Toronto Hydro-Electric System Limited

Conservation and Demand Management

2013 Annual Report

Submitted to:

Ontario Energy Board

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Background

On March 31, 2010, the Minister of Energy and Infrastructure of Ontario, under the guidance of sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998*, directed the Ontario Energy Board ("OEB") to establish Conservation and Demand Management ("CDM") targets to be met by local electricity distributors ("LDCs"). Accordingly, on November 12, 2010, the OEB amended the distribution licence of Toronto Hydro-Electric System Limited ("THESL") requiring THESL, as a condition of its licence, to achieve 286 MW of net annual peak demand savings and 1,304 GWh of net cumulative electricity energy savings, over the period beginning January 1, 2011 and ending December 31, 2014.

In accordance with the same Minister's directive, on September 16, 2010 the OEB issued the Conservation and Demand Management Code for Electricity Distributors (the "CDM Code"). The CDM Code sets out the obligations and requirements with which LDCs must comply in relation to the CDM targets set out in their licences.

The Code also requires a distributor to file Annual Reports with the OEB. This is the third Annual Report filed by THESL covering the period from January 1, 2013 to December 31, 2013.

THESL's previously submitted 2011 and 2012 Annual Reports summarized the results, successes, and challenges of its CDM activities for the January 1, 2011 to December 31, 2012 period. The OEB's 2011 CDM Results Report[1] recognized that Distributors had concerns with a delay in the full suite of CDM Programs being made available by the Ontario Power Authority ("OPA"), and that the absence of some programs negatively impacted the final 2011 results. This message was also highlighted in Volumes I & II of the Environmental Commissioner's Report[2] on Ontario's Annual Energy Conservation Progress.

On December 21, 2012, the Minister of Energy directed the OPA to fund CDM programs which meet the definition and criteria for OPA-Contracted Province-Wide CDM Programs (the "OPA Programs") for an additional one-year period from January 1, 2015 to December 31, 2015. To date, no further direction has been provided in terms of program initiative rules or funding.

The Ministerial Directive did not amend the timelines for LDCs to achieve their energy savings and demand savings targets. As a result, THESL continues to assume an unchanged CDM target deadline of December 31, 2014, and is maintaining a strategy consistent with that timeline.

On March 31, 2014, the Minister of Energy announced a directive to implement a new six-year Conservation First Framework. The new framework will achieve a total of 7 TWh of reductions in electricity consumption between January 1, 2015 and December 31, 2020 in Ontario.

[1] Conservation and Demand Management Report – 2011 Results (EB-2010-0215), OEB December 20, 2012

[2] http://www.ecoissues.ca/index.php/CDM12v2_The_2014_LDC_Electricity_Conservation_Targets,_Year_One

Executive Summary

This 2013 Annual Report details THESL's CDM savings progress to date, the achievements and highlights of programs implemented in 2013, the challenges and mitigation measures considered during the course of program implementation, and discusses modifications to THESL's CDM Strategy in order to attempt to meet its mandated targets by the end of 2014.

2013 CDM Results – As noted in table 1 below (provided by the OPA in the 2013 final verified results), in 2013 THESL achieved 93.6 MW of net annual peak demand savings and 135.5 GWh of net energy savings. Combined with the final verified results for 2011 and 2012, this translates into 52.7% of the demand savings target achieved and 99.8% of the energy savings target achieved, assuming that demand response resources remain until 2014 (OPA Scenario 2). Under OPA Scenario 1 (assuming demand response resources have a persistence of only 1 year) the demand savings target achieved is 29.8%. Further details on savings results are listed in Section 3.1.

Table 1: Summary of 2013 Savings Results for THESL

FINAL 2013 Progress to Targets	2013 Incremental	Program-to-Date Progress to Target (Scenario 1)	Scenario 1: % of Target Achieved	Scenario 2: % of Target Achieved
Net Annual Peak Demand Savings (MW)	93.6	85.4	**29.8%**	**52.7%**
Net Energy Savings (GWh)	135.5	1,301.5	**99.8%**	**99.8%**

Scenario 1 = Assumes that demand response resources have a persistence of 1 year

Scenario 2 = Assumes that demand response resources remain in the LDC service territory until 2014

THESL's 2013 Activities - In 2013, THESL undertook the following activities to further implement OPA-Contracted Province-Wide programs:

- A total of 1,922 applications (31.7 MW) were approved under the ERII program and 1,334 (24.0 MW) processed for incentive payment.
- Continued strong ***peaksaver*** **PLUS** enrollments and expanded the base of participants to 54,451.
- Worked with the Ministry of Energy and other large LDCs to develop a new CDM model for 2015 to 2020, which was announced on March 31, 2014 by the Minister of Energy to implement a new six-year Conservation First Framework.
- Received approval from the OPA and commenced a localized demand response pilot. The intent is to develop a framework and protocol for applying local demand management projects to optimize infrastructure investment.
- Deployed 13 Embedded Energy Managers and 5 Roving Energy Managers in large customers' facilities to help them identify and execute CDM project opportunities.
- Supported several customers who were pursuing natural gas fired co-generation projects. Cogeneration had been an eligible measure under the industrial PSUI program, but approvals were on hold for over a year due to changes in government policy. In July 2013 the OPA was directed to resume approving natural gas fired cogeneration projects. Although a welcome change, it has come too late to impact THESL demand reduction achievements as these projects typically require a multi-year implementation,
- Made extensive efforts to reach out to customer rate classes with lower involvement rates and identify new approaches to existing markets. As an example:

- using an external consulting firm to offer support in the 200 to 2,000 kW sector, and participating in an OPA pilot that used innovative approaches to implement cultural and operational improvements in industrial facilities; and
- using remote/low-touch energy auditing tools to identify retrofit and operational efficiency opportunities in large and medium commercial office buildings using electrical interval data to spur interest in conservation projects.

2014 Outlook - The savings projections from THESL's CDM Strategy have been revised to include THESL's experience with OPA Programs that have been in market for three years, as well as the Ministry of Energy's announcement of the program extension into 2015. Section 4.2 provides a summary of THESL's latest forecast; THESL expects to be 73 MW below the demand target and 160 GWh above the electricity savings target. Given the expected shortfall for demand, THESL intends to continue to work actively on participant engagement. In addition, THESL is working with other LDCs, the OPA and the Electrical Distribution Association ("EDA") to improve program effectiveness. In addition to these activities, THESL believes that an extension to the target date, consistent with the extension of program funding would be helpful in overcoming the forecasted peak demand savings shortfall.

The outlook is modified to reflect the program termination in December 31, 2014, a 2015 extension in customer incentive funding for projects completing in 2015 and the shift in focus from demand to energy savings under the new Conservation First program. The new Conservation First Framework will encourage the market to continue its conservation focus and will build up the funnel of applications which will transition to the new program starting in 2015. In 2014 THESL expects to over achieve the energy target and reach within the eighty percentile range of the demand target subject to the final time-of-use ("TOU") results.

Program funding under the current framework for 2015 carry-over activities to wrap-up 2014 programs was removed and is expected to be reallocated by the OPA in 2015 as a transition towards the Conservation First directive program (for the 2015 – 2020 period). The carry-over work in 2015 is required for final settlement of participant incentives and third party services for projects completed up to December 31, 2014 including quality assurance and quality control work activities, as well as administration work for the final audit and 2014 annual report.

Strategy Modifications - THESL has modified its strategy for 2014 due to the following factors:

- The Conservation First Directive announced in March 2014 will influence the 2014 program and provide market confidence through the continuation of conservation to December of 2020.
- CDM Demand Response ("DR") programs will no longer be included in LDC delivered CDM programs under the new directive (DR programs will be transferred to IESO).
- In 2014 THESL intends to continue to aggressively market energy efficiency programs in all sectors in order to achieve the maximum results in 2014 as well as to provide market continuance for conservation (promote and attract retrofit project applications for the new Conservation First directive).
- Results for projects completing post 2014 (in-flight 2014 applications) will transition into 2015 and energy results will be attributed to the new six year target (2015 - 2020).

THESL will continue to rely entirely on results achieved via the OPA Programs and the Board-Approved TOU pricing. The commercial, institutional and industrial sectors remain the key markets with the potential to deliver the greatest share of conservation gains. THESL intends to implement a number of market tactics to extend the successful market activities to date. Section 4.3 provides further details on the market strategy and OPA Program delivery enhancements. THESL plans to continue to collaborate with the OPA, the EDA and other LDCs to enhance existing OPA Program initiatives and develop new initiatives to improve the outcome.

THESL had planned to have two new programs (Suitesaver and Gridsaver) in the market in 2014, but due to approval and implementation delays, the pilots were not concluded in the summer of 2013 as

planned. The pilots are being re-run in 2014 with the intent to have these programs launched as part of the 2015 to 2020 suite of programs.

These modified strategies require a more focused and accelerated market transformation approach, which in turn, requires additional human resources to research, monitor and manage channel partners and to deliver increased market results in a condensed time period.

1 Board-Approved CDM Programs

Introduction

THESL did not apply for any Board-Approved CDM Programs during 2013; however, as noted in the CDM guidelines, released April 26, 2012, the OEB has deemed TOU pricing a Province-wide Board-Approved CDM Program. The OPA is to provide measurement and verification on TOU. At the time of this report the OPA has not released any verified results of TOU savings to LDCs.

TOU Implementation

Customer Type(s): Residential and small business customers (up to 250,000 kWh per year)

Objectives: TOU pricing is designed to encourage conservation and demand shifting of energy usage from "on-peak" periods when electricity demand is high to "off-peak" periods when electricity demand is low.

Description: In August of 2010, the OEB issued a final determination to mandate TOU pricing for Regulated Price Plan ("RPP") customers, in order to support the Government's expectation for 3.6 million RPP consumers to be on TOU pricing by June 2011, and to ensure that smart meters funded at ratepayer expense are being used for their intended purpose. The RPP TOU price is adjusted twice annually by the OEB.

Delivery: The OEB sets the TOU rates; LDCs install and maintain smart meters; LDCs convert and enrol customers to TOU billing.

THESL continues to educate and inform customers of the benefits of TOU through a number of marketing tactics:

- Community outreach events in 2013 included 20 festivals and shopping centre visits which generated more than 8,858 interactions, as well as participation at CDM in-store events. This included 16 stores over 6 weekends resulting in 7,646 interactions.
- Rates updates in May and November were publicized through bill inserts distributed to all business and residential customers.
- TOU info was also distributed via E-Connect Residential Digital Newsletter. An additional e-blast was sent to all customers in May and November who are registered for the TOU portal.
- Social Media and press releases were utilized to remind customers of TOU rates changes as well as reminders during holidays of lower rates.
- Website materials are updated bi-yearly with banner ads for quick reference.
- Brochures with conservation tips and new rates are printed in May and June for distribution at community events. TOU stickers with time blocks are reprinted as well for distribution.

