



**Conservation and Demand Management  
Report – 2013 Results  
EB-2010-0215**

**Date: December 17, 2014**

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## Executive Summary

In 2013, distributors continued delivery of conservation and demand management (“CDM”) programs towards their 2011-2014 CDM targets. Results from 2013 programs indicate that distributors have achieved 5,139 GWh of cumulative energy savings, or 86% of the overall energy (kWh) savings target of 6,000 GWh and 639 MW of demand savings<sup>1</sup>, or 48% of the peak demand (kW) savings target of 1,330 MW.

By the end of 2013, 42 distributors have exceeded 80% of their energy (kWh) target, of which 20 distributors have met or exceeded their 2011-2014 energy (kWh) target. Distributors noted that they generally feel confident that they will be able to meet their energy (kWh) target, although almost unanimously caution that it is very unlikely that they will meet the peak demand (kW) target. Currently, only one distributor has achieved at least 100% of its peak demand (kW) target, while two others have achieved at least 80%. Distributors reiterated that the main issue with the peak demand (kW) targets could be that they were too high when they were initially set.

Net incremental energy savings (kWh) in 2013 saw the Business Program (430 GWh) yield significant energy savings compared with the other major program types (Consumer – 70 GWh, Industrial – 29 GWh, Home Assistance – 21 GWh). Conversely, net incremental peak demand (kW) savings in 2013 were fairly balanced across the major program types as the Industrial Program (166 MW), Consumer Program (117 MW) and Business Program (107 MW) all produced comparable savings.

Significant investments were made in 2013 as total spending was reported to be \$266.5M. The Business Program (\$127M) and Consumer Program (\$96M) received the majority of funding, while the Industrial Program received \$27M. Over the last three years (i.e., 2011 to 2013), a total of \$612M has been spent on CDM programs.

Distributors continue to participate and deliver Ontario Power Authority (“OPA”)-Contracted Province-Wide CDM Programs and work collaboratively with the OPA to ensure effective programs are available to customers across the province. Distributors noted many similar challenges in 2013 as witnessed in 2012, including requirements for continued improvements to the change management process related to OPA-

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<sup>1</sup> Peak demand savings results under the OPA’s Scenario 2 which assumes Demand Response resources remain in place until 2014.

Contracted Province-Wide CDM Programs and the fact that some initiatives are reaching the point of market saturation. They commented that new initiatives need to be developed in order to take the place of the exiting initiatives.

PowerStream Inc. launched the Direct Install Refrigeration (“DIR”) Program on September 20, 2013, a Board-Approved CDM program. The DIR program yielded net peak demand savings of 6.05 kW and net energy savings of 57,427 kWh in 2013<sup>2</sup>. PowerStream Inc. noted that these results are less than projected for a full year of program delivery due to a late start to the program in 2013, which resulted in a reduced number of installations completed by December 31, 2013.

The OPA is currently conducting independent evaluations of the impact of Time-of-use (“TOU”) rates in Ontario. The Board indicated in the 2012 CDM Guidelines (EB-2012-0003) that TOU would act as a Board-Approved CDM Program for the purpose of distributor target achievement. The OPA expects to have final TOU savings results available in the summer of 2015 to be reported in the 2014 final results.

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<sup>2</sup> PowerStream Inc.’s 2013 program results are preliminary and not yet verified.

## **1. Background**

### **1.1 Green Energy and Green Economy Act, 2009**

On September 9, 2009, certain sections of the *Green Energy and Green Economy Act, 2009* (the “Green Energy Act”) were proclaimed. The *Green Energy Act* amended section 27.2 of the *Ontario Energy Board Act, 1998* (the “Act”) and stated that a directive may require the Ontario Energy Board (the “Board”) to specify, as a condition of licence, conservation and demand management targets (“CDM Targets”) for electricity distributors.

### **1.2 CDM Directive to the Board**

The Minister of Energy and Infrastructure issued a directive, dated March 31, 2010, to the Board under sections 27.1 and 27.2 of the Act (the “Directive”).

The Directive required the Board to take steps to establish electricity CDM Targets to be met by certain licensed electricity local distribution companies (“LDCs” or “distributors”).

The Directive also required the Board to add a condition to the licence of each distributor that distributors must achieve reductions in electricity consumption (6,000 GWh) and in peak provincial electricity demand (1,330 MW) by the amounts that the Board specified in each distributor’s licence. The reductions are to be achieved through the delivery of CDM Programs over a four-year period beginning January 1, 2011 and ending December 31, 2014.

