330,695	328,410	330,076	331,741	333,473	335,223
Seasonal	157,017	153,653	153,253	153,957	153,498	148,991	149,166	149,485	149,813	150,145	150,445	150,701
Sub-transmission *	794	795	800	882	838	804	806	808	811	814	825	828
Urban General Service - Demand Billed	1,272	1,185	1,184	1,167	1,893	1,715	1,715	1,744	1,753	1,762	1,772	1,783
Urban General Service - Energy Billed	11,650	12,308	12,307	10,807	17,703	17,780	17,763	18,074	18,166	18,268	18,380	18,501
Urban Residential	159,086	167,672	169,795	170,796	208,639	213,199	214,934	225,944	228,666	231,390	234,088	236,737
Street Light *	4,771	4,724	4,804	5,104	5,118	5,251	5,286	5,323	5,364	5,401	5,445	5,481
Sentinel Light *	31,447	30,504	30,380	26,670	25,689	24,364	24,166	23,987	23,822	23,645	23,719	23,605
Unmetered Scattered Load *	5,504	5,512	5,562	5,104	5,624	5,537	5,567	5,597	5,633	5,667	5,944	5,975
Acquired Residential	35,434	35,562	35,892	36,212	36,382	36,487	36,745	37,000	37,257	37,514	37,769	38,018
Acquired General Service - Energy Billed	4,361	4,357	4,340	4,349	4,350	4,348	4,347	4,345	4,343	4,341	4,339	4,337
Acquired General Service - Demand Billed	307	309	322	321	330	336	342	348	353	359	365	371
Acquired Urban Residential	13,709	13,862	14,020	14,175	14,353	14,515	14,676	14,834	14,994	15,153	15,312	15,467
Acquired Urban General Service - Energy Billed	1,180	1,207	1,222	1,243	1,246	1,263	1,280	1,295	1,310	1,324	1,339	1,352
Acquired Urban General Service - Demand Billed	193	185	182	189	193	193	193	193	193	194	194	194
Sum: Includes Newly Acquired for 2021-2022 only	1,247,577	1,255,963	1,267,680	1,267,171	1,274,369	1,283,351	1,291,963	1,300,516	1,309,216	1,317,967	1,386,522	1,395,578

* Includes Acquired Utilities corresponding figures in 2021 and 2022 only.

Table E.5: Hydro One Distribution Load History and Forecast in GWh

Year	Actual/Forecast GWh	Growth	Normalized Weather GWh	Growth
2011	37,641	-0.8	38,062	3.2
2012	37,627	0.0	37,419	-1.7
2013	37,621	0.0	37,418	0.0
2014	37,798	0.5	37,091	-0.9
2015	36,686	-2.9	36,419	-1.8
2016	35,856	-2.3	36,139	-0.8
2017	36,244	1.1	36,244	0.3
2018	36,019	-0.6	36,019	-0.6
2019	35,680	-0.9	35,680	-0.9
2020	35,673	0.0	35,673	0.0
2021*	36,363	1.9	36,363	1.9
2022*	36,373	0.0	36,373	0.0

* Includes Acquired Utilities.

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Table E.6: Actual Sales and Forecast in GWh

Rate Class	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Generator	8	11	14	16	16	17	18	18	19	20	20	21
General Service - Demand Billed	3,100	2,888	2,825	2,928	2,394	2,343	2,378	2,342	2,317	2,312	2,302	2,297
General Service - Energy Billed	2,306	2,518	2,398	2,358	2,189	2,132	2,146	2,104	2,064	2,043	2,018	1,999
Residential - Medium Density	4,402	4,396	4,553	4,499	4,930	4,851	4,939	4,924	4,917	4,953	4,971	4,998
Residential - Low Density	5,491	5,515	5,563	5,541	4,767	4,614	4,640	4,539	4,478	4,457	4,426	4,408
Seasonal	701	666	699	682	671	641	643	632	620	613	605	600
Sub-transmission *	16,787	17,082	16,395	16,599	15,806	15,468	15,625	15,528	15,368	15,362	15,132	15,149
Urban General Service - Demand Billed	686	677	607	628	1,064	1,036	1,046	1,058	1,048	1,047	1,044	1,044
Urban General Service - Energy Billed	397	415	400	382	600	589	594	598	592	591	589	589
Urban Residential	1,541	1,563	1,564	1,528	1,983	1,947	1,975	2,047	2,047	2,064	2,075	2,090
Street Light *	125	127	125	122	122	122	121	121	122	123	133	133
Sentinel Light *	19	19	20	20	21	21	21	20	20	20	21	20
Unmetered Scattered Load *	23	23	23	23	24	24	24	24	25	25	26	26
Acquired Residential	308	302	305	303	301	300	298	295	292	290	287	284
Acquired General Service - Energy Billed	114	111	110	111	110	109	110	108	107	105	104	102
Acquired General Service - Demand Billed	270	233	232	241	235	237	241	239	237	236	236	236
Acquired Urban Residential	105	106	107	106	102	100	98	96	95	94	93	92
Acquired Urban General Service - Energy Billed	41	43	44	43	43	43	44	44	43	43	43	44
Acquired Urban General Service - Demand Billed	164	128	129	136	136	138	142	143	142	141	142	143
Sum: Includes Acquired Utilities for 2021-2022 only	35,587	35,901	35,186	35,327	34,586	33,804	34,170	33,957	33,637	33,631	34,267	34,276