Participation:	720,380 (Residential, GS<50kW and suite meters) TOU-enabled meters as of the end of 2013
Spending:	Delivery and implementation of TOU was not OPA funded - it is subject to OEB funding approval.
Results & Evaluation:	THESL has been supporting the OPA in its evaluation study by providing customer data, but results are not available for this reporting period. Preliminary results indicate that there will likely be positive savings. However, the OPA has indicated that the savings results for TOU will not be available until 2015, although the studies are completed. This is far too late for potential conservation planning purposes.

2 OPA-Contracted Province-Wide CDM Programs

In 2013, THESL continued to deliver the following OPA Programs in its service area:

- **Consumer Program**
- **Business Program**
- **Industrial Program, and**
- **Home Assistance Program**

The funding for the above programs is provided by the OPA as detailed in Section 3.3 by type of expense and by initiative. Summary results at the program initiative level are shown in Section 3.

The following sections provide a detailed description of each of the OPA Program initiatives that were offered in THESL's service area in 2013. Full OPA-Contracted Province-Wide CDM Program descriptions are available on the OPA's website at http://www.powerauthority.on.ca/ldc-province-wide-program-documents and additional information can be found on the saveONenergy[OM] website at https://saveonenergy.ca as well as THESL's website at www.torontohydro.com.

The details for each program are presented in accordance with the templates provided in the appendices to the CDM Code. THESL further provides additional OPA Program context common to many of the individual initiatives, highlights of achievements including operational challenges, and current and possible risk mitigation activities.

2.1 Consumer Program – Residential Market

The Consumer Program includes initiatives that are designed specifically to meet the requirements of the residential sector and encourage uptake of energy efficient devices and generally promote a culture of conservation. THESL continued to promote the following initiatives to residential customers in 2013:

- Appliance Retirement
- Appliance Exchange
- HVAC Incentives
- Conservation Instant Coupon Booklet
- Bi-Annual Retailer Event
- Residential and Small Commercial Demand Response

To-Market Strategy: THESL's "to-market" strategy for the Consumer Program continued to be a mass marketing and communications plan. The diversity and size of Toronto's population requires a comprehensive integrated marketing plan, including social media channels, events, sponsorships and relevant and qualified advertisements that resonate with particular target groups and are coordinated with OPA's media timetable. In 2013, THESL leveraged its brand strength and recognition to promote these programs instead of utilizing the standard templates developed by the OPA.

Beginning in January 2013, THESL reached out to its consumer sector to promote the OPA's saveONenergy[OM] programs as follows:

- Advertisements using local print media, digital and radio
- Direct mail (spring and fall) to targeted customers promoting key programs
- Bill inserts

- Direct to customer E-newsletters
- Events – local community events and festivals
- Company website pages and social media – Facebook, YouTube and Twitter
- Outbound calling campaign to re-enrol customers to ***peaksaver* PLUS®**
- Public relation events and new releases

Consumer Program Highlights and Observations:

THESL heavily promoted the ***peaksaver* PLUS®,** Coupon Event, HVAC and Appliance Retirement during 2013:

- THESL launched a Spring and Fall media campaign which incorporated radio ads, community newspapers, ethnic advertising, unaddressed direct mail, digital/online and out-of-home (total 8 million impressions).
- Community outreach is important in educating customers. In 2013, events included 20 festivals and shopping centre visits which generated more than 8,858 interactions and 225 program enrolments.
- A unique ethnic campaign was executed to the Asian and South Asian market that included radio, theatre advertising, direct mail, and ethnic advertising as well as a translated micro site for registrations.
- THESL ran in-store events in conjunction with the OPA bi-annual coupon event in the spring and fall of 2013. This included 16 stores (Home Depot and Lowes). The stores generated 7,646 interactions and 1,187 ***peaksaver* PLUS®** enrolments.
- THESL piloted a "trike" campaign where representatives cycled to 11 events to promote ***peaksaver* PLUS®** and handed out freezies to the public. This campaign generated 32 ***peaksaver* PLUS®** enrolments.
- THESL utilized "Air Miles™" on applicable collateral during its time in market.
- Outbound calling was a major contributor to exceeding ***peaksaver* PLUS®** targets with approximately 45,000 of the original 65,000 participants extending their participation.
- Data mining was utilized to better target key geographic areas to drive ***peaksaver* PLUS®** registrations.

2.1.1 Appliance Retirement

Objectives:	To permanently decommission older, inefficient refrigeration appliances.
Description:	Offers consumers free pick-up and decommissioning of old inefficient refrigerators and freezers that are 20 years and older.
Delivery:	The OPA centrally contracted for province-wide marketing, call centre, appliance pick-up and decommissioning. LDC provided local marketing and coordination with municipal pick-up where available.
Participation:	1,541 appliances
Spending:	$115,584
Results & Evaluation:	Net peak demand savings = 100 kW
	Net energy savings = 656,268 kWh

Additional Comments:

This program has reached market saturation. The change of the applicable appliance age to 20 years and older has curbed the number of eligible appliances. Mitigation – THESL intends to run a creative campaign-specific to

help **drive** interest in this program, and to work with the OPA Residential Working Group to lower the age requirements.

2.1.2 Appliance Exchange

Objective: To remove and permanently decommission inefficient Room Air Conditioners ("RACs") and dehumidifiers.

Description: Appliance exchange events were held at local retail locations and customers were encouraged to bring in their old inefficient RACs and dehumidifiers in exchange for coupons/discounts towards the purchase of new energy efficient equipment.

Delivery: The OPA contracted with participating retailers for the collection of eligible units. THESL promoted the initiative as part of the integrated marketing plan but did not have an in-store presence.

Participation: 397 appliances

Spending: $70,358

Results & Evaluation: Net peak demand savings = 82 kW

Net energy savings = 146,668 kWh

Additional Comments:

In Toronto, room air conditioners are more popular than dehumidifiers; therefore, THESL only promoted this program through social media. Mitigation - THESL intends to seek greater autonomy to design marketing campaigns that suit its specific market conditions and that maximize the effectiveness of this program.

2.1.3 HVAC Incentives

Objective: To encourage the replacement of existing heating, ventilation and air conditioning ("HVAC") systems with high efficiency ENERGY STAR® systems and products.

Description: The initiative offers rebates for the replacement of inefficient heating and cooling systems with high efficiency ENERGY STAR® systems and products installed by approved Heating, Refrigeration, and Air Conditioning Institute ("HRAI") qualified contractors.

Delivery: The OPA contracted centrally for delivery of the initiative and THESL marketed this initiative as part of the integrated marketing plan.

Participation: 14,327 HVAC units

Spending: $216,686

Results & Evaluation: Net peak demand savings = 3,015 kW

Net energy savings = 5,189,758 kWh

Additional Comments:

The OPA centrally managed, tracked, and reported results. THESL did not have visibility to actively manage the effectiveness of this initiative. Mitigation – THESL intends to work directly with HRAI Toronto to market to their membership.

2.1.4 Conservation Instant Coupon Booklet

Objective: To encourage households to purchase energy efficient products by offering coupon discounts.

Description: This initiative offers customers coupons towards the purchase of a variety of low cost, easy to install ENERGY STAR® energy efficient products. Booklets are available at point-of-purchase or as downloadable coupons at www.saveonenergy.ca and on the THESL web site.

Delivery: The OPA contracted centrally for the distribution of the coupon booklets across Ontario. LDCs marketed and distributed coupons at local events. The OPA entered into agreements with retailers to honour the coupons.

Participation: 44,396 products

Spending: Nil

Results & Evaluation: Net peak demand savings = 66 kW

Net energy savings = 986,409 kWh

Additional Comments:

At the beginning of the year, LED coupons were added to the list of products in the Coupon Booklet. In addition, THESL printed LDC-coded coupons for the top selling products and distributed them at all THESL outreach events.

2.1.5 Bi-Annual Retailer Events

Objectives: To offer customers instant point of purchase discounts at participating retailers for a variety of energy efficient products.

Description: Twice a year (spring and fall), participating retailers host month-long rebate events. Customers are encouraged to visit participating retailers where they can find coupons redeemable for instant rebates towards a variety of low cost, easy to install energy efficient measures.

Delivery: The OPA enters into arrangements with participating retailers to promote the discounted products. LDCs also refer retailers to the OPA.

Participation: 120,911 products

Spending: $490,696

Results & Evaluation: Net peak demand savings = 151 kW

Net energy savings = 2,198,663 kWh

Additional Comments:

THESL continued to promote the LED offering as the lead message for this campaign. In addition, a new Lowes store was added to the roster as Lowes continues to grow their presence in Toronto. THESL also added an additional weekend of in-store presence at the Home Depot and Lowes stores.

2.1.6 Retailer Co-op

Objectives: To hold promotional events encouraging customers to purchase energy efficiency measures.

Description: The initiative provides LDCs with the opportunity to work with retailers in their distribution area by holding special events at retail locations. These events are typically special promotions that encourage customers to purchase energy

efficiency measures (and go above-and-beyond the traditional Bi-Annual Coupon Events).

Delivery: Retailers apply to the OPA for co-op funding to run special promotions of energy efficiency products to customers in their stores. LDCs can refer retailers to the OPA. The OPA provides each LDC with a list of retailers who are qualified for co-op funding as well as details of the proposed special events.

Participation: N/A

Spending: N/A

Results & Evaluation: N/A

Additional Comments: THESL did not participate in 2013

2.1.7 Residential and Small Commercial Demand Response ("DR")

Objectives: Control residential and small commercial electrical end use loads, including air conditioners, pool pumps and electric water heaters, to make available for dispatch during IESO demand response events.

Description: Customers enrol in ***peaksaver* PLUS®** (previously, ***peaksaver***), which includes the installation of a Load Control Device ("LCD") on one or more of the end use loads noted above and/or a free in-home display ("IHD") that allows customers to view their energy use and associated price on a real time basis.

THESL launched the new ***peaksaver* PLUS®** initiative in late summer 2012 and had considerable success in converting customers to the new program.

Delivery: THESL procures LCDs and IHDs directly and contracts the installation of the devices via a third party. THESL actively markets within its service territory using targeted market tactics (bill inserts, direct mail, outbound calling, and radio and newspaper ads) to promote the initiative.

