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June 20, 2006

VIA FACSIMILE & COURIER

Mr. John Zych
Board Secretary
Ontario Energy Board
2300 Yonge St, Suite 2601
Toronto, ON M4P 1E4

Dear Mr. Zych:

**Conservation & Demand Management
Ontario Energy Board File No. RP-2004-0203 et al
Review of LDC CDM 2005 Annual Reports**

Pursuant to the Board's letter dated May 12, 2006, announcing a review of the 2005 annual reports of LDC CDM experience, including cost benefit analysis, Energy Probe Research Foundation (Energy Probe) reviewed a number of the annual reports but has addressed its comments only to the report of Toronto Hydro.

Should you require additional information, please do not hesitate to contact me.

Sincerely,

David S. MacIntosh
Case Manager

CC. Richard Zebrowski, Toronto Hydro-Electric System Limited (By fax & email)
Tom Adams, Energy Probe Research Foundation (By email)

Energy Probe Research Foundation 225 BRUNSWICK AVE., TORONTO, ONTARIO M5S 2M6

Phone: (416) 964-9223 Fax: (416) 964-8239 E-mail: EnergyProbe@nextcity.com Internet: www.EnergyProbe.org

Ontario Energy Board

Review of LDC CDM 2005 Annual Reports

◆Toronto Hydro-Electric System Limited◆

Comments from

Energy Probe Research Foundation

Submitted June 20, 2006

Toronto Hydro-Electric System Limited CDM 2005 Annual Report

Comments of Energy Probe Research Foundation

The following comments are provided on behalf of Energy Probe Research Foundation (Energy Probe) in response to the May 12, 2006 letter from the Board entitled *Review of LDC Conservation and Demand Management (CDM) 2005 Annual Reports*, which invited comment from stakeholders.

Energy Probe appreciates the opportunity to review and comment on the 2005 Annual Reports in an effort to assist Board Staff. Due to the number of reports and their size, Energy Probe has addressed its attention to only Toronto Hydro.

General Comments on the 2005 Toronto Hydro CDM Plan

The Ontario government has promised to bring a culture of conservation to electricity usage. As part of that initiative it has directed the Ontario local electricity distribution companies to undertake CDM programs and mandated the Ontario Energy Board (“OEB”) to approve and supervise spending of approximately \$163 million on the programs.

In 2005, Toronto Hydro, Ontario's second largest electricity distributor, spent \$13.4 million on conservation programs as part of that direction. The utility operated 12 programs during 2005 and in its 2005 Annual Conservation Report has submitted claimed savings of 59.8 GWh of electricity, enough power to supply approximately 6,000 homes for a year.

The actual program results, applying the assumptions of conservation program effectiveness ordered by the Ontario Energy Board, tell another story.

Toronto Hydro appears to have inflated the claimed electricity consumption savings for some of its conservation programs by more than 200%.

Not only are the results overstated but the costs are also excessive. Toronto Hydro give-away programs have hidden costs that customers in Toronto now pay as a hidden tax. Some product give-aways cost 10% more than comparable products available from a popular retailer and several times the cost of similar products available widely through discount retailers.

In 2005, Toronto Hydro's largest conservation program by far – representing 84% of the claimed savings – was a series of co-branded electrical product promotions offered through Home Depot. This program was identified by Toronto Hydro in its 2005 annual conservation report to the Ontario Energy Board as saving 50.6 GWh of electricity. The program was composed of three elements: a give-away program for compact fluorescent light (CFL) bulbs, discount coupons for air conditioners, and holiday lighting products.

Last fall, the Ontario Energy Board issued guidelines for utilities to use in reporting conservation savings. The guidelines provide the assumptions utilities are required to use in calculating the energy savings associated with conservation programs. For example, when a utility gives a CFL to a consumer, the guidelines indicate what type of bulb the consumer is assumed to replace with the CFL. The number of hours a CFL or an air conditioner will be used in specific time periods during the year is also provided. The regulator also provides an assumption for the number of customers who would have replaced their Christmas lights on their own without a subsidy program.

Energy Probe is concerned that many of the assumptions required by the OEB are unrealistically optimistic about the effectiveness of conservation programs. The OEB assumes that consumers do not leave efficient CFLs or air conditioners on for longer than the less efficient equipments they replace, an assumption disproved by several independent studies.¹ The regulator assumes that only 5% of those buying subsidized efficient Christmas lights would do so without the subsidy although new high tech low energy Christmas lights sell well without subsidies.²

Assuming that every subsidized energy appliance acquired by consumers was used as assumed by the regulator and also assuming that every appliance was installed immediately upon acquisition by every consumer, the calculated savings from the conservation program in 2005 is only 16.2 GWh. Using the OEB's guidelines to do the calculations, the Toronto Hydro program only generated 32% of the amount claimed by Toronto Hydro as savings. The actual savings achieved by the give-away programs are probably much less.