* Includes Acquired Utilities corresponding figures in 2021 and 2022 only.

2

3

Witness: Bijan Alagheband

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Table E.8b: Weather Corrected Actual and Forecast for Billing Peak in kW

Rate Class	DGEN	GSd	UGd	ST *	Acquired GSd	Acquired UGD	Total *
2011	66,297	10,030,850	1,907,448	34,691,170	651,580	445,197	46,695,764
2012	80,371	9,909,510	1,885,788	35,862,030	578,209	369,084	47,737,698
2013	127,613	9,807,861	1,862,275	35,229,815	664,055	387,214	47,027,563
2014	161,733	9,849,440	1,866,224	35,656,983	673,290	394,123	47,534,380
2015	165,405	8,484,670	3,058,267	35,259,430	658,111	390,728	46,967,772
2016	171,973	8,116,669	2,846,321	33,693,637	665,344	397,887	44,828,600
2017	178,213	8,149,966	2,842,412	33,699,242	677,233	409,686	44,869,833
2018	184,739	8,025,918	2,832,322	33,491,228	672,386	414,168	44,534,208
2019	191,107	7,940,259	2,797,926	33,144,837	667,563	410,184	44,074,129
2020	198,809	7,924,744	2,787,731	33,133,111	664,084	408,125	44,044,395
2021	204,487	7,887,971	2,771,740	33,111,381	663,644	410,749	45,049,972
2022	210,569	7,871,666	2,764,065	33,152,081	662,981	411,710	45,073,072

* The total and ST include corresponding Acquired Utilities figures and for only 2021 and 2022.

Table E.9: Hydro One Distribution CDM Impacts (GWh) by Rate Class

Rate Class	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
General Service - Demand Billed	191.0	225.3	271.8	329.5	295.3	328.5	364.5	397.3	436.5	461.5	469.6	480.2
General Service - Energy Billed	193.8	270.1	317.3	367.1	373.6	418.1	454.9	493.5	537.6	563.2	568.8	577.6
Residential - Medium Density	116.6	115.2	114.2	176.6	238.6	269.9	296.7	325.4	358.4	379.6	387.2	396.7
Residential - Low Density	145.4	144.5	139.6	217.5	230.7	256.7	278.7	300.0	326.4	341.6	344.7	349.9
Seasonal	18.6	17.5	17.5	26.8	32.5	35.7	38.6	41.8	45.2	47.0	47.2	47.6
Sub-transmission *	551.2	667.1	731.7	922.0	991.8	1,087.5	1,218.2	1,336.7	1,464.4	1,546.4	1,546.5	1,582.0
Urban General Service - Demand Billed	42.2	52.8	58.3	70.6	131.2	145.2	160.4	179.4	197.4	208.9	213.0	218.2
Urban General Service - Energy Billed	33.4	44.5	52.9	59.5	102.4	115.5	126.0	140.3	154.2	163.0	166.1	170.0
Urban Residential	40.8	41.0	39.2	60.0	96.0	108.3	118.6	135.3	149.2	158.2	161.7	165.9
Acquired Residential	0.9	1.6	2.5	4.2	5.7	6.5	9.2	11.9	14.1	16.5	19.3	20.2
Acquired General Service - Energy Billed	0.7	1.7	2.6	3.9	4.8	5.9	8.4	10.9	12.9	15.1	17.7	18.5
Acquired General Service - Demand Billed	1.0	2.1	3.7	4.8	5.6	7.6	10.8	13.9	16.5	19.3	22.7	23.7
Acquired Urban Residential	0.4	0.7	1.0	1.6	2.1	1.8	2.3	2.8	3.1	3.6	4.1	4.2
Acquired Urban General Service - Energy Billed	0.5	1.0	1.4	2.3	2.9	2.5	3.1	3.8	4.3	4.9	5.6	5.9
Acquired Urban General Service - Demand Billed	4.0	4.3	5.8	7.6	10.9	10.8	13.7	16.6	19.0	21.5	24.6	25.6
Sum: Includes Acquired Utilities for 2021-2022 only	1,333	1,578	1,743	2,230	2,492	2,765	3,056	3,350	3,669	3,870	3,999	4,086