Participation: 54,306 switches for residential

145 switches for small commercial

51,736 IHDs for residential

89 IHDs for small commercial

Spending: $12,492,174

Results & Evaluation: Net peak demand savings for residential = 34,491 kW

Net energy savings for residential = 239,477 kWh

Net peak demand savings for commercial = 92 kW

Net energy savings for commercial = 119 kWh

Additional Comments: The program has been well received and take-up rates continue to exceed expectations in the residential sector, while recognizing the number of eligible participants is diminishing. THESL led efforts to increase the demand response capability via the use of more effective cycling strategies. These efforts were successful and increased the demand reduction by approximately 0.1 kW per unit. Despite its overall success, there are some challenges with the program:

i) Small commercial take-up of the program has been negligible as there is generally no viable IHD technology or any incentive for business owners to participate. Mitigation – A task force of LDCs and the OPA worked to implement changes to improve participation in the small commercial

sector. This work was completed at end of 2013, however, the recommended participant incentives were not approved by OPA and the minor program changes which were approved did not have an effect on the participation rates of small commercial customers.

ii) Although the program has been a key contributor to the overall demand results for THESL, the savings associated with the IHD for ***peaksaver* PLUS®** have been determined by OPA to be negligible.

2.1.8 Residential New Construction

Objectives: To promote the construction of energy efficient residential homes in the new home construction market.

Description: This initiative offers incentives to homebuilders who construct new energy efficient homes. Incentives are offered for two categories: 1) incentives for the installation of electricity efficiency measures as determined by a prescriptive list or via a custom option; and 2) incentives for homes that meet or exceed aggressive efficiency standards using the EnerGuide performance rating system. This program has limited applicability in the Toronto Market, but did show some minor results in 2013.

Delivery: Local engagement of builders is the responsibility of the LDC and is supported by the OPA marketing air coverage driving builders to their LDC for additional information.

Participation: 50 homes

Spending: $61,348

Results & Evaluation: Net peak demand savings = 14 kW

Net energy savings = 105,822 kWh

Additional Comments:

This program was redesigned by the Residential Work Group to simplify the application process. Improvements launched in 2013 have resulted in a minor increase to program participation rates.

2.2 Business Program – Commercial and Institutional Markets

By end of 2013, many active sectors of the marketplace were demonstrating familiarity, comfort and experience with the CDM Programs.

THESL faces a challenge in Toronto. The conservation marketplace has matured since 2005 and saturation of certain conservation measures remains a limiting factor for some key segments. Development of new initiatives to satisfy the next generation of projects and opportunities that are tailored or unique to Toronto's market conditions is crucial to THESL achieving its mandated savings targets.

Analysis since 2012 continues to support the observation of an increasing number of smaller project applications with decreasing kW per application accompanied by longer sales cycle. This has resulted in greater sales and administrative efforts. This supports THESL's Applicant Representative Initiative ("ARI") in seeking to engage the supply chain as channel partners working with THESL to help widen the catch-net of energy saving measures, increase volume and spread the effort in helping to submit applications.

The following initiatives were promoted in 2013 through intense sales and marketing efforts:

- Efficiency: Equipment Replacement Incentive Initiative ("ERII")
- Direct Install Lighting
- Existing Building Commissioning Incentive
- New Construction and Major Renovation Incentive (High Performance New Construction)
- Energy Audit

To-Market Strategy: The business marketing strategy included the use of media, customer outreach and specific marketing tactics with cross-program messaging. A key component of the plan relied heavily on building a strong channel and ally partner network to help supplement THESL's sales activities. Key messages in the marketing campaign focused on technologies and highlighted the technical support offered by the business development team. Tactics included:

- Multimedia mass marketing, including radio and newspaper inserts, elevator advertising to build awareness in all sectors including ethnic advertising
- Hosting technology focused conferences
- Trade/vertical publications
- Online ad units on consumer business publications sites and commercial trade sites; additional digital tactics such as search engine marketing and retargeting
- E-newsletters to targeted lists
- Direct mail letter
- Sponsorship of major association events and initiatives including Race to Reduce, BOMA, CME, ORHMA, etc.
- Hosted an Energy Into Action conference in partnership with five other LDCs - over 350 participated in attendance
- Outreach activities at top industry events

- Ally/channel information and training sessions
- Marketing materials to support sales and partners/channel/allies (includes sale sheets, press releases, presentations, website)

Business Program Highlights and Observations:

- THESL continued to invest considerable effort in providing training workshops, seminars, and activities in 2013 to highlight and promote OPA Programs while engaging third party channel partners with local experience to accelerate uptake of available programs.
- Collaborated with OPA Energy Efficiency Service Provider (EESP) initiative to increase program participation in retail and hospitality sectors.
- Continued ARI to assist in the outreach and delivery of program solutions while sharing the administrative burden in managing a larger number of smaller projects.
- Actively participated in OPA Commercial and Institutional Program Work Groups to address operational issues and program enhancements.
- Head office applications processing under iCON were simplified to streamline approval processes for multi-site projects across multiple LDCs.
- Launched the ***Gridsaver*** pilot program to study Commercial Energy Management and Load Control opportunity in the small commercial sector.

- Launched the ***Suitesaver*** pilot program to study Multi-unit Residential Demand Response opportunity in the condominium sector

2.2.1 Equipment Replacement Incentive Initiative ("ERII")

Objectives: To offer incentives to business customers to encourage investment in more energy efficient equipment including lighting, space cooling, ventilation, controls and various other measures.

Description: Incentives are offered for projects where equipment and systems will be replaced with more efficient alternatives. Typical target segments for this initiative include commercial, retail, hospitality and entertainment, municipal, academic, health care, other institutional and multi-residential facilities. Applications can be submitted using one of three possible incentive streams (i.e. prescriptive, engineered, and custom).

Delivery: THESL developed a comprehensive front, middle and back office system to support this initiative. Technical energy consultants were hired to target all market sectors promoting ERII and assisting customers to identify energy savings opportunities and submit applications. THESL also contracted with the City of Toronto Better Buildings Partnership as its channel partner in the municipal, academic, social, and health care sectors to leverage long-standing relationships in those markets.

Participation: 1,713 projects

Spending: $22,260,388

Results & Evaluation: Net peak demand savings = 15,424 kW

Net energy savings = 90,527,082 kWh

Additional Comments:

i) THESL and other LDCs continue to collaborate with the OPA to enhance the program through the Change Management process. (ii) Observed project sizes are smaller while the number of applications has risen relative to prior years and earlier generation programs. This creates a more challenging sales and back office processing environment. Mitigation – Continued to promote THESL's Applicant Representative Initiative to increase supply chain engagement in sales cycle. (iii) Program was modified to allow capture of unplanned (emergency breakdown) rooftop unit replacement work in the unitary air conditioning distributor market that was largely disinterested in prior years with positive results. In addition, work was begun to extend and simplify the program into 2014.

2.2.2 Direct Install Lighting

Objectives: Offer up to $1,500 for the installation of eligible lighting and water heating measures in commercial, institutional, agricultural and multi-family buildings.

Description: The Initiative offers turn-key lighting and electric hot water insulation measures with a value of up to $1,500 at no cost to qualifying small businesses. In addition, standard prescriptive incentives are available for eligible equipment beyond the $1,500 limit.

Delivery: Participants enrol directly with a THESL contracted representative who manages the audit, installations and incentive administration. This initiative is reaching market saturation as it has been in market, albeit under a different name, for four years and was well-received by the market. Because most eligible participants have already been contacted, or have participated in the initiative, the numbers are expected to decline. THESL has been working with the OPA and other LDCs to refine the legal definition of eligible participant to include those inadvertently excluded, and to increase the incentive cap to attract more participants. These changes are in progress and were not available in time to influence 2013 participation rates.

Participation: 2,366 projects

Spending: $4,982,509

Results & Evaluation: Net peak demand savings = 2,092 kW

Net energy savings = 6,898,480 kWh

Additional Comments: The program has reached the point of diminishing returns unless additional measures and/or eligibility rules can be established. Mitigation – Propose changes through the C&I Working Group to expand the eligible participant base and update measure costs.

2.2.3 Existing Building Commissioning Incentive

Objective: To offer incentives for optimizing (but not for replacing) existing chilled water systems for space cooling in non-residential facilities for the purpose of achieving implementation phase energy savings, implementation phase demand savings, or both.

Description: This initiative offers participants incentives for the following phases of commissioning 1) scoping study; 2) investigation and analysis; 3) implementation; and 4) hand off/completion.

Delivery: LDC-delivered. THESL launched the initiative through its front-line technical energy consultants to large commercial and institutional segments; however customer response and participation were limited. THESL received a total of nine applications in 2011 and 2012, and another six applications in 2013. As of December 2013, only one application, with 0.5 MW of savings, has completed all four phases with OPA approval pending for the remaining three.

Participation: N/A

Spending: $282,375

Results & Evaluation: Net peak demand savings = 0 kW

Net energy savings = 0 kWh

Additional Comments:

i) Customer feedback indicates that the initiative is administratively complex and the rules are inflexible relative to the potential incentive available. These factors have limited potential participation. Mitigation – Issues were reviewed by the C&I Working Group and a number of revisions were made to the schedule to increase program effectiveness; however, at this time, the schedule has not been formally updated.

2.2.4 New Construction and Major Renovation Incentive (High Performance New Construction)

Objectives: To encourage builders of commercial, institutional, and industrial buildings (including multi-family buildings and agricultural facilities) to design and build new buildings with more energy-efficient equipment and systems for lighting, space cooling, ventilation and other measures.

Description: The initiative provides incentives for new buildings to exceed existing codes and standards for energy efficiency. The initiative uses both a prescriptive and custom approach.

Delivery: LDCs deliver the program to customers and design decision makers. This initiative was a continuation of the High Performance New Construction initiative previously delivered by the City of Toronto under contract with the OPA, which ended in December 2010. THESL re-contracted with the City's Energy Efficiency Office/Better Buildings Partnership as its delivery channel; however, due to the market hiatus, results are not expected until 2013 and beyond considering the length of time required to apply, build and commission new buildings.

