

Pollution Probe INTERROGATORY #1 List 1

Interrogatory

Reference: Exhibit .C, Tab 1, Schedule 1

For each of Hydro One's OPA-contracted province-wide CDM programs, please provide the following information:

- a) cumulative* annual energy savings (MWh) per year;
- b) number of participants per year;
- c) potential number of participants per year;
- d) annual budgets broken out according to:
 - i) financial incentives for customers; and
 - ii) other;
- e) TRC ratio;
- f) PAC ratio; and
- g) free-rider rate estimates and copies of the reports that support these free rider rate estimates;

For example, assuming that the program saved 100 kWh in 2011 and an incremental 200 kWh in 2012, but only 90 kWh of the 2011 savings persisted in 2012, then the cumulative annual energy savings in 2012 would be 290 kWh (i.e. 90 + 200).

Response

Hydro One is not in the position to provide any additional information about the OPA-contracted programs beyond the evidence we've already provided in our submission.

Pollution Probe INTERROGATORY #2 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 1, pp. 29 — 31

Please provide Hydro One's number of actual and potential:

- a) residential; and
- b) general service peaksaver customers as of December 31, 2010.

Response

		Participants to date	Potential
a)	Residential	33,000	450,000 estimated with central air conditioning. The future program may not be restricted to central air conditioning and therefore may have additional potential.
b)	General Service (<50kW)	400	80,000

Pollution Probe INTERROGATORY #3 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 1, pp. 29-3 1

Please provide Hydro One's forecasted cumulative number of:

- a) residential; and
- b) small commercial participants for each of the following years: 2011, 2012, 2013 and 2014.

Response

The table below outlines Hydro One's forecasted cumulative participants for the years 2011, 2012, 2013 and 2014:

HONI Cumulative Participants - Forecast*				
	2011	2012	2013	2014
Residential	8,000	17,000	27,000	40,000
Small Commercial	100	200	300	400

**Estimated based on Hydro One's past experience and best available information.*

Pollution Probe INTERROGATORY #4 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 1, pp. 29-31

Has Hydro One analyzed the benefits and costs of adopting more aggressive participant targets for its residential and small commercial demand response program? If yes, please provide copies of Hydro One's analyses. If no, please explain why not.

Response

This is a province-wide program designed by the Residential DR Working Group and approved by the OPA. Although we have been a member of this working group and contributed to the design of this program, Hydro One is not in a position to provide detailed information about the benefits and costs analysis that supported the design of this initiative.

Pollution Probe INTERROGATORY #5 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 1, pp. 29-31

Please provide break-outs of Hydro One's annual marketing budgets (e.g. TV ads, newspaper ads, bill inserts, door-to-door canvassing, etc.) for its residential and small commercial demand response program.

Response

This information is not available. The details of the marketing plan of the Residential and Small Commercial Demand Response program have not been finalized.

Pollution Probe INTERROGATORY #6 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2

For each of Hydro One's proposed Board-approved CDM programs please provide the following information:

- a) cumulative* annual energy savings (MWh) per year;
- b) number of participants per year;
- c) potential number of participants per year;
- d) annual budgets broken out according to:
 - i) financial incentives for customers; and
 - ii) other;
- e) TRC ratio;
- f) PAC ratio; and
- g) free-rider rate estimates and copies of the reports that support these free rider rate estimates;

For example, assuming that the program saved 100 kWh in 2011 and an incremental 200 kWh in 2012, but only 90 kWh of the 2011 savings persisted in 2012, then the cumulative annual energy savings in 2012 would be 290 kWh (i.e. 90 + 200).

Response

Community Events

- a) See Exhibit C, Tab 1, Schedule 2, Page 6 of 67
- b) See Exhibit I, Tab 1, Schedule 7 for assumptions on giveaways
- c) 150,000 are the total potential attendees to the 40 annual events
- d) This information was provided in Confidence to ensure RFP integrity
- e) See Exhibit I, Tab 1, Schedule 7
- f) See Exhibit I, Tab 1, Schedule 7
- g) See Exhibit I, Tab 1, Schedule 7

Neighbourhood Benchmarking

- a) See Exhibit C, Tab 1, Schedule 2, Page 17 of 67
- b) 50,000 per year
- c) Approximately 900,000
- d) This information was provided in Confidence to ensure RFP integrity
- e) See Exhibit I, Tab 1, Schedule 18

1 f) See Exhibit I, Tab 1, Schedule 18

2 g) See Exhibit I, Tab 1, Schedule 18

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5 **Monitoring and Targeting**

6
7 a) See Exhibit C, Tab 1, Schedule 2, Page 28 of 67

8 b) See Exhibit I, Tab 1, Schedule 25

9 c) 1,600 C/I customers with average load of 200kW and above, but with annual energy
10 consumption of less than 1,500,000GWh.