* Includes Acquired Utilities corresponding figure in 2021 and 2022 only.

Note: All savings are at end-use level

Witness: Bijan Alagheband

TAB 2

1 **UNDERTAKING – JT 1.1**

2
3 **City of Hamilton Technical Conference Undertaking Introduction**

4
5 **Undertaking**

6 The City of Hamilton's ("COFH") interrogatories were intended to determine whether,
7 and if so with that effect on rates, Hydro One Networks Inc. ("HONI") had included the
8 COFH's LED conversion program for street lights in the forecast rates for the street light
9 rate class. HONI's responses to the COFH's interrogatories appear to be in conflict with
10 the pre-filed evidence and, as a result, do not answer the questions posed. In its
11 interrogatory responses, HONI has identified 22 GWh of past street light CDM savings
12 and 35 GWh of pre-approved (future) street light CDM savings. This translates to a
13 reduction in consumption (and consequently demand) of approximately 47%. This is a
14 significant drop in load for the rate class, however it is not identified or accounted for
15 anywhere in the pre-filed evidence. In fact, HONI's pre-filed evidence suggests a street
16 light load profile that has little or no change over the time period in question. These
17 Technical Conference Questions seek clarification of the interrogatory responses,
18 including a reconciliation of those responses with the pre-filed evidence.

19
20 **Response**

21 Hydro One clarifies that the 35 GWh of approved street light savings, referenced in
22 Exhibit I, Tab 46, Schedule COFH-5, is the cumulative savings by 2022, and the 22 GWh
23 of savings is the cumulative savings achieved as of 2017. Thus the 35 GWh includes 22
24 GWh of historical savings and 13 GWh (= 35 – 22) of future savings in 2018 to 2022.

25
26 The introduction to COFH's technical conference questions references a reduction in
27 consumption of "approximately 47%" which suggests a misunderstanding that the total
28 savings are 57 GWh (= 22 + 35).

Witness: ANDRE Henry

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1 **City of Hamilton Technical Conference Undertaking # 1a**

2
3 **Reference**

4 In HONI's response, it states that the total cumulative energy savings from municipal
5 LED street light conversion programs is about 22 GWh. The response further states that
6 "The actual street lighting load in 2016, which is the base for forecasting, should already
7 reflect the conservation impact of the street lighting conversion program."
8

9 Table E.9 in Appendix E of Exhibit E1, Tab 2, Schedule 1, identifies the CDM impacts,
10 by Rate Class that were considered in HONI's load forecasting. That table does not
11 include the street
12 light class. Accordingly, it is not clear how the 22 GWh of CDM savings that HONI has
13 identified in their interrogatory response is accounted for.
14

15 Table E.6 from Appendix E of Exhibit E1, Tab 2, Schedule 1 provides HONI's actual
16 sales and forecasted sales (in GWh) for its various rate classes. The street light class does
17 appear in this Table. However, the load forecast in the Table is essentially flat with the
18 exception of the load increase in 2021 and 2022 when acquired utilities are accounted for.
19 The actual and forecast sales would, thus, not appear to reflect the impact of the LED
20 conversions.
21

22 Table E.4 in Exhibit E1, Tab 2, Schedule 1 sets out the number of customers (historical
23 and forecast) that contribute to HONI's load forecast. For the period between 2017 and
24 2020, the forecast is that the number of customers will grow by only approximately 2%
25 for the street light class. That suggests that the impact of CDM reductions is not offset by
26 customer growth.
27

28 **Undertaking**

- 29 1) Where in HONI's pre-filed evidence can the historical CDM impact of 22 GWh be
30 found?
31
- 32 2) What has HONI forecast for CDM savings, on a year-by-year basis, related to the
33 street light rate class for years 2017 through 2022?
34 a) Is this information specifically identified in HONI's pre-filed evidence?
35 b) If so, where can this information be found in the pre-filed evidence?
36
- 37 3) If the information is not identified in the pre-filed evidence, what is the basis for the

Witness: ANDRE Henry

1 statement about the effect of the municipal LED street light conversion program on
2 forecast loads and, therefore, on rates?