Participation: 3 buildings

Spending: $481,014

Results & Evaluation: Net peak demand savings = 74 kW

Net energy savings = 407,340 kWh

Additional Comments:

(i) Development and construction cycles are very long for these types of buildings (often 4 to 5 years) and do not align well with CDM funding periods causing developers to be reluctant to enrol and invest in CDM. The length of time required to complete a project also requires a long term project management approach, which is much more involved than most other CDM Programs, and highlights the need for program continuity. Mitigation – In September 2013, the OPA announced that the program will continue through to

the end of 2015. (ii) Early program rules required participants to provide onerous project details somewhat prematurely at the time of application considering that many details only solidify nearer to project completion. Mitigation – In response, program rules were modified to defer application until later while accepting an "intent to apply" to signal program interest.

2.2.5 Energy Audit

Objectives: Offer incentives to owners and lessees of commercial, institutional, multi-family buildings and agricultural facilities to undertake energy audit assessments to identify all possible energy saving opportunities and help reduce demand and consumption.

Description: This initiative provides participants incentives for the completion of facility energy audits of electricity consuming equipment. Energy audits include development of energy baselines, use assessments and performance monitoring and reporting.

Delivery: LDC-delivered. The initiative was fully marketed through THESL front-line technical energy consultants. The initial primary focus was on whole-building energy audits for large commercial and multi-residential customers. In the first two years of the program, 324 applications were received with a total of 188 completed audits. In 2013, THESL received 194 applications and another 118 projects were completed. It is estimated that approximately 70% of completed audits lead to a Retrofit application.

Participation: 89 audits

Spending: $1,051,456

Results & Evaluation: Net peak demand savings = 784 kW

Net energy savings = 4,312,118 kWh

Additional Comments: The joint work between THESL and the OPA resulted in the introduction of the Detailed Analysis of Non-Capital Intensive Measures (DANCIM) audits, which are now referred to as a Building System Audits (BSA). These audits are offered to incorporate one of the key features of THESL's OEB Tier 3 Program application for Hydronic System Balancing and Commissioning. THESL is fully exploiting this initiative and is working with distribution channels to uncover opportunities in unexploited markets like the condominium sector. Since the addition of the BSA component in September 2012, approximately 25% of all applications have included a BSA component. The BSA audits have a higher conversion to project rate than other audits, which reinforces the soundness of the original OEB program design.

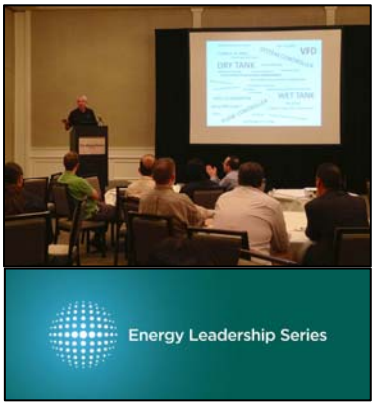
2.3 Industrial Program – Industrial Market

As referenced in THESL's CDM Strategy, the industrial sector represents approximately 13% of the total electricity consumption in Toronto. The key types of manufacturing in this sector (plastics/rubber, chemical, and food) together comprise 47% of the peak demand and 51% of the electricity consumption in the industrial sector. However, economic pressure on industrial customers has resulted in the total industrial load declining by almost 13% since 2008. The rate of industrial decline has since slowed, but this sector is expected to continue to experience a decline due to a number of macro and micro economic factors that make industrial production more effective in other jurisdictions.

The Industrial Program has a number of initiatives that are designed specifically to meet the requirements of this sector including stringent investment criteria (i.e. short payback periods), lack of resources and limited understanding of energy use within industrial facilities. After extensive efforts by the OPA and participating LDCs, the program schedules were released and signed May 31, 2011. Of the initiatives offered, Demand Response 3 was in market prior to the launch of the schedules, as this program existed prior to the OPA Programs and is delivered by the OPA via existing contracts with load aggregators.

The initiatives in this sector include:

- Process & System Upgrades Initiative ("PSUI")
- Monitoring and Targeting ("M&T")
- Energy Manager
- Demand Response 1 (cancelled)
- Demand Response 3



To-Market Strategy

Targeted marketing included the use of media, customer outreach and specific marketing tactics focused on the General Manufacturing, Plastics and Food & Beverage. With over 2.5 million impressions generated from a variety of tactics including radio, electronic newsletters and outdoor billboards in industrial neighbourhoods. THESL also hosted customer-training sessions (compressed air challenges) and conducted outbound calling to secure appointments with Industrial customers. Additional efforts to provide support services to the mid and small sized industrials were launched to increase participation in this segment.


TORONTO HYDRO

Dear John Smith,

What would increased energy efficiency mean to your bottom line?

If you maintain the same production levels while using less electricity, you'll make a positive contribution to your bottom line.

The first step in identifying exactly when and where electricity is being used so you can find your greatest potential for savings.

That's where a Monitoring and Targeting (M&T) energy management system comes into play. An M&T system enables you to identify and explain variations in your electricity use, map consumption trends and most importantly, diagnose specific areas of wasted energy. This program is funded by the Ontario Power Authority and offered by Toronto Hydro.

For a limited time – funding up to 80% of eligible costs

To encourage the implementation of M&T systems, your business may be eligible to receive up to 80% of actual eligible costs, to a maximum of $75,000, to purchase, install and make operational an M&T system. Often M&T findings provide the basis for further incentives under various other energy conservation programs.

We can help you identify savings opportunities

At no cost to you, we would like to accompany you on a walk-through of your facilities to look for potential areas of electricity savings. This will help you in your planning and give you an overview of the incentives you may be eligible for.

I will follow up with you in the next few days to find the best possible times for a walk-through. You don't need to prepare in advance, I have everything we'll need.

Also please accept the enclosed portfolio with personalized graph paper pad – it will be a handy folder to keep your incentive program documentation.

I look forward to speaking with you soon.

First Name Last Name
Title

In the meantime, you can find more information on the M&T incentive program at
torontohydro.com/MandT

Industrial Program Highlights and Observations:

- Capability funding for Embedded Energy Managers has met with strong customer interest
- LDCs hired Roving Energy Managers and Key Account Managers to bolster their forces that serve this sector
- All industrial energy efficiency work is being completed under the ERII program, due to the complexity of the PSUI program
- Renewal of Demand Response 3 contracts with the aggregators solicited strong market interest as this provided stability of funding allowing projects to proceed
- There is growing interest in cogeneration projects under the PSUI program. These projects were initially part of the PSUI program, but then placed on hold until late 2013. However, these projects have extensive lead times, so are not expected to have any impact on the 2011 to 2014 results.

Many of the issues raised in the first year of the program remain unresolved including customer non-acceptance of the legal agreements – customer feedback indicates that they are reluctant to accept because of the onerous long term commitments for reporting and project performance. Customer feedback has also indicated that many participants are opting to receive a lower level of incentives via

the ERII initiative in order to avoid the longer term commitments. Mitigation -THESL, as part of the Industrial Work Group, has been working with the OPA to have the requirements streamlined for industrial projects and allow the customer flexibility to apply under the ERII initiative for specific projects.

2.3.1 Process & System Upgrades Initiative ("PSUI")

Objectives: Offer capital and enabling incentives to assist with CDM investment in large complex and capital intensive projects, as well as, increase the capability of customers to implement energy management and system optimization projects.

Description: PSUI is an energy management initiative that includes a preliminary engineering study ("PES"), a detailed engineering study ("DES"), and a project incentive. The incentives are available to large customers with projects that are expected to generate at least 350 MWh of annualized electricity savings or, in the case of Micro-Projects, 100 MWh of annualized electricity savings.

Delivery: LDC delivered with key account management support in some cases. This initiative was fully marketed through THESL front-line technical energy consultants.

Participation: N/A

Spending: $447,057

Results & Evaluation: Net peak demand savings = 0 kW

Net energy savings = 0 kWh

Additional Comments: THESL has started to see some interest under the PSUI program with the eligibility of natural gas cogeneration project eligibility being restored. At this time there are projects with significant demand reductions being studied and under development for 2015, but these projects will not count towards target achievement.

Participation in the Preliminary Engineering Study ("PES") and Detailed Engineering Study ("DES") initiatives has started to increase. Although the projects identified in the studies have not been implemented under the PSUI program, it has become a resource for business case development and has resulted in projects being implemented under the ERII program.

Changes have been made in contractual requirements of the PSUI program, but major improvements are required for this program to have the level of participation seen in ERII. Mitigation – THESL intends to continue working with the Industrial Work Group and OPA to simplify participant agreements and create customer choice for programs. At this time, it is not expected that any fundamental changes will be made to this program to affect the achievement of CDM targets within the 2011-2014 period.

2.3.2 Monitoring and Targeting ("M&T")

Objectives: Offers access to funding for the installation of M&T systems in order to deliver a minimum savings target at the end of 24 months to be sustained for the term of the M&T agreement.

Description: Initially targeted at industrial processes and large commercial/institutional chilled water systems (>15 GWh), this initiative offers customers funding for the installation of M&T systems to help understand how their energy consumption might be reduced. During the course of 2012, changes were made through the OPA Change Management process to remove the 15GWh size limit. A facility

energy manager, who regularly oversees energy usage, will be able to use historical energy consumption performance to analyze and set targets.

Delivery: LDC delivered with key account management support, in some cases.

Participation: N/A

Spending: $109,076

Results & Evaluation: Net peak demand savings = 0 kW

Net energy savings = 0 kWh

Additional Comments:

This initiative has not been successful due to the length of the commitment required in the Participant Agreement. For the most part, interested customers have pursued the initiative through the ERII program, as M&T is now an eligible measure in that program stream. M&T remains an area of considerable interest for industrial and commercial customers, therefore it is increasingly important that there be an effective program in this area.

2.3.3 Energy Manager

Objectives: To provide customers and LDCs the opportunity to access funding for the engagement of energy managers in order to help deliver a minimum annual savings target.

Description: Targeted at large industrial or commercial customers (typically > 5 MW in aggregate), this initiative provides customers the opportunity to access funding to engage an on-site, full time embedded energy manager ("EEM"), or an off-site roving energy manager ("REM") who is engaged by the LDC. The role of the EEM or REM is to take control of the facility's energy use by monitoring performance, leading awareness programs, and identifying opportunities for energy consumption improvement, and spearheading projects. Participants are funded 80% of the EEM's salary plus 80% of the EEM actual reasonably incurred expenses. Each EEM/REM has an annual target of 300 kW of demand reduction and a related consumption target (0.3MW x Load Factor x 8760) from one or more facilities.

Delivery: LDC delivered with key account management support, in some cases. THESL was the first LDC to apply for REM and EEM funding and worked with the OPA on the allocation methodology. THESL hired the fifth of the allotted six REMs in 2013 and customers received approval for thirteen EEM and a total of eleven have now been hired.