Further, the Directive required the Board to issue a code that set out the obligations and requirements with which licensed distributors must comply in relation to the CDM Targets.

Finally, the Directive requires the Board to publish annually verified results for each distributor and consolidated results for all distribution CDM programs. In December of 2012 and 2013, the Board issued CDM Summary Reports which discussed 2011 and 2012 results, respectively. This report summarizes LDC CDM results for 2013 as well as the overall results towards the 2014 targets.

### **1.3 CDM Directives to the Ontario Power Authority**

On April 23, 2010, the Minister of Energy directed the Ontario Power Authority (“OPA”) to support LDCs and the Board in the development and implementation of the activities

related to the 2011-2014 CDM Targets, including providing advice to the Board on the appropriate allocation of CDM Targets amongst LDCs and designing, delivering and funding OPA-Contracted Province-Wide CDM Programs.

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 for an additional one-year period from January 1, 2015 to December 31, 2015. The Ministerial Directive did not amend the timelines for distributors to achieve their 2011-2014 energy (kWh) or peak demand (kW) savings targets.

On March 31, 2014, the Ministry of Energy directed the OPA to support and fund the delivery of CDM programs through distributors to achieve a total of 7 TWh (7,000,000,000 kWh) of electricity savings between January 1, 2015 and December 31, 2020. This directive does not affect any of the targets established previously, which are to be met by December 31, 2014.

## **1.4 CDM Code and Annual Reporting**

On September 30, 2010 the Board issued its CDM Code (EB-2010-0215). The CDM Code sets out the conditions and rules that licensed distributors are required to follow in achieving their CDM Targets.

Section 2.2 of the CDM Code sets out the requirements distributors must follow when reporting on annual CDM results. Each LDC must file its annual CDM report with the Board by September 30<sup>th</sup> of each year, starting with the 2011 reports which were filed in 2012. To date, the Board has received CDM reports from LDCs for the 2011, 2012 and 2013 program years. The final CDM reports of the 2011 to 2014 term are scheduled to be filed with the Board by September 30, 2015.

## **2. 2013 CDM Annual Reports**

The distributors have filed their CDM reports on the basis of a template prepared by a working group of distributors and the OPA, and reviewed by Board staff for consistency with the CDM Code. Only very minor revisions were made to the template for the 2013 reporting year. The Board appreciates the continuing efforts of the distributors to file their reports on a consistent basis.

## 2.1 2013 CDM Results

The 2013 CDM results reported by distributors are summarized and included in Appendix A of this report. Results must be achieved through a combination of province-wide CDM programs made available by the OPA and Board-Approved programs. There are two Board-Approved CDM programs to be considered towards targets. In 2013 PowerStream Inc.'s Direct Install Refrigeration Program was approved by the Board. In addition, the Board has indicated that energy or peak demand savings resulting from the implementation of Time-of-use ("TOU") pricing will be counted towards targets. Both of these programs are discussed later in the report.

The tables that follow include the consolidated 2013 net energy (kWh) and peak demand (kW) savings results. Net energy (kWh) and/or peak demand (kW) savings represent the total change in energy consumption (kWh) and/or peak demand (kW) that is attributable to energy efficiency or demand response programs. The results have been adjusted to take into account free riders, spillover effect, free drivers and energy efficiency standards, amongst others.

All previous Board CDM Summary Reports (i.e., 2011 and 2012) and all individual distributor reports that discuss local CDM activity in 2011, 2012, and 2013 can be found at the following link to the Board's website: [Conservation and Demand Management Annual Reports](#).

## 2.2 OPA-Contracted Province-Wide CDM Programs

As noted above, on December 21, 2012, the Minister of Energy issued a directive to the OPA to extend funding for the Province-Wide CDM programs until December 31, 2015.

In reporting CDM results to the Board, distributors have been directed to rely on the OPA's final evaluation results for all province-wide CDM programs as prepared by the OPA. The OPA's evaluations have resulted in final net energy (kWh) consumption and peak demand (kW) savings for the 2013 program year, which the distributors have included in the 2013 annual reports.

The consolidated results included in the tables throughout this report are consistent with those reported by the OPA for the 2013 program year and are discussed below.

### 3. 2013 Verified Savings

Savings totals for both energy (kWh) and peak demand (kW) have been reported below as both 2013-only savings (e.g., new incremental savings that have taken place during 2013) and as cumulative energy (kWh) savings persisting throughout the 2011 to 2014 term and as persisting peak demand (kW) savings which the OPA projects to be in place at the end of 2014.