11 d) This information was provided in Confidence to ensure RFP integrity

12 e) See Exhibit I, Tab 1, Schedule 25

13 f) See Exhibit I, Tab 1, Schedule 25

14 g) See Exhibit I, Tab 1, Schedule 25

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16 **Energy Management and Demand Response Initiative**

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18 a) See Exhibit C, Tab 1, Schedule 2, Page 39 of 67

19 b) See Exhibit I, Tab 1, Schedule 33

20 c) Approximately 85,000 General service customers with average load less than 200kW

21 d) This information was provided in Confidence to ensure RFP integrity

22 e) See Exhibit I, Tab 1, Schedule 33

23 f) See Exhibit I, Tab 1, Schedule 33

24 g) See Exhibit I, Tab 1, Schedule 33

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27 **Municipal and Hospital Initiative**

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29 a. See Exhibit C, Tab 1, Schedule 2, Page 49 of 67

30 b. See Exhibit I, Tab 1, Schedule 39

31 c. 366 Municipalities and 79 Hospitals

32 d. This information was provided in Confidence to ensure RFP integrity

33 e. See Exhibit I, Tab 1, Schedule 39

34 f. See Exhibit I, Tab 1, Schedule 39

35 g. See Exhibit I, Tab 1, Schedule 39

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37 **Double Return Plus**

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39 a) See Exhibit C, Tab 1, Schedule 2, Page 62 of 67

40 b) See Exhibit I, Tab 1, Schedule 48

41 c) Approximately 800 C/I customers with average load of at least 200kW

42 d) This information was provided in Confidence to ensure RFP integrity

43 e) See Exhibit I, Tab 1, Schedule 48

44 f) See Exhibit I, Tab 1, Schedule 48

- 1 g) See Exhibit I, Tab 1, Schedule 48
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Pollution Probe INTERROGATORY #7 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2

Please provide the avoided cost estimates (with respect to both energy and capacity) that Hydro One uses to calculate the cost-effectiveness of its CDM programs. Please provide a break-out of these estimates by year, season, time of day, generation, transmission, and distribution.

Please also provide a break-out of the generation mix assumptions that are embedded in the avoided cost estimates (i.e. the percentage of the avoided capacity and energy supply that is solar, wind, biomass, water power, simple cycle gas, combined-cycle gas, combined heat and power, nuclear power, and imports).

Please also provide copies of the reports that support Hydro One's avoided cost estimates.

Response

Hydro One used the avoided cost estimates included in the OPA's latest version of their Conservation Program Resource Planning Tool (v3.3) to calculate the cost-effectiveness of our CDM programs. The table below shows the avoided costs used in the various cost-effectiveness tests:

Year	Avoided Energy Cost by Season and Time-of-Use Period (2007 \$/MWh)								Avoided Capacity Cost (2007 \$/kW-yr)		
	Winter			Summer			Shoulder		Gen	Tx	Dx
	On Peak	Mid- Peak	Off- Peak	On Peak	Mid- Peak	Off- Peak	Mid- Peak	Off Peak			
2008	71.48	68.32	35.74	73.41	59.46	34.34	38.23	29.26	133.10	3.40	4.30
2009	68.14	66.46	36.19	67.63	57.24	34.04	39.06	28.63	133.10	3.40	4.30
2010	60.94	58.53	62.12	62.12	54.57	34.27	36.62	26.75	133.10	3.40	4.30
2011	56.93	53.55	32.12	62.47	52.75	31.51	35.04	26.43	133.10	3.40	4.30
2012	57.88	58.31	32.49	62.93	53.76	31.83	33.72	23.38	133.10	3.40	4.30
2013	56.45	54.56	30.63	60.14	51.49	30.76	33.34	23.07	133.10	3.40	4.30
2014	57.04	55.44	30.88	60.67	51.90	31.21	34.98	25.37	133.10	3.40	4.30
2015	66.76	65.87	40.19	71.66	62.33	37.61	48.77	30.30	133.10	3.40	4.30
2016	68.26	66.48	44.31	73.58	64.74	38.91	49.68	29.95	133.10	3.40	4.30
2017	69.25	66.60	44.68	76.17	67.04	39.68	48.67	30.23	133.10	3.40	4.30
2018	70.33	68.44	45.01	75.80	68.50	39.73	51.49	30.07	133.10	3.40	4.30
2019	71.65	69.54	45.26	77.70	70.77	41.37	52.69	30.98	133.10	3.40	4.30
2020	70.12	65.26	41.61	74.22	66.54	39.45	44.80	31.16	133.10	3.40	4.30