Participation: 26 projects

Spending: $1,965,731

Results & Evaluation: Net peak demand savings = 607 kW

Net energy savings = 3,446,706 kWh

Additional Comments: The program continues to be well received in the industrial, commercial and institutional sectors with the REM and EEM meeting, and in some cases, significantly exceeding their 300 kW targets. The demand for REM's and EEM's resources continues as THESL's Key Account Managers promote these resources to their client base. Training and information sessions for REM/ EEM and the clients they serve have been well received and assisted in development of projects. One of the most well attended events has been training via the compressed air challenge.

i) Contractual issues continue around indemnity and environmental attributes preventing some governmental/institutional clients from participating in the EEM program, Mitigation – Continue involving the OPA in discussions with clients and work with the OPA to modify Participant Agreements to accommodate the limitations of governmental agencies. ii) The requirement for non-incented savings is challenging as the role of the technical resource is to ensure that client projects are processed through the incentive streams. This has been removed as an obligation of REM's however remains as a requirement of EEM's and continues to be a challenge. Mitigation – Continue discussions with the Industrial Work Group regarding potential changes to the EEM obligations.

2.3.4 Demand Response ("DR") 3

Objectives: To build capacity and compensate DR 3 participants for making electricity demand capacity available during a demand response event.

Description: The DR 3 initiative is a contractual resource that is an economic alternative to the procurement of new generation capacity. DR 3 comes with specific contractual obligations requiring participants to reduce their use of electricity relative to a baseline when called upon to do so by the OPA. This initiative makes payments for participants to be on standby and payments for the actual demand reduction provided during a demand response event. Participants are required to be on standby for approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours within that year.

Delivery: DR 3 is delivered by DR aggregators, under contract to the OPA. The OPA administers contracts with all DRPs and direct participants that provide in excess of 5 MW of demand response capacity. The OPA provides administration including settlement, EM&V, and dispatch. LDCs are responsible for outreach and marketing efforts. The LDC's role is to promote this initiative to customers and work with DR aggregators.

Participation: 44 facilities for commercial
28 facilities for industrial

Spending: $292,215

Results & Evaluation: Net peak demand savings for commercial = 6,678 kW

Net energy savings for commercial = 98,839 kWh

Net peak demand savings for industrial = 24,336 kW

Net energy savings for industrial = 564,746 kWh

Additional Comments:

Due to the renewal of aggregator contracts, there was active recruitment into the DR 3 program in 2013. This enabled the addition of substantial capacity over 2012 levels.

Some challenges include:
i) The inclusion of significant demand response targets within the program portfolio continues to be problematic for LDCs due to a limited ability to influence participation, particularly when LDCs do not have customer data due to contractual terms between the OPA and the aggregators. Mitigation – Actively work with the OPA to resolve this issue which would enable THESL to access information on DR 3 loads within THESL's service territory. THESL actively worked with aggregators on developing additional participants and

understanding their opportunity funnel. iii) Allocation of DR 3 results to an individual LDC is dependent on strategies employed by aggregators in balancing load and risk. This has the potential to penalize LDCs as only a fraction of the actual DR 3 capacity within their territory is allocated to the LDC target. Mitigation – Continue discussions with the OPA for a solution to allocate DR 3 result based on available capacity in an LDC's service territory. .

2.4 Home Assistance Program ("HAP") – Income Qualified Residential Market

Objectives: To help low-income customers reduce electricity consumption and better manage their electricity bills through education and free installation of energy efficiency measures.

Description: This is a turnkey initiative for income qualified customers. It offers residents the opportunity to take advantage of the free installation of energy efficient measures such as lighting and appliance upgrades, that improve the comfort of their home, increase efficiency, and help them manage electricity costs. All eligible customers receive a "Basic and Extended Measures Audit," to determine eligible conservation measures, while customers with electric heating also receive a Weatherization Audit and are eligible for additional insulation and draft proofing. All participants receive information on energy conservation.

Delivery: LDC-led outreach and marketing with a delivery agent under contract to provide audit, direct install and customer care services

Participation: 2,398 homes

Spending: $1,528,957

Results & Evaluation: Net peak demand savings = 122 kW

Net energy savings = 1,620,650 kWh

Additional Comments:

i) The marketing focus shifted in 2013 to utilize more mass marketing channels such as radio advertising and bill inserts in order to extend program reach and overcome barriers in identifying potential participants. Information on HAP was delivered as part of an integrated customer care strategy to communicate on the full range of THESL's programs and services that assist low-income customers.

ii) Hired an additional resource to help increase program participation and drive referrals through delivery of client workshops and training for front line case workers and social service agency staff in targeted lower-income neighbourhoods, beginning in January 2014.

iii) To facilitate implementation of the program in Toronto Community Housing's complete housing portfolio before the end of 2014 (an approximately 10,000 eligible units), in late 2013 THESL entered into a funding agreement to subsidize Keyholder services that will ramp up its Delivery Agent's audit and retrofit activity and ensure it can meet 2011-2014 program targets.

iv) THESL continued to lead efforts to improve the program across the province through the OPA-EDA residential working group and stakeholder engagement. Several program changes were implemented including corrections and refinements to program eligibility criteria, simplifications to the application process for housing co-operatives and other non-profit housing providers, improvements to the settlement process to allow for re-submission of projects where additional measures can be installed and a shift from a project-level TRC requirement to a program-level TRC evaluation in order to facilitate installation

of additional measure and create greater consistency with natural gas low-income DSM programs. Beginning in late 2013, THESL took the lead in forming a sub-working group which will work closely with the OPA in 2014 to complete a comprehensive evaluation of the current low-income program and prepare recommendations for future program improvements.

2.5 The Adjustments to the 2011 and 2012 Verified Results

True-up analysis and reporting for the previous year's verified results (i.e. 2011 and 2012) is shown in Table 2 below. This true-up process ensures that energy and demand savings are properly categorized in the year that they were achieved and that any omissions and/or errors identified after the release of the 2011 and 2012 Final Results Reports are properly accounted for and reported to the LDCs.

Table 2: Adjustments to THESL's 2011 & 2012 Verified Results due to Errors or Omissions

Initiative	Unit	Incremental Activity (new program activity occurring within the specified reporting period)		Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period)		Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period)	
		2011*	2012*	2011	2012	2011	2012
Consumer Program							
HVAC Incentives	Equipment	-3,164	346	-863	70	-1,572,488	138,411
Conservation Instant Coupon Booklet	Items	1,051	0	2	0	35,278	0
Bi-Annual Retailer Event	Items	10,471	0	14	0	279,429	0
Consumer Program Total				**-847**	**70**	**-1,257,781**	**138,411**
Business Program							
Retrofit	Projects	54	100	905	1,067	4,543,720	7,586,120
Direct Install Lighting	Projects	25	21	32	48	78,682	164,080
Energy Audit	Audits	19	17	98	88	478,349	427,996
Business Program Total				**1,036**	**1,203**	**5,100,751**	**8,178,195**
Other							
Program Enabled Savings	Projects	1	4	390	315	164,800	6,606,320
Other Total				**390**	**315**	**164,800**	**6,606,320**
Adjustments to 2011 Verified Results				**579**		**4,007,770**	
Adjustments to 2012 Verified Results					**1,588**		**14,922,926**
Total Adjustments to Previous Years' Verified Results				**579**	**1,588**	**4,007,770**	**14,922,926**

3 Summary of Program Results

The following sections provide the detailed OPA Program results, both annually and cumulatively, at the initiative level. The evaluation findings for the OPA Programs are provided in Appendix A.

3.1 Program Results

Table 3 below summarizes the annual results since 2011, including participation, net peak demand savings and net energy savings. It has been extracted from the 2013 verified results report released by the OPA on August 29, 2014. As per the OPA reporting standards, activity and savings for Demand Response resources (i.e. ***peaksaver* PLUS®** and DR 3) for each year represent the savings from all active facilities or devices contracted since January 1, 2011.

Table 3: THESL Initiative and Program Level Savings by Year (OPA Scenario 1 – Assuming One Year Persistency)