#### 3.1 Adjustments to 2011 and 2012 Final Results

As part of the 2013 evaluation, the OPA undertook a review of the 2011 and 2012 results to ensure that all savings were accounted for, adjusting for any omissions and/or errors identified after the release of the 2012 Final Results Report.<sup>3</sup> This process was developed with the LDC Reporting Working Group and is one that will take place each year until the end of the 2011-2014 reporting period. The results for 2013 that are summarized below include the activity adjustments, as reported by distributors, that the OPA has made to the 2011 and 2012 results.

Charts showing the cumulative progress of each distributor against their energy CDM Targets can be found in Appendix B.

#### 3.2 Energy Savings (kWh)

To achieve the energy consumption CDM Target of 6,000 GWh, distributors are relying on the energy savings achieved each year as well as the persisting savings from annual CDM activities in subsequent years all of which accumulate over the 4-year period and contribute towards achieving the overall target.

Generally, the energy efficiency effects of a conservation program will last multiple years. Through the installation of new energy efficient technologies, overall energy

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<sup>3</sup> Minor differences may appear between the 2011 and 2012 adjustments reported by distributors and those calculated by the OPA. 2012 savings reported by some distributors in their 2013 CDM Annual Reports may contain minor updates to 2011 and 2012 savings that were originally reported in their 2011 and 2012 CDM Annual Reports. These adjustments are referred to as “reporting adjustments” by the OPA and were not included as a separate entry in distributors’ 2013 CDM Annual Reports. Generally, the 2011 and 2012 reporting adjustments, as calculated by the OPA, account for any differences between what the distributors have reported and what the OPA is expected to report. As noted above, CDM targets can only be met through verified results, and for OPA-Contracted Province-Wide CDM Programs these are the results from the OPA’s evaluations as reported by the OPA. Inclusion of a distributor’s reported results throughout this report that differ from the results of the OPA does not constitute the Board’s acceptance that these results are final for 2013.



consumption savings take place as the new technology uses less energy than the technology it replaced. The energy savings from upgrading to more energy efficient technologies will generally persist over a number of years. The savings in the subsequent years may be slightly reduced from the first year the new technology was installed due to a number of factors (e.g., the new technologies being uninstalled or failing to work, efficiency performance deterioration, etc.).

The cumulative and persisting effects of energy savings are important factors that distributors and the OPA have taken into consideration from the start of the 2011 to 2014 CDM term. Since distributors receive credit towards their target for every kWh of electricity they are able to conserve throughout the 2011 to 2014 CDM period, there is a great benefit in achieving a high level of savings earlier in the period due to the persisting nature of energy savings. The savings in each year include the savings from programs delivered in that year plus the savings from prior years that persist in that year. The energy target is cumulative so these savings for each year are all added together to come up with the overall results.

Table 1 below provides the annual energy savings from CDM programs over the period 2011 to 2013, and shows the persisting savings in subsequent years following the year the energy savings were first achieved. Overall, the annual savings and the persisting savings combine and result in the cumulative contribution towards the 2014 target.

By the end of 2013, distributors have been successful in implementing CDM programs to produce 5,139.1 GWh of cumulative energy savings. These energy savings will contribute 85.7% of the energy savings needed to meet the 2011-2014 energy consumption target. Below is a summary of the results to-date:

- In 2011, distributors collectively contributed to achieve 606.9 GWh of energy savings towards the 2014 target. The effects of the CDM programs from 2011 continued to persist and contribute 603 GWh, 601.0 GWh and 582.3 GWh in 2012, 2013 and 2014 respectively towards the target. The cumulative contribution of the 2011 CDM programs to the target is 2,393.1 GWh or 40% of the overall target.
- Similarly, the 2012 CDM programs have contributed a total of 1,513.3 GWh, or 25%, of the target.
- In 2013, distributors collectively achieved 603.3 GWh of new incremental energy savings. After accounting for persistence, the 2013 CDM programs are estimated to contribute 1,232.8 GWh, or 21%, of the total energy savings target.

Distributors will require a very successful effort in 2014 in order to meet the overall energy consumption target of 6,000 GWh as 860.9 GWh of energy savings remains unachieved.