	Avoided Energy Cost by Season and Time-of-Use Period (2007 \$/MWh)								Avoided Capacity Cost (2007 \$/kW-yr)		
	Winter			Summer			Shoulder		Gen	Tx	Dx
Year	On Peak	Mid- Peak	Off- Peak	On Peak	Mid- Peak	Off- Peak	Mid- Peak	Off Peak			
2021	70.40	67.73	41.88	74.23	66.21	39.28	54.41	30.65	133.10	3.40	4.30
2022	65.74	63.65	37.42	68.00	59.75	35.86	42.50	27.31	133.10	3.40	4.30
2023	62.43	59.03	34.46	66.78	57.68	34.15	35.83	25.13	133.10	3.40	4.30
2024	61.86	57.71	34.73	67.93	58.67	34.86	35.92	26.19	133.10	3.40	4.30
2025	64.14	60.61	35.14	68.61	59.11	34.80	37.16	25.76	133.10	3.40	4.30
2026	68.27	65.33	37.03	69.93	61.00	36.81	45.58	27.09	133.10	3.40	4.30
2027	71.03	66.21	38.71	72.91	63.44	37.98	46.22	28.50	133.10	3.40	4.30

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Pollution Probe INTERROGATORY #8 List 1

Interrogatory

Reference: Exhibit B, Tab 1, Schedule 2, P. 4

Please describe in detail the methodology for the Program Administration Cost ("PAC") Test.

Response

The OPA's Conservation Program Resource Planning Tool User Guide (release date: August 18, 2010) is the basis of Hydro One's PAC analysis. A general description of this methodology can be found in the following document:

OPA Conservation and Demand Management Cost Effectiveness Guide (source: <http://icon.powerauthority.on.ca/report/templates/Cost%20Effectiveness%20Guide-%20Tuesday%20October%2019,%202010.pdf>)

Pollution Probe INTERROGATORY #9 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2, pages 45 — 51.

Please provide the total coincident peak demand and total annual electricity consumption for all of Hydro One's municipal and hospital customers.

Response

The total coincident peak demand for all of Hydro One's Municipal and Hospital customers is 134MW. The total annual consumption for all of Hydro One's Municipal and Hospital customers is 868,385 MWh for 2009.

Pollution Probe INTERROGATORY #10 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2, pages 45-5 1

- a) Will the Municipal and Hospital Energy Efficiency Performance Program's customer financial incentives for saving electricity be a function of their first year annual savings or a function of their savings over the life of the energy efficiency measures? For example, everything else being equal, will the financial incentive for an energy efficiency measure that saves 100 kWh per year for 20 years be greater than the financial incentive for an energy efficiency measure that saves 100 kWh for 5 years? And if yes, by how much?
- b) Please provide the avoided cost value(s) (i.e. LUEC) used by Hydro One to evaluate the TRC Test benefits of the Municipal and Hospital Energy Efficiency Performance Program.
- c) Please state the Municipal and Hospital Energy Efficiency Performance Program's proposed customer financial incentives per kWh and/or per kW and the time period during which a project would receive such incentive payments (e.g. one year, 5 years, economic life of the project's energy savings, etc.).

Response

- a) The incentive structure in this initiative is based on annual savings and not the savings over the life of the energy efficiency measures.
- b) Please refer to Exhibit I, Tab 4, Schedule 7.
- c) The proposed customer financial incentive is \$0.075 per kWh of savings. Incentives for this initiative are based on annual savings relative to a customer baseline, which will be reset annually through to December 31, 2014.