Initiative	Unit	Incremental Activity (new program activity occurring within the specified reporting period)				Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period)				Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period)				Program-to-Date Verified Progress to Target (excludes DR)	
														2014 Net Annual Peak Demand Savings (kW)	2011-2014 Net Cumulative Energy Savings (kWh)
		2011*	2012*	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2014	2014
Consumer Program															
Appliance Retirement	Appliances	6,088	2,802	1,541		349	161	100		2,343,820	1,091,609	656,268		579	13,933,867
Appliance Exchange	Appliances	549	580	397		52	83	82		57,879	143,607	146,668		178	920,442
HVAC Incentives	Equipment	16,744	13,393	14,327		5,674	2,821	3,015		10,493,166	4,781,806	5,189,758		11,510	66,697,599
Conservation Instant Coupon Booklet	Items	66,320	3,953	44,396		150	29	66		2,439,881	178,941	986,409		245	12,269,164
Bi-Annual Retailer Event	Items	121,855	135,773	120,911		215	189	151		3,760,986	3,427,499	2,198,663		556	29,723,766
Retailer Co-op	Items	13	0	0		0	0	0		230	0	0		0	919
Residential Demand Response	Devices	1,328	43,149	54,306		743	22,940	34,491		1,924	168,943	239,477		0	410,345
Residential Demand Response (IHD)	Devices	0	23,824	51,736		0	0	0		0	0	0		0	0
Residential New Construction	Homes	0	0	50		0	0	14		0	0	105,822		44,396	211,643
Consumer Program Total						**7,184**	**26,223**	**37,920**		**19,097,886**	**9,792,405**	**9,523,065**		**13,082**	**124,167,747**
Business Program															
Retrofit	Projects	636	1,268	1,713		7,527	15,973	15,424		43,007,032	80,294,445	90,527,082		38,362	591,225,618
Direct Install Lighting	Projects	3,971	3,519	2,366		4,903	2,502	2,092		12,683,558	9,383,020	6,898,480		7,404	85,037,910
Building Commissioning	Buildings	0	0	0		0	0	0		0	0	0		0	0
New Construction	Buildings	0	11	3		0	151	74		0	269,821	407,340		225	1,624,142
Energy Audit	Audits	79	93	89		0	393	784		0	1,913,395	4,312,118		1,178	14,364,423
Small Commercial Demand Response	Devices	36	132	145		23	84	92		84	478	119		0	682
Small Commercial Demand Response (IHD)	Devices	0	0	89		0	0	0		0	0	0		0	0
Demand Response 3	Facilities	26	28	44		1,915	4,413	6,678		75,010	64,142	98,839		0	237,991
Business Program Total						**14,369**	**23,516**	**25,144**		**55,765,683**	**91,925,302**	**102,243,979**		**47,169**	**692,490,765**
Industrial Program															
Energy Manager	Projects	0	19	26		0	785	607		0	5,639,289	3,446,706		1,037	21,517,666
Retrofit	Projects	32	0	0		522	0	0		3,017,532	0	0		522	12,070,127
Demand Response 3	Facilities	17	20	28		10,024	10,274	24,336		588,385	247,610	564,746		0	1,400,741
Industrial Program Total						**10,545**	**11,059**	**24,943**		**3,605,917**	**5,886,899**	**4,011,451**		**1,559**	**34,988,535**
Home Assistance Program															
Home Assistance Program	Homes	0	626	2,398		0	98	122		0	790,242	1,620,650		215	5,534,388
Home Assistance Program Total						**0**	**98**	**122**		**0**	**790,242**	**1,620,650**		**215**	**5,534,388**
Pre-2011 Programs completed in 2011															
High Performance New Construction	Projects	0	0	0		16	14	0		84,494	14,011	0		31	380,009
Toronto Comprehensive	Projects	577	0	0		15,805	0	0		86,964,886	0	0		15,805	347,859,545
Multifamily Energy Efficiency Rebates	Projects	107	0	0		1,906	0	0		7,400,835	0	0		1,906	29,603,338
Pre-2011 Programs completed in 2011 Total						**17,727**	**14**	**0**		**94,450,215**	**14,011**	**0**		**17,741**	**377,842,892**
Other															
Program Enabled Savings	Projects	1	5	2		0	0	3,513		0	0	2,915,337		3,513	5,830,674
Other Total						**0**	**0**	**3,513**		**0**	**0**	**2,915,337**		**3,513**	**5,830,674**
Adjustments to 2011 Verified Results							**178**	**401**			**3,791,694**	**215,912**		**571**	**16,007,321**
Adjustments to 2012 Verified Results								**1,588**				**14,922,926**		**1,546**	**44,622,782**
Energy Efficiency Total						**37,120**	**23,199**	**26,046**		**172,254,298**	**107,927,685**	**119,411,301**		**83,279**	**1,238,805,242**
Demand Response Total (Scenario 1)						**12,705**	**37,711**	**65,597**		**665,403**	**481,174**	**903,181**		**0**	**2,049,758**
Adjustments to Previous Years' Verified Results Total						**0**	**178**	**1,988**		**0**	**3,791,694**	**15,138,838**		**2,117**	**60,630,103**
OPA-Contracted LDC Portfolio Total (inc. Adjustments)						**49,825**	**61,088**	**93,631**		**172,919,701**	**112,200,552**	**135,453,320**		**85,396**	**1,301,485,103**

3.2 Realization Rate and Net-to-Gross Ratio

In the final results report for 2013, the OPA reported realization rates and net-to-gross ("NTG") ratios for both peak demand savings and energy savings for the 2013 initiatives. For comparison purposes, the realization rates and NTGs from the 2011 and 2012 final reports are provided in the table below.

Table 4: Realization Rates & NTG Ratios

Initiative	Peak Demand Savings								Energy Savings							
	Realization Rate				Net-to-Gross Ratio				Realization Rate				Net-to-Gross Ratio			
	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014
Consumer Program																
Appliance Retirement	1.00	1.00	n/a		0.49	0.46	0.42		1.00	1.00	n/a		0.50	0.47	0.44	
Appliance Exchange	1.00	1.00	1.00		0.52	0.52	0.53		1.00	1.00	1.00		0.52	0.52	0.53	
HVAC Incentives	1.00	1.00	n/a		0.60	0.50	0.48		1.00	1.00	n/a		0.60	0.49	0.48	
Conservation Instant Coupon Booklet	1.00	1.00	1.00		1.14	1.00	1.11		1.00	1.00	1.00		1.11	1.05	1.13	
Bi-Annual Retailer Event	1.00	1.00	1.00		1.13	0.91	1.04		1.00	1.00	1.00		1.10	0.92	1.04	
Retailer Co-op	1.00	n/a	n/a		0.68	n/a	n/a		1.00	n/a	n/a		0.68	n/a	n/a	
Residential New Construction	n/a	n/a	0.75		n/a	n/a	0.63		n/a	n/a	2.85		n/a	n/a	0.63	
Business Program																
Retrofit	0.98	0.92	0.91		0.69	0.72	0.71		1.02	0.98	0.97		0.72	0.74	0.72	
Direct Install Lighting	1.08	0.69	0.82		0.93	0.94	0.94		0.90	0.85	0.84		0.93	0.94	0.94	
Building Commissioning	n/a	n/a	n/a		n/a	n/a	n/a		n/a	n/a	n/a		n/a	n/a	n/a	
New Construction	n/a	1.00	0.59		n/a	0.49	0.54		n/a	1.00	0.97		n/a	0.49	0.54	
Energy Audit	n/a	n/a	1.02		n/a	n/a	0.66		n/a	n/a	0.97		n/a	n/a	0.66	
Demand Response 3	0.76	n/a	n/a		n/a	n/a	n/a		1.00	n/a	n/a		n/a	n/a	n/a	
Industrial Program																
Energy Manager	n/a	1.13	0.90		n/a	0.90	0.90		n/a	1.13	0.90		n/a	0.90	0.90	
Demand Response 3	0.84	n/a	n/a		n/a	n/a	n/a		1.00	n/a	n/a		n/a	n/a	n/a	
Home Assistance Program																
Home Assistance Program	n/a	0.41	0.84		n/a	1.00	1.00		n/a	1.00	0.87		n/a	1.00	1.00	
Pre-2011 Programs completed in 2011																
High Performance New Construction	1.00	1.00	1.00		0.50	0.50	0.50		1.00	1.00	1.00		0.50	0.50	0.50	
Toronto Comprehensive	1.33	n/a	n/a		0.41	n/a	n/a		1.15	n/a	n/a		0.41	n/a	n/a	
Multifamily Energy Efficiency Rebates	0.99	n/a	n/a		0.69	n/a	n/a		0.99	n/a	n/a		0.69	n/a	n/a	
Other																
Program Enabled Savings	n/a	n/a	1.00		n/a	n/a	1.00		n/a	n/a	1.00		n/a	n/a	1.00	

Energy Manager, Aboriginal Program and Program Enabled Savings were not independently evaluated

3.3 Program Spending

Table 5 and Table 6 summarize the total spending by initiative THESL has incurred in 2013 and cumulatively since 2011. It is detailed by the Program Administration Budget ("PAB"), Participant Based Funding ("PBF"), Participant Incentive ("PI") and Capability Building Funding (CBF).

Table 5: Summary of Spending in 2013 for OPA Programs

CDM Program Initiatives	PAB	PBF	PI	CBF	Total
Consumer Program	$ 2,266,048	$11,180,798	$ -	$ -	**$13,446,845**
Appliance Retirement	$ 115,584				**$ 115,584**
Appliance Exchange	$ 70,358				**$ 70,358**
HVAC Incentive	$ 216,686				**$ 216,686**
Conservation Instant Coupon Booklet					**$ -**
Bi-Annual Retailer Event	$ 490,696				**$ 490,696**
Residential & Small Commercial Demand Response	$ 1,311,377	$11,180,798			**$12,492,174**
Residential New Construction	$ 61,348				**$ 61,348**
Business Program	$ 6,190,128	$ 864,170	$21,345,241	$ 658,203	**$29,057,742**
Equipment Replacement Incentive	$ 4,840,721		$17,419,668		**$22,260,388**
Direct Install Lighting	$ 400,176	$ 864,170	$ 3,718,163		**$ 4,982,509**
Existing Building Commissioning Incentive	$ 248,965		$ 33,411		**$ 282,375**
New Construction & Major Renovation Incentive	$ 307,014		$ 174,000		**$ 481,014**
Energy Audit	$ 393,253			$ 658,203	**$ 1,051,456**
Industrial Program	$ 951,520	$ -	$ -	$1,862,558	**$ 2,814,078**
Process & System Upgrades	$ 447,057				**$ 447,057**
Monitoring & Targeting	$ 109,076				**$ 109,076**
Energy Manager	$ 103,172			$1,862,558	**$ 1,965,731**
DR 1					**$ -**
DR 3	$ 292,215				**$ 292,215**
Home Assistance Program	$ 626,289		$ 902,668		**$ 1,528,957**
Total Spending	**$ 10,033,985**	**$12,044,968**	**$22,247,909**	**$2,520,762**	**$46,847,623**

Table 6: Summary of Cumulative Spending Since 2011 for OPA Programs

CDM Program Initiatives	PAB	PBF	PI	CBF	Total
Consumer Program	$ 8,781,540	$14,656,299	$ 22,900	$ -	**$ 23,460,739**
Appliance Retirement	$ 1,404,544	$ -	$ -	$ -	**$ 1,404,544**
Appliance Exchange	$ 240,687	$ -	$ -	$ -	**$ 240,687**
HVAC Incentive	$ 1,596,910	$ -	$ -	$ -	**$ 1,596,910**
Conservation Instant Coupon Booklet	$ 448,855	$ -	$ -	$ -	**$ 448,855**
Bi-Annual Retailer Event	$ 1,175,227	$ -	$ -	$ -	**$ 1,175,227**
Residential & Small Commercial Demand Response	$ 3,169,409	$14,656,299	$ 22,900	$ -	**$ 17,848,608**
Residential New Construction	$ 587,625	$ -	$ -	$ -	**$ 587,625**
Midstream Electronics	$ 47,131	$ -	$ -	$ -	**$ 47,131**
Midstream Pool Equipment	$ 47,080	$ -	$ -	$ -	**$ 47,080**
Home Energy Assessment Tool	$ 64,072	$ -	$ -	$ -	**$ 64,072**
Business Program	$14,402,433	$ 2,785,519	$36,462,208	$ 658,203	**$ 54,308,364**
Equipment Replacement Incentive	$ 9,657,405	$ -	$25,726,194	$ -	**$ 35,383,600**
Direct Install Lighting	$ 1,308,198	$ 2,785,519	$ 9,981,564	$ -	**$ 14,075,281**
Existing Building Commissioning Incentive	$ 913,477	$ -	$ 35,911	$ -	**$ 949,387**
New Construction & Major Renovation Incentive	$ 1,124,441	$ -	$ 174,000	$ -	**$ 1,298,441**
Energy Audit	$ 1,257,379	$ -	$ 544,539	$ 658,203	**$ 2,460,122**
Direct Service Space Cooling	$ 141,534	$ -	$ -	$ -	**$ 141,534**
Industrial Program	$ 2,445,023	$ -	$ -	$2,653,040	**$ 5,098,063**
Process & System Upgrades	$ 1,102,070	$ -	$ -	$ 392,043	**$ 1,494,113**
Monitoring & Targeting	$ 241,881	$ -	$ -	$ -	**$ 241,881**
Energy Manager	$ 172,249	$ -	$ -	$2,260,997	**$ 2,433,247**
DR 1	$ 178,288	$ -	$ -	$ -	**$ 178,288**
DR 3	$ 750,535	$ -	$ -	$ -	**$ 750,535**
Home Assistance Program	$ 1,195,602	$ -	$ 1,230,271	$ -	**$ 2,425,873**
Pre-2011 CDM Programs	$ -	$ -	$ 1,853,496	$ -	**$ 1,853,496**
Total Spending	**$26,824,598**	**$17,441,818**	**$39,568,875**	**$3,311,244**	**$ 87,146,535**

The above cumulative spending includes the expenditures associated with the planning activities for the initiatives not launched (i.e. Midstream Electronics, Midstream Pool Equipment, Direct Service Space Cooling and Home Assistance) and excludes participant incentives for the Consumer Program (other than Residential DR), DR 1 and DR 3, which are paid directly by the OPA to participants.