Table 1 – Province-Wide Net Energy Savings at the End-User Level (GWh)<sup>4</sup>

Implementation Period	Annual Results (GWh)								Cumulative	
	2011	% of Target	2012	% of Target	2013	% of Target	2014	% of Target	2011-2014	% of Target
2011	606.9	10.1%	603	10.1%	601.0	10.0%	582.3	9.7%	2,393.1	40%
2012 <sup>5</sup>	18.7	(n/a)	503.6	8.4%	498.4	8.3%	492.6	8.2%	1,513.3	25%
2013 <sup>6</sup>	1.7	(n/a)	44.4	(n/a)	603.3	10.1%	583.4	9.7%	1,232.8	21%
2014										
Verified Net Cumulative Energy Savings 2011-2014									5,139.1	85.7%
2011-2014 Cumulative CDM Energy Target									6,000	

### 3.2.1 2013 Net Incremental Energy Savings

The net incremental energy savings (kWh), that is, the new energy savings that were the result of specific programs/initiatives delivered in 2011, 2012 and 2013 are summarized in Table 2 below. It can be seen that in 2013, the biggest contributor to energy savings was the Business Program (430 GWh) followed by the Consumer Program with 70 GWh. 2013 was also the first year that the Aboriginal Programs were delivered.

Table 2 – Net Incremental Energy Savings (kWh)<sup>6</sup>

Program/Initiative Name	2011 Savings	2012 Savings	2013 savings
Consumer Program	133,520,941	75,796,859	70,049,807
Business Program	198,124,253	381,415,230	430,423,659
Industrial Program	31,947,577	9,156,820	28,907,187
Home Assistance Program	39,283	5,442,232	20,987,275
Aboriginal Program	n/a	n/a	1,609,393

<sup>4</sup> Table 1 has relied on data found in the OPA's 2013 CDM Annual Report, Table 2, October 1, 2014.

<sup>5</sup> Includes adjustments to previous years' verified results (shown in the shaded blue cells).

<sup>6</sup> For consistency, net incremental energy savings (kWh) totals in Table 2 has be taken from the OPA's 2013 CDM Summary Report, October 1, 2014.

Program/Initiative Name	2011 Savings	2012 Savings	2013 savings
Pre-2011 Program Completed in 2011	243,251,550	11,901,944	3,522,240
Other	n/a	1,188,362	4,075,382
Adjustments to 2011 Results	n/a	18,689,081	1,736,381
Adjustments to 2012 Results	n/a	n/a	41,947,840
<b>Total Incremental Net Energy Savings (kWh)</b>	<b>606,883,604</b>	<b>503,746,721</b>	<b>603,259,164</b>

### 3.2.2 2011-2014 - Cumulative Energy Savings by Program/Initiative

Overall, the cumulative and persisting energy savings from programs delivered in 2011, 2012 and 2013 represent approximately 86% of the overall net energy (kWh) target of 6,000 GWh. Table 3 below provides the specific cumulative persisting energy savings for each of the programs/initiatives offered by distributors throughout Ontario. It can be seen that the main drivers of energy savings are the Business and Consumer Programs.