Pollution Probe INTERROGATORY #11 List 1

Interrogatory

Reference: Exhibit B, Tab 1, Schedule 2, p. 3:

“In 2008 and 2009, Hydro One developed and submitted custom CDM programs to the OPA, of which Double Returns was implemented and has proven to be a great success. Many of these programs were considered leading edge and have been emulated by other utilities throughout North America.”

- a) For each of these years, please describe the key terms and conditions of Hydro One’s historic Double Returns programs (e.g. which customer classes were eligible to participate, conditions for receiving an incentive, values of the incentive, limits on the magnitude of the incentives (if any), etc.).
- b) For each year of Hydro One’s historic Double Returns programs, please provide their: number of participants; MWh and MW savings; TRC net benefits; TRC Benefit Cost Ratio; total dollar value of incentive payments; and total dollar value of non-incentive payment program costs.
- c) Please provide references (including electronic links where applicable) to North American utility programs that emulate Hydro One’s Double Returns program.

Response

- a) The details of the MARR-funded Double Return program were outlined in the 2007 Annual Report filed as Attachment 3 to Exhibit I, Tab 9, Schedule 7.

The details of the OPA-funded Double Return program are outlined in an EM&V study completed in 2010 by the OPA.

- b) Please refer to response to a) above.
- c) The reference in quote from our submission refers to the OEB programs in general, not to the Double Return Plus initiative in particular. An example of a program designed by Hydro One and then emulated by other North American utilities is the In-Home Display initiative, offered to Hydro One residential customers in 2006/2007 and subsequently adopted by other North American utilities.

Pollution Probe INTERROGATORY #12 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2, p. 57:

“The Double Return Plus initiative has two components: a peak demand reduction and an energy efficiency component.”

Please provide the Double Return Plus’ forecasted total net TRC benefits by year from both:

- a) its peak demand reduction component; and
- b) its energy efficiency component.

Response

The table below outlines the TRC benefits

TRC benefits		
	Energy efficiency component	Peak demand reduction component
2011	\$428,681	\$1,262,910
2012	\$2,609,538	\$5,114,846
2013	\$2,747,388	\$5,281,494
2014	\$2,695,370	\$5,082,518
Total	\$8,480,977	\$16,741,768

The table below outlines the TRC costs:

Year	TRC Costs
2011	\$467,854
2012	\$609,216
2013	\$589,734
2014	\$555,775
Total	\$2,222,580

The cost cannot be broken down by energy and demand.

Pollution Probe INTERROGATORY #13 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2, p. 58:

“While the participants are encouraged to optimize their reduction in their peak demand, incentives are only applied to savings that range from a minimum of 5% to a maximum of 10% reduction.”

Please explain in detail why Hydro One is not proposing to pay incentives for peak demand reductions in excess of 10%.

Response

While Double Return Plus is expected to be an effective initiative in achieving its objectives, it is one among many initiatives in our CDM portfolio in which we strive to strike a balance in meeting the needs of different customer classes through CDM offerings. As such, our intent is to avoid dedicating undue resources to one initiative at the expense of others.

Pollution Probe INTERROGATORY #14 List 1

Interrogatory

Reference: Exhibit B, Tab 1, Schedule 2, p. 3; and Exhibit C, Tab 1, Schedule 2, p. 57

Please explain in detail why Hydro One is not proposing to offer a Double Returns program also to its residential and small volume customers.

Response

The application of Double Return Plus to residential and small volume customers will require significant program redesign in order to account for the differences in rate and billing structure, enabling technologies, and customer class characteristics. Hydro One will continue to explore opportunities for extending this initiative to a wider range of demand-billed customers and will come forward with new proposed initiatives as appropriate.

Pollution Probe INTERROGATORY #15 List 1

Interrogatory

Reference: Exhibit C, Tab 1, Schedule 2

For each of Hydro One's proposed Board-Approved CDM programs, please provide the date that Hydro One will receive preliminary and/or final evaluation reports with respect to Hydro One's free-rider rate estimates for these programs.

Response

As mentioned in Exhibit I, Tab 1, Schedule 9, Exhibit I, Tab 1, Schedule 20, Exhibit I, Tab 1, Schedule 27, Exhibit I, Tab 1, Schedule 35, Exhibit I, Tab 1, Schedule 41, Exhibit I, Tab 1, Schedule 50, these details will be finalized with the assistance of a Third-Party EM&V expert, which will be retained as soon as the proposed initiatives are approved by the Board.