3

4

Response

5

1) The 22 GWh saving is implicitly reflected in the historical actual figures for street
6 light sales in Table E.6.

7

8

2) Hydro One does not forecast the specific CDM amounts for the street light rate class.
9 Hydro One uses an implicit method to account for the CDM impact on the forecast of
10 street light sales.

11

a) This information is not explicitly identified in the pre-filed evidence.

12

b) N/A.

13

14

3) The forecast takes into account historical trends in actual street light sales, including
15 the impact of CDM, and so the forecast would have been higher in the absence of
16 CDM savings for street lights.

Witness: ANDRE Henry

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1 **City of Hamilton Technical Conference Undertaking # 1b**

2
 3 **Reference**

4 By this question, the COH sought to understand the impact to HONI's street light Service
 5 Charge and Distribution Volumetric Rate given the impact of the street light load profile
 6 forecast related specifically to CDM (LED conversions).
 7

8 **Undertaking**

- 9 1) What effect has reduced demand, due to forecasted CDM impacts, had on HONI's
 10 SLAF for the years 2018 through 2022? Please provide the SLAF values for both the
 11 CDM and non-CDM adjusted cases.
 12
 13 2) What would be HONI's street light rate class Service Charge and Distribution
 14 Volumetric Rates for each year (2018 through 2022).
 15 a) With CDM (LED conversions) accounted for?
 16 b) Without CDM (LED conversions) accounted for?
 17 c) What data and assumptions were used to generate this forecast, and how is
 18 LED technology adoption accounted for?
 19

20 **Response**

- 21 1) A reduction in street light demand has the effect of increasing the street light
 22 adjustment factor ("SLAF") value, which reduces the number of "equivalent" primary
 23 and line transformer street light customers within the cost allocation model and
 24 therefore reduces the costs allocated to the street light class. A reduction in street light
 25 demand will also decrease the revenue collected from street light class, which could
 26 drive the need to increase distribution rates in order to recover the cost of serving the
 27 class.
 28

29 The 2018 and 2021 SLAF values for the CDM adjusted case are 8.58¹ and 8.48²,
 30 respectively. In this application, Hydro One did not calculate 2019, 2020 and 2022
 31 SLAF values as it did not populate a cost allocation model for those test years.
 32

¹ See Exhibit G1, Tab 3, Schedule 1, attachment 3, Sheet "I6.2 Customer Data", 2018 Cost Allocation Model, filed June 7, 2017

² See Exhibit G1, Tab 3, Schedule 1, attachment 4, Sheet "I6.2 Customer Data", 2021 Cost Allocation Model, filed June 7, 2017

Witness: ANDRE Henry

- 1 Hydro One does not have the information to calculate the “non-CDM adjusted” SLAF
2 values, as this would require a set of “non-CDM adjusted” NCP4 values for all
3 residential (i.e. R1, R2, UR, Seasonal, AR and AUR) and street light customer classes
4 in 2018 and 2021, which are not readily available.
5
- 6 2) a) Hydro One’s street light rate class Service Charge and Distribution Volumetric
7 Rates for each year (2018 through 2022) with CDM (LED conversions) accounted for
8 are provided in Table 1 of Exhibit H1, Tab 1, Schedule 1.
9
- 10 b) Hydro One does not have the information required to calculate street light
11 distribution rates for each year (2018 through 2022) without CDM (LED conversions)
12 accounted for, as this would require populating the entire cost allocation model using
13 “non-CDM adjusted” load forecasts for all Hydro One’s rate classes. This
14 information is not readily available. In any case, distribution rates are applied to the
15 kWh delivered to customers and it is unclear how rates based on an estimated “non-
16 CDM adjusted” charge determinant would be implemented.