Pre-2011 CDM Program spending is for participant incentives paid by the OPA in 2011. OPA manages and controls the complete financial reporting for the province-wide programs.

4 Combined CDM Reporting Elements

4.1 Progress Towards CDM Targets

The summary of THESL's progress towards meeting its CDM targets is provided in the tables below. The data comes from the 2013 final verified results released by the OPA on August 29, 2014.

Table 7: Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual			
	2011	2012	2013	2014
2011 - Verified	49.8	37.1	36.7	35.2
2012 - Verified†	0.2	61.1	23.1	22.7
2013 - Verified†	0.4	2.0	93.6	27.5
2014				
Verified Net Annual Peak Demand Savings Persisting in 2014:				85.4
Toronto Hydro-Electric System Limited 2014 Annual CDM Capacity Target:				286.3
Verified Portion of Peak Demand Savings Target Achieved in 2014 (%):				29.8%

The decline in demand savings noted in 2014 in Table 7 above is due to demand savings persistence with regard to ***peaksaver* PLUS** and DR 3 contracts (OPA Scenario 1). At this point in time, however, THESL assumes that the current aggregate of contracts will persist until 2014 (as per OPA Scenario 2). Based on this assumption, the contribution from the 2011, 2012 and 2013 results to the 2014 target would be 151.0 MW or 52.7%, as reported by the OPA.

Table 8: Net Energy Savings at the End-User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011 - Verified	172.9	172.1	171.0	166.9	683.0
2012 - Verified†	3.8	112.2	110.8	109.4	336.3
2013 - Verified†	0.2	15.1	135.5	131.4	282.3
2014					
Verified Net Cumulative Energy Savings 2011-2014:					1,301.5
Toronto Hydro-Electric System Limited 2011-2014 Annual CDM Energy Target:					1,304.0
Verified Portion of Cumulative Energy Target Achieved in 2014 (%):					99.8%

With 2011, 2012 and 2013 results amounting to 99.8% of its energy savings target, THESL expects to exceed its energy savings target by the end of 2014.

4.2 THESL's CDM Outlook (2014)

As indicated in Table 9 below, the savings projections from the CDM Strategy have been modified to incorporate THESL's experience with the OPA programs after they have been in market for three years.

Table 9: 2014 Outlook

OPA Programs	2011 Actual	2012 Actual	2013 Actual	2014 Forecast	Total	Target	Variance
Net Annual MW	**49.8**	**48.4**	**55.9**	**59.6**	**213.7**	**286.3**	**-72.6**
Net Cumulative GWh	**683.0**	**336.3**	**282.3**	**162.5**	**1,464.1**	**1,304.0**	**160.1**

Considering that the current OPA programs end on December 31, 2014, THESL projects that it will achieve 214 MW of summer peak demand savings and 1,464 GWh of electricity savings. Based on this projection, THESL expects to be 73 MW below the demand target and 160 GWh above the electricity savings target.

The projected demand shortfall is primarily a result of the delay in implementation (and in some cases the absence) of a full suite of CDM programs in 2011, challenges with respect to the adoption of program changes and the development of new programs, and the delay in the release of official TOU results. Other contributors to the demand shortfall include market saturation in some programs, as well as a slower economy relative to 2010, when the OEB targets were established. THESL's projected savings have also been adjusted to reflect significant policy decisions that have lowered the forecasted outlook to the end of 2014 including the two-year hold on the approval of cogeneration projects (> 20 MW) and the transition of the DR 3 program to the IESO that effectively capped the program capacity for numerous customers who were willing to participate (>13 MW).

The electricity consumption savings are favourable mainly due to the number of transition projects in 2011 that were counted towards THESL's results and a number of effective energy-savings-only projects that have or are expected to be implemented.

The above projection is based on the current existing conditions, as noted below (Scenario # 1). THESL also provides an alternative demand scenario (Scenario #2) as an alternative outlook projection.

Table 10: 2014 Outlook Scenarios

Scenario	Total Peak Demand Savings – MW		
	2011-2014	Target	Variance
1. Forecast – Scenario #1 (No TOU Results)	**213.7**	**286.3**	**-72.6**
2. Forecast – Scenario #2 (TOU Results)	**220.7**	**286.3**	**-65.6**
Scenario	**Total Annual Electricity Savings – GWh**		
	2011-2014	**Target**	**Variance**
Forecast – Both Scenarios	**1,464.1**	**1,304.0**	**160.1**

The outlook noted above includes two scenarios for peak demand savings:

1. **Forecast – Scenario #1 (72.6 MW shortfall)** – this scenario is based on the current known conditions (i.e. key programs are extended into 2015, but targets remain as of end-2014 and any results carried over into 2015 are not counted towards the assigned targets). This scenario does not include any TOU results.

2. **Forecast – Scenario #2 (65.6 MW shortfall)** – this scenario includes a 7 MW estimate for TOU savings based on the preliminary numbers provided by the OPA (0.68% of peak summer residential demand). This number is considerably lower than the expected results and reflects the low differential between On and Off Peak pricing and a significant fall off in customer engagement from 2012 to 2013.

4.3 CDM Strategy Modifications

After reviewing the market analysis of the 2013 results, the in-market experience gained from delivering the OPA Programs for the past three years, as well as, previous experience in delivering CDM programs since 2005, THESL's CDM Strategy has been revised to account for the following:

1. Conservation First Framework

The Ministry of Energy released its Conservation First Framework white-paper "Conservation First: A Renewed Vision for Conservation in Ontario" in July 16, 2013 to solicit input from stakeholders on the next generation of conservation programs with the LTEP perspective. THESL participated together with the Coalition of Large Distributor (CLD) in submitting its thoughts and ideas on how LDCs can support Ontario's vision. The LDCs have remained actively involved with the OPA to help define the new framework in response to the Minister's Conservation First Directives. Within the context of providing for a transition to the new Framework in 2015 THESL supports the extension of the current programs into 2015 for a smooth transition to the next generation of CDM programs.

The extension of the current programs to December 31, 2015 while beneficial to customers by providing more time to complete their projects, may potentially make it more difficult for LDCs to achieve their targets by the end of 2014 since projects completing in 2015 will not count towards the target.

2. Need for Additional Programs

The disallowance of a large portion of THESL's application for Board-Approved programs has resulted in a potential 67 MW shortfall in its forecast as contained in its original CDM Strategy. To make up for the potential shortfall, THESL has continued to work with the OPA and the LDC Working Groups through the Change Management process to implement the initiatives previously submitted to the OEB for approval, which included Hydronic System Balancing, Monitoring and Targeting (M&T), Multi-Unit Residential Building Demand Response ("MURB DR" branded as "Suitesaver"), and Commercial Energy Management and Load Control ("CEMLC" branded as "Gridsaver"). The first two were partially adopted by the OPA as changes to the existing OPA-Contracted Province-Wide programs in 2012. The MURB DR and CEMLC were carried out as pilots in 2013, but due to approval delays were re-tested in the summer of 2014 with a shift in focus to testing electricity and natural gas savings to reflect the realities of the Conservation First framework.

3. TOU Savings

The implementation of TOU rates was accepted by the OEB as a Board-Approved program and savings resulting from the implementation of TOU rates will be counted towards LDC assigned targets. THESL will continue to work with the OPA and other LDCs in the evaluation of the results. The OPA has indicated that the savings results for TOU will not be available until 2015, which would be too late to mitigate the risk of under-achieving the demand target or to effect any changes in strategy or budget. It would be helpful to LDCs if the OPA could reconsider the results delivery timeline.

4. Delayed Start of Programs and Market Saturation

The delayed launch of some of the OPA Programs and the continued signs of market saturation without the counteracting effect of new programs has impacted the take-up rates and has delayed the accumulation of savings. As a result, THESL has:

- Continued the Applicant Representative Initiative ("ARI") channel delivery strategy launched in 2012 to assist the business market in completing applications. THESL also increased the number and frequency of contractor training to further support this successful initiative. In addition, added emphasis was placed on HVAC contractor participation especially to leverage program improvements for rooftop unit projects.
- Refocused marketing and promotional initiatives on high potential market sectors for retrofit initiatives with technology-specific messaging, case studies and efficiency measure training.
- Continued to collaborate with community, business and industry associations to engage as wide a cross section of the market by leveraging sponsorship opportunities where possible to improve CDM messaging penetration and awareness.
- Enhanced and improved the marketing of residential initiatives (including cross-referencing the Housing Assistance Program) developing promotional campaigns for THESL's residential customers in Toronto's diverse languages.
- Continued working with other LDCs to share delivery tactics and best practices, co-promote programs and develop ideas for program development.
- Collaborated with the OPA's Energy Efficiency Service Provider (EESP) initiative to intensify the engagement of THESL's retail and hospitality customers with additional outreach, training and audits.
- Hired third party engineering resources to augment THESL's Roving Energy Manager resources to provide supplementary energy auditing to key customers in industrial and commercial markets.
- Employed direct calling and additional support resources to reach out to the small and medium customers in the industrial and C&I sectors to provide support and increase awareness of programs. This initiative was successful in reaching this sector and engaging parties in the retrofit programs.