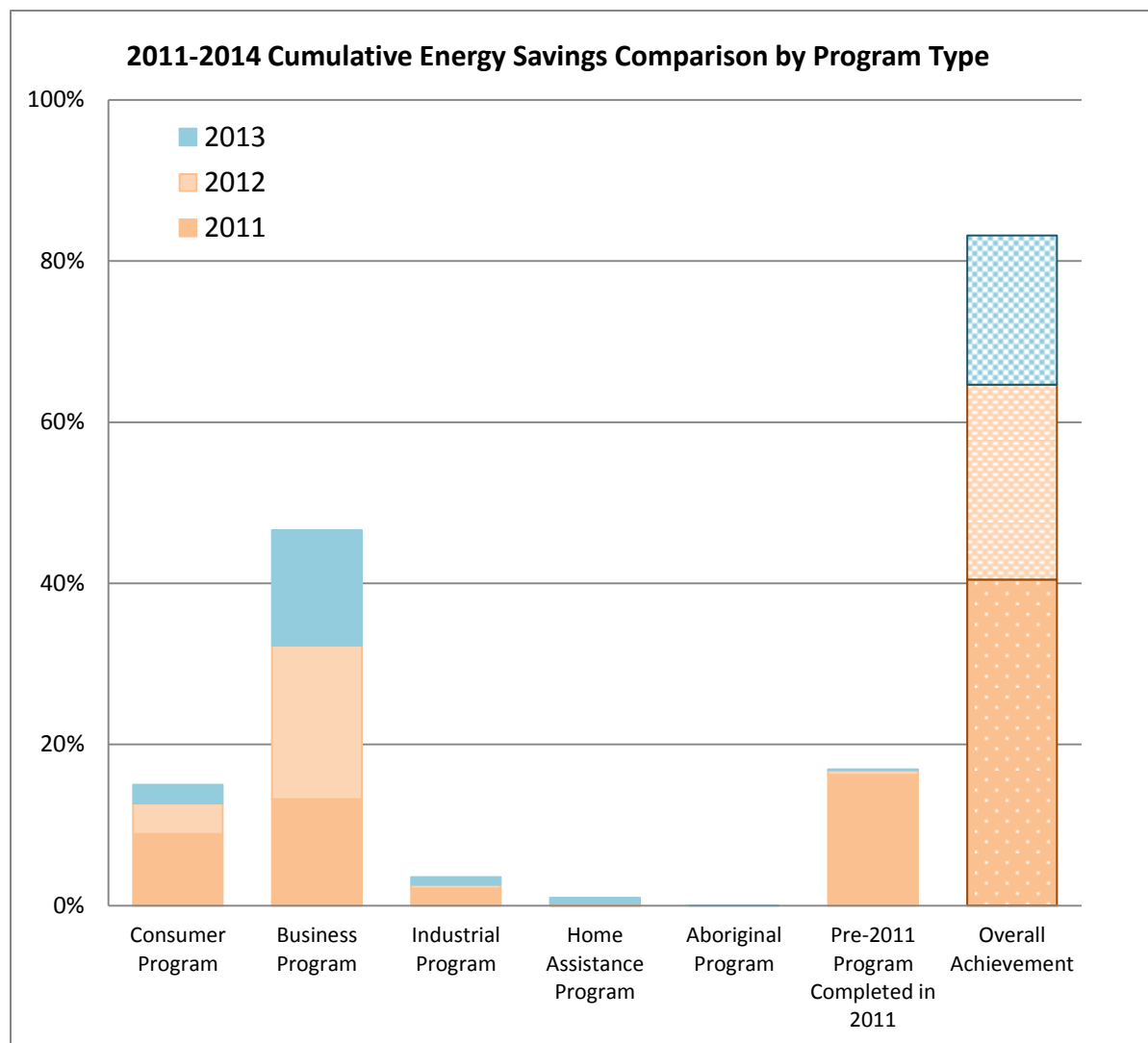
Table 3 – 2011-2014 Cumulative Net Energy Savings (kWh) by Program/Initiative

Program/Initiative Name	2011-2014 Cumulative Savings (kWh)	Percentage of 2011-2014 Total Cumulative Net Energy Savings (kWh)
Consumer Program	900,058,189	17.5%
Business Program	2,758,523,766	53.7%
Industrial Program	184,732,989	3.6%
Home Assistance Program	57,949,913	1.1%
Aboriginal Program	3,218,786	0.1%
Pre-2011 Program Completed in 2011	1,015,756,510	19.8%
Other	11,715,850	0.2%
Adjustments to 2011 Results	80,864,121	n/a
Adjustments to 2012 Results	126,287,857	n/a
<b>2011-2014 Total Cumulative Net Energy Savings (kWh)</b>	<b>5,139,107,980</b>	
<b>% of Full OEB Target Achieved to Date</b>	<b>85.7%</b>	

Chart 1 below shows the cumulative energy savings (kWh) for each program type from each year the programs have been offered (i.e., 2011, 2012 and 2013). The overall cumulative energy savings that have been achieved up to the end of 2013 is also

shown. It can be seen that the Business Program is the largest contributor to the cumulative energy savings results, contributing close to 50% of the overall results-to-date.

Chart 1: CDM Program Comparison – Cumulative Energy Savings



Twenty distributors have already met or surpassed their total net energy (kWh) savings target in 2013. An additional 22 distributors have met 80% of their energy target. These 42 distributors, who provide electricity service to approximately 60% of all customers in Ontario, are listed in the table below.

Table 4 – Distributors meeting or exceeding at least 80% of energy target (kWh) by the end of in 2013