While the foregone consumption attributable to the give-aways is uncertain, the costs can be quantified. The largest individual product promotion under the Toronto Hydro/Home Depot program gave away "free" CFLs. The embedded cost of the give-away program to Toronto Hydro was \$7.71 per bulb not including regulatory overheads. CFLs of equivalent size are available at Ikea for \$6.99. Slightly smaller but well-functioning CFL bulbs can be purchased from discount retailers for \$1.00.

Energy Probe's calculations for THESL's savings and unit costs are presented in Appendix A.

Over the next 2 years, Toronto Hydro is budgeting a further \$26.5 million to continue its conservation programs.

¹ A classic reference on this subject is D. Khazzoom, "Energy savings resulting from the adoption of more efficient appliances," *The Energy Journal* 8, 4 (1987): 85-89. Many studies on automobile fuel efficiency have identified similar "rebound" effects.

² One recent survey from the UK showed that 57.1% of responding town centre managers and local authorities used LED Christmas lights in their displays during Christmas 2005. (www.atcm.org/files/files/219-ATCMChristmasLightSurvey.pdf)

Conclusion

While wasteful conservation programs with exaggerated effectiveness flourish, real conservation languishes. Toronto Hydro continues to rent unmetered flat-rate water heaters. Ontario has over 400,000 residential suites in multi-occupancy apartments, malls, and office buildings with only a single bulk meter for the building and no suite meters, the largest concentration of which appear to be in Toronto.

Many people would like to believe that utilities can achieve conservation through CDM programs and that these programs can be administered effectively and efficiently. Give-away programs may well be popular with recipients, particularly since the costs are so difficult to discern and are borne mostly by non-participants. The Ontario government is relying heavily on conservation programs of the kind delivered by Toronto Hydro literally to keep the lights on in Ontario.

Our analysis indicates that Toronto Hydro's programs are inefficient and increase overall consumer cost. More importantly, the effectiveness of the conservation programs appears to be overstated. Reliance on the demand reduction claims of Toronto Hydro creates a significant risk to Ontario's power system's reliability.

Transparency and a reasonable opportunity for continued stakeholder involvement will assist the Board in validating this regulatory process.

Respectfully submitted on behalf of Energy Probe Research Foundation at Toronto, Ontario this 20th day of June, 2006.

Thomas Adams

Appendix A

Energy Probe Analysis of THESL Conservation and Demand Management (CDM) Program Results

Program: "Co-branded Mass Market Program"

Reference: p. 5/6 and 49 of THESL 2005 CDM Annual Report (<http://www.oeb.gov.on.ca/documents/cases/RP-2004-0203/annualreports/thesl.pdf>)

Program	CFL	Room AC	X-mas lights	Total	Notes
Base tech	60W	Old	traditional		
Efficient Tech	CFL	RAC replace	SLED		
Units	497,106	5,195	90,681		
Claimed saving (kWh)				50,584,655	p. 49
Actual results					
Units	497,106	5,195	90,681		p. 6 reports 495,106 but excludes 2,000 units provided to city councillors etc.
Annual kWh savings per unit (per TRC Guide)	104	880	19		
Fraction of year appliance in service	0.19	1.00	1.00		assumes all items installed immediately by recipients
Total saved kWh	9,942,120	4,571,600	1,722,939	16,236,659	
THESL inflation				3.12	reported results vs. actual
Costs					
Total cost (no overhead)	\$3,121,825.68	\$129,875.00	\$634,767.00	\$3,886,467.68	cost per CFL calculated as residual
Program cost/item (no overhead)	\$6.28	\$25.00	\$7.00		
overhead ratio	0.23	0.23	0.23		
Program cost/item with overhead	\$7.71				Marathon 15W
IKEA price for 15W CFL	\$6.99				

Summary of 2005 Programs

April 2005 THESL initiated 2 for 1 coupon offer as bill stuffer – 357 coupons redeemed (savings not included in 2005 CDM results)

November 5th initiated "No Strings Attached" X-mas lights

September 23 initiated Canadian Tire Coupon program (included CFL)

September 17 initiated Bright Idea campaign with Home Depot (CFL), program ran from September 16-Oct. 30 – 495,106 units given away

(note: inconsistency in numbers of CFLs given away, p. 49 indicates 497,106 and p.6 with the correct information appearing on p. 6

"Keep cool" launched June 2 (\$25 bounty on old RAC)