5. Changing Evaluation Measurement and Verification ("EM&V") Results

- Reviewed all findings and recommendations from the OPA's 2013 program evaluation reports and adopted them where relevant to THESL's territory including new Net-to-Gross ("NTG") ratios.
- Participated in EM&V Working Groups to fully understand any upcoming changes in the savings results.

4.4 Conclusion

Many improvements have been implemented to overcome operational and structural issues that have previously limited program effectiveness across all market sectors. These changes are contributing to a slightly more successful delivery of the OPA Program initiatives, particularly those in the business sector. A high level of collaboration with other LDCs and the OPA continues to contribute to improvements to existing initiatives, the development of new initiatives, as well as improvements in the Change Management process which is expected to provide benefits in future years. Furthermore, THESL's CDM team has become more effective and new staff has become seasoned in their roles resulting in increased productivity.

However, despite these improvements to existing programs and the development of new programs, THESL anticipates a shortfall of the demand savings target within the current CDM framework This is primarily due to: the delay (and in some cases the absence) of a full suite of program initiatives

available in 2011, the length of time it has taken to overcome the slow process in adopting program changes and developing new province-wide programs, and the OPA's timeline for the release of the TOU program results in 2015. THESL's results will also be impacted by significant policy changes in both the demand response program and the PSUI freeze on cogeneration projects until late 2013. As such, under current circumstances, THESL expects it would need a one year extension ending in 2015 to achieve its 2014 OEB demand savings target. THESL understands that the Ministry will not be issuing a directive to the OEB to extend the current CDM target date to be aligned with the current funding date.

THESL remains committed to the 2014 program and continues to market and aggressively press on to deliver the maximum conservation results possible in 2014. It plans to conclude its two pilot programs currently under market trial and develop them as new province-wide programs for launching in early 2015. As well, collaboration with other electric and gas utilities will continue and expand in areas where opportunities become available, both in the short term as well as the longer term.

In 2014, THESL expects to build on the successful key account and energy consulting activities to influence large business customers to implement short term projects and plan for the longer term conservation initiatives given the long term commitment provided by the Minister's "Conservation First" Directive.

THESL will continue to work with OPA on the new conservation First Framework to ensure that an effective framework will be in place by January 2015 including the transition from the existing program to the new framework.

Appendix A: Evaluation Findings for the OPA Programs

The following are the findings from OPA Program evaluations conducted in 2014 by the OPA's independent third party evaluators. Provided by the OPA on September 5, 2014, the findings are for OPA Program initiatives delivered in 2013 across the Province of Ontario.

CONSUMER INITIATIVES

Appliance Retirement

- Per unit savings increased for both energy (+15.4%) and demand (+4.0%) between 2012 and 2013 due to a greater proportion of refrigerators/freezers with large volumes and a manufacturer date before National Appliance Energy Conservation Act (NAECA) was implemented. Dehumidifiers also show a higher per unit savings related to the change in ENERGY STAR definitions.
- Overall participation continues to decline with 20,952 appliances recycled in 2013, compared with 34,146 in 2012 and 56,110 in 2011. The program has experienced close to a 40% reduction (39.1% 2011 to 2012, 41.1% 2012 to 2013) in recycled appliances in each subsequent year of operation.
- Net to gross ratio stayed constant at around 43% between 2012 and 2013.

Appliance Exchange

- Increased per unit energy and demand savings due to an adjustment to the assumed consumption of "conventional" and Energy Star dehumidifiers. The calculated weighted average annual energy savings of a exchanged dehumidifier increased 36.6%.
- Of the participants surveyed who reported they had replaced the dehumidifiers they exchanged, 100% reported purchasing ENERGY STAR® models.
- 21% increase in the number of eligible dehumidifiers collected in the program. In 2013, 5,337 dehumidifier units were collected compared to 3,617 dehumidifier units and 219 window air conditioners.
- Net to Gross ratio (NTG) was 52.6% which is a slight increase of the 2012 NTG of 51.5%.

HVAC

- Total participation (equipment) increased 7.5% from 2012 to 91,581.
- Per unit furnace savings decreased from 1139 kWh/yr in 2012 to 1090 kWh/yr due to a slight shift in the number of participants who use their furnace fan non-continuously both before and after the retrofit as opposed to changing from continuous to non-continuous operation.
- Per unit energy and demand savings assumptions for central air conditioners did not change from 2012.

Annual Coupons

- Customers redeemed more than ten times as many annual coupons in 2013 as in 2012 because of new LED coupons and full year availability of all coupons. Customers redeemed 13% more annual coupons in 2013 than in 2011, the first full year of annual coupons due to the high volume of new LED coupons.

- There was a significant reduction in savings specialty CFL related measures. In 2013, the findings showed around 30% of participants are replacing incandescent bulbs compared to 60% of participants replacing incandescent bulbs in 2012.
- Despite the significant per unit savings reductions, the Net Annual Savings from Annual Coupons in 2013 was more than 5.5 times that in 2012. This is primarily because of higher participation due to the inclusion of LED coupons and full year availability of all coupons.
- 93% of coupons redeemed in 2013 were for general purpose LEDS and specialty CFLs and LEDs, producing 89% of net annual energy savings and 84% of net demand savings.
- Measure NTG ratio was approximately 8% higher in 2013 than in 2012 due to the inclusion of participant like spillover, i.e., purchase of additional coupon initiative measures without using coupons because of program influence.

Bi-Annual Coupon Events

- 19% increase in the number of coupons redeemed during the Spring and Fall Events in 2013 compared to 2012 because of substantial increase in LED purchases with event coupons.
- 36% lower net annual savings in 2013 compared to 2012 primarily because of significant reductions in per unit savings estimates for standard and specialty CFLs. In 2013, findings showed a decrease in replacement rate of incandescent bulbs. Only 30% of 2013 participants are estimated to have replaced incandescent bulbs compared to 60% of participants replacing incandescent bulbs in 2012. This leads to a change in the baseline assumption for the savings calculations.
- 87% of coupons redeemed were for general purpose and specialty CFLs and LEDs, producing 80% of net annual energy savings and 73% of net demand savings.
- Measure NTG ratio was approximately 8% higher in 2013 than in 2012 due to the inclusion of participant like spillover, i.e., purchase of additional coupon initiative measures without using coupons because of program influence.

***peaksaver* PLUS**

- The cycling strategy for CAC load control was changed from 50% simple cycling to 60% simple cycling.
- Under 1-in-10 year weather conditions, the 2013 estimated impacts for load control devices are higher than the 2012 estimates in all months and are between 10 and 15% higher during the core summer months of June through August.
- Load impact estimates for the average small and medium business and for electric water heaters among residential customers are also unchanged from the prior year's analysis.
- This year's IHD analysis has yielded an estimate of no statistically significant energy savings.

Residential New Construction

- Energy and demand savings for the Initiative increased by 300% compared to the combined 2011 and 2012 results ; number of projects also increased from 45 in 2011 and 2012 to 86 in 2013.
- All projects are opting for the prescriptive or performance path. No custom project applications were received in 2013, similar to 2011-2012.
- Net-to-gross ratio for the initiative was higher by 14% from 49% in 2012 to 63% in 2013.

BUSINESS INITIATIVES

Retrofit

- A total of 8,785 projects completed in 2013. Reported energy savings for individual projects ranged from 1 kWh to over 5,000,000 kWh.
- Net to Gross ratio (NTG) for energy was 72.8%, consistent with prior years.
- NTG for demand was 72.0%, consistent with prior years.
- NTG ratios are comparable to similar programs across North America.

Small Business Lighting

- In 2013 the initiative introduced: a) an increase in the incentive to $1500 from $1000, b) new LED measures c) Agribusiness eligibility, resulting in the stabilization of participation and an increase in savings.
- 17,782 projects completed in 2013 (3.8% decrease from 2012).
- However, 12.2% increase in Net Verified Energy Savings relative to 2012.
- The average incentive per project and savings per project both increased between 2012 to 2013.
- Net to Gross ratio (NTG) for 2013 remained unchanged at 94%.

Audit Funding

- 319 audits were completed in 2013.
- 2013 sample saw more recommended measures implemented without incentives (33% in 2013 vs. 13% in 2012).
- The average per audit summer peak demands savings is estimated to be 13 kW.

Existing Building Commissioning

- 29 unique participants in the 2013 population.
- No Commissioning projects completed the hand-off/completion phase in 2013
- Improvements to the chilled water system controls were the most commonly targeted measure.
- Large variation in estimated savings results between preliminary investigation phase and actual implementation phase.

HPNC

- Number of projects increased by 25% from 69 in 2012 to 86 in 2013.
- Custom projects, representing only about 8% of the total number of projects, account for 67% of verified demand savings and 54% of verified energy savings.
- A realization rate of 72% for energy savings is low due to the low realization rate of the Agribusiness high ventilation, low speed fans which comprised of 15 % of the HPNC prescriptive project energy savings.
- Net-to-gross ratio for the initiative was higher by 5% from 49% in 2012 to 54% in 2013.

INDUSTRIAL INITIATIVES

Process System Upgrade Initiative

- In 2013, three PSUI projects were put into service. Projects were very well documented and technical reviews were thorough. Most projects are delivering the level of energy savings expected or more (realization rates of 87% for energy savings and 86% for summer demand savings).
- Good level of quality on M&V conducted in each project. The level of free-ridership was found to be very low, at only 7% for energy savings and 6% for demand savings, and no spillover was identified.
- Energy Managers are seen as important drivers of program enabled savings projects. Almost a 300% increase vs. 2012 in the amount of energy savings from program enabled savings projects.

DR 3

- The largest 20 contributors account for 60% of the contractual demand reduction – in other words, less than 5% of contributors account for the majority of the load reductions.
- In 2013, DR-3 was successfully dispatched locally for the first time in order to provide assistance in restoring power after a prolonged power outage due to substation flooding.

HOME ASSISTANCE

Home Assistance Program

- Participation increased significantly to 26,756 participants in 2013 from 5,033 in 2012.
- Realization rates were slightly lower in 2013 (0.88 for kWh and 0.26 for kW) than in 2012 (0.98 for kWh and 0.32 for kW) primarily due to updated verified per unit assumptions.
- Realization rate for demand savings remained low as FAST Tool calculated kW savings for certain insulation measures remained very high and recommended revisions to kW savings factors were not yet in use in 2013 (changes to the FAST Tool to address these issues were made in early 2014).

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