Witness: ANDRE Henry

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1 **City of Hamilton Technical Conference Undertaking # 1c**

2
3 **Reference**

4 HONI has stated in its response to interrogatory COFH-1 (a) that “the load forecast for
5 the street lighting reflects the effects the COH’s LED street light conversion program, as
6 well as the LED conversion program in all other municipalities served by Hydro One”.

7
8 **Undertaking**

- 9 1) Without consideration of other rate classes, what data and assumptions were used to
10 develop the load forecast specific to the street light rate class for the years 2017
11 through 2022?
12
13 2) If CDM/LED conversions were considered as an input to the street light rate class
14 load forecasting process, what impact did they have on the load forecast (expressed in
15 MW) on a yearly basis from 2018 through 2022?
16

17 **Response**

- 18 1) The 2017-2022 forecast implicitly takes into consideration the historical trends in # of
19 customer accounts and street light sales, as shown in Tables E.4 and E.6 respectively,
20 and a forecast of future growth based on econometric and end-use models, as well as
21 total CDM forecasts in accordance with the forecast methodology described in
22 Exhibit E1, Tab 2, Schedule 1
23
24 2) N/A.

Witness: ANDRE Henry

1 **City of Hamilton Technical Conference Undertaking # 4c**

2

3 **Reference**4 In its response, HONI sets out the estimated energy savings related to municipality street
5 lighting programs for 2015 to 2017.

6

7 While the energy savings numbers above vary significantly from year to year, the actual
8 sales (GWh) shown in Table E.6 of Appendix E of Exhibit E1, Tab 2, Schedule 1 barely
9 vary year-over-year (2015=122 GWh, 2016=122 GWh, 2017=121 GWh).

10

11 **Undertaking**12 1) Can HONI explain why the 2015, 2016, 2017 energy savings figures expressed in
13 their interrogatory answer appear to have no impact on the sales figures for those
14 same years expressed in Table E.6?

15

16 **Response**17 1) The actual sales figures in Table E.6 reflect the net impact of an increase in street
18 light sales due to load growth from new and existing accounts (e.g. a new sub-
19 division) offset by a decrease in street light sales due to conservation measures (e.g.
20 LED conversion).

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2 **City of Hamilton Technical Conference Undertaking # 5b**

3
 4 **Reference**

6 In its response, HONI states that “The street lighting load profile implicitly includes any
 7 saving through the LED conversion projects noted above”.

8 **Undertaking**

12 1) Please provide a load profile, year-over-year, spanning from 2012 through 2022 that
 13 clearly shows HONI’s street light (and only street light) consumption that identifies
 14 historical and projected impacts from CDM in a format similar to Figure 2 from
 15 Exhibit E1, Tab 2, Schedule 1 of HONI’s pre-filed evidence.

13
 14 **Response**

20 1) Please see the table below for Sales Net of CDM (i.e. actual/forecast billed amounts)
 21 and an estimate of Sales Gross of CDM (i.e. adding back estimated CDM). There is
 22 no weather impact associated with street lights so that the actual and weather normal
 23 sales are identical. Total pre-approved CDM saving for street lights is 35 GWh of
 24 which 22 GWh relates to 2012-2017 period and the remainder, 13 GWh, is expected
 25 to occur after 2017.

21

Year	Sales Net of CDM	Sales Gross of CDM	% Variance
2011	125	125	0.00
2012	127	127	0.25
2013	125	126	0.77
2014	122	128	5.30
2015	122	141	15.66
2016	122	142	16.43
2017	121	143	18.57
2018	121	146	20.66
2019	122	150	22.57
2020	123	153	24.44
2021 *	133	166	24.51
2022 *	133	168	26.42

22

* Includes street lighting sales of Acquired Utilities.

Witness: ANDRE Henry

TAB 3

City of Hamilton Interrogatory # 1

Issue:

Issue 46: Is the load forecast methodology including the forecast of CDM savings appropriate?

Reference:

None

Interrogatory:

- a) Did the calculation of the load forecast for the determination of the COH street lighting rate class reflect the effect of the COH's LED street light conversion program?
- b) If so, what is the effect on the rates to be charged for the COH street lighting rate class?
- c) If not, why not?
- d) What data and assumptions were used to generate this load forecast, and how is LED technology adoption accounted for?

Response:

- a) Yes, the load forecast for the street lighting reflects the effects the COH's LED street light conversion program, as well as the LED conversion program in all other municipalities served by Hydro One. Hydro One has implemented municipality street lighting programs since 2012 and the total cumulative energy savings is about 22 GWh. The actual street lighting load in 2016, which is the base for forecasting, should already reflect the conservation impact of the street lighting conversion program.
- b) Distribution rates are determined for each rate class as a whole, rather than specific customers. A decrease in the forecast will increase the rates for the street light class as a whole. However, with a reduction in street lighting load, COH would benefit from a proportional reduction in its volumetric distribution charges in addition to savings on commodity charges.
- c) Not applicable.
- d) The allocation of aggregate sales forecast amongst different rate classes takes into account historical shares of each rate class in total sales. Consequently, if electricity usage for the

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1 street lighting class reduces, it would be reflected in the forecast because its share of the total
2 reduces. Thus actual conservation impact, including LED technology adaptation, is implicitly
3 reflected in the actual load and the forecast.

Witness: ALAGHEBAND Bijan

City of Hamilton Interrogatory # 2

Issue:

Issue 46: Is the load forecast methodology including the forecast of CDM savings appropriate?

Reference:

None

Interrogatory:

- a) In the calculation of the load forecast for the street lighting rate classes in any of the other urban municipalities within HONI's service area, has HONI included the effect of LED conversion programs?
- b) If so, what is the effect of doing so on the rates for the street lighting rate class in those urban municipalities?
- c) If not, why not?
- d) What data and assumptions were used to generate the load forecast for the street lighting class in other urban municipalities within HONI's service area, and how was LED technology adoption accounted for?

Response:

- (a) Please see Exhibit I-46-COFH-1.
- (b) Please see Exhibit I-46-COFH-1.
- (c) Please see Exhibit I-46-COFH-1.
- (d) Please see Exhibit I-46-COFH-1.

Witness: ALAGHEBAND Bijan

1 City of Hamilton Interrogatory # 3

2
3 Issue:

4 Issue 46: Is the load forecast methodology including the forecast of CDM savings appropriate?

5
6 Reference:

7 H1-01-01 Page: 3

8 HONI states that it applies the Bonbright principles in its rate design process. Included in those
9 principles is the principle that “customers should, in general, pay rates for distribution services
10 that reflect the costs they “cause” as determined by a board-approved cost allocation study”.

11
12 Interrogatory:

13 a) Does HONI believe that the application of that principle requires it to include, in the
14 calculation of the rates for the street lighting rate class for the COH, the effect of the COH’s
15 LED conversion program?

16
17 b) If not, why not?

18
19 Response:

20 a) Yes.

21
22 b) Not applicable.

Witness: ANDRE Henry

City of Hamilton Interrogatory # 4

Issue:

Issue 46: Is the load forecast methodology including the forecast of CDM savings appropriate?

Reference:

None

Interrogatory:

- a) Does HONI believe that the application of the conservation and demand management directives of the province require that, in the calculation of rates for the street lighting rate class for COH, it include the effect of COH's LED conversion program?
- b) If not, why not?
- c) What were the load impacts of the CDM applications for 2015, 2016 and 2017 related to street lighting?

Response:

- a) Yes.
- b) Not Applicable
- c) Based on the HONI's municipality street lighting approval list, the estimated energy savings related to municipality street lighting programs for 2015-2017 is as follows:

Approval Year	Sum of Estimated Energy Savings in LDC's Territory (kWh)
2015	3,494,089.0
2016	6,839,966.6
2017	2,935,103.0

1 **City of Hamilton Interrogatory # 5**

2
3 **Issue:**

4 Issue 46: Is the load forecast methodology including the forecast of CDM savings appropriate?

5
6 **Reference:**

7 None

8
9 **Interrogatory:**

10 a) How many municipal LED conversions in HONI's service territory have received pre-
11 approval for IESO SaveOnEnergy incentives via HONI's CDM group? Please provide the
12 accompanying load reduction values.

13
14 b) How are the pre-approved IESO SaveOnEnergy incentive LED conversion projects
15 represented in the street lighting load profile?

16
17 **Response:**

18 a) 139 LED conversions have been pre-approved by Hydro One for IESO SaveOnEnergy
19 incentives, with estimated energy savings of 35 GWh. Furthermore, 92 LED conversions
20 have been completed since 2012, with estimated energy savings of 22 GWh.

21
22 b) The street lighting load profile implicitly includes any saving through the LED conversion
23 projects noted above.