Distributors who have met 100% of the 2011-2014 Energy Consumption Target			Distributors who have met 80% of the 2011-2014 Energy Consumption Target		
Distributor	Total Customers in Service Territory 2013	% of Cumulative GWh Target Achieved	Distributor	Total Customers in Service Territory 2013	% of Cumulative GWh Target Achieved
Woodstock Hydro	15,534	176%	Kitchener-Wilmot Hydro Inc.	90,018	98%
Hydro 2000 Inc.	1,220	144%	Niagara Peninsula Energy Inc.	51,213	95%
Chapleau Public Utilities Corp.	1,247	141%	Orillia Power Distribution Corp.	13,219	94%
Cambridge and North Dumfries Hydro Inc.	52,212	133%	Westario Power Inc.	22,725	94%
Guelph Hydro Electric Systems Inc.	52,323	127%	Newmarket - Tay Power Distribution Ltd.	34,626	94%
Festival Hydro Inc.	20,187	127%	PowerStream Inc.	346,618	93%
Cooperative Hydro Embrun	1,962	125%	North Bay Hydro Distribution Ltd.	23,973	90%
Grimsby Power Inc.	10,595	124%	Haldimand County Hydro Inc.	21,217	90%
Rideau St. Lawrence Distribution Inc.	5,859	114%	Essex Powerlines Corp.	28,400	90%
Kingston Hydro Corp.	27,098	112%	Brantford Power Inc.	38,543	90%
Erie Thames Powerlines Corp.	18,119	109%	Hydro Ottawa Ltd.	314,722	89%
ENWIN Utilities Ltd.	86,018	109%	PUC Distribution Inc.	33,367	87%
Centre Wellington Hydro Ltd.	6,710	109%	Wasaga Distribution Inc.	12,816	87%
Espanola Hydro Distribution Corp.	3,301	109%	Burlington Hydro Inc.	66,704	87%
Fort Frances Power Corp.	3,697	107%	Midland Power Utility Corp.	7,013	86%
St. Thomas Energy Inc.	15,846	105%	Enersource Hydro Mississauga Inc.	199,871	86%
Niagara-on-the-Lake Hydro Inc.	8,639	104%	Horizon Utilities Corp.	238,777	86%
Welland Hydro-Electric System Corp.	22,330	102%	E.L.K. Energy Inc.	11,483	84%
London Hydro Inc.	150,917	101%	Waterloo North Hydro Inc.	54,165	82%
Toronto Hydro-Electric System Ltd.	734,576	100%	ENTEGRUS	40,385	81%
			Norfolk Power Distribution Inc.	19,337	80%
			Renfrew Hydro Inc.	4,225	80%

### 3.3 Peak Demand Savings (kW)

Peak demand (kW) savings result from both CDM programs (i.e., those that incent and promote upgraded energy efficiency technologies and primarily target energy (kWh) savings) and demand response programs. Demand response programs mainly realize energy savings during peak hours. A large portion of the peak demand savings resulting from energy efficiency programs will generally persist from one year to the next, as the new energy efficient technology will remain in place and generally operate at the same time of the day. However, peak demand savings are not cumulative in nature. That is, a peak kW saved in 2011 will not count against a distributor's peak demand target unless it will remain in place and produces a kW saved in 2014. To achieve the peak demand (kW) CDM Target of 1,330 MW, peak demand (kW) savings must be in place on December 31, 2014.

Within the OPA's 2013 Final Results reports, distributors were provided with three different peak demand (kW) savings amounts. These three amounts are summarized below.

- a) **Net Incremental Peak Demand Savings** (2013-specific peak demand savings)  
These are the new peak demand savings from activity within the specified reporting period (e.g., only those peak demand savings completed in 2013, inclusive of both peak demand savings from both energy efficiency and demand response programs);
- b) **Scenario 1 Peak Demand Savings** (Persisting peak demand savings from CDM programs)  
This represents the peak demand savings that will be in place at the end of 2014 and includes a level of persisting peak demand savings from all previous energy efficiency programs. Scenario 1 results assume that peak demand savings from demand response programs persist for one year. One year persistence means that the demand response savings will remain in the reporting year, not beyond; and,
- c) **Scenario 2 Peak Demand Savings** (Persisting peak demand savings from CDM programs and demand response programs)  
Similar to Scenario 1, this represents the peak demand savings that will be in place at the end of 2014, including a level of persisting peak demand savings from all previous CDM program year activities, but which also includes persisting peak demand savings from demand response programs.

In past CDM Summary Reports, the Board has reported the net incremental peak demand savings as these provided a sense of the new peak demand reductions distributors achieved within that reporting year. In this report, the Board has again reported the net incremental peak demand savings, but has also included the total persisting peak demand savings in 2014 from energy efficiency programs (Scenario 1) and the total persisting peak demand savings in 2014 from both energy efficiency programs and demand response programs (Scenario 2) amounts. The Board is of the view that the Scenario 2 Peak Demand Savings amounts provide the most accurate and complete account of the peak demand savings achieved by distributors and that which the OPA expects to be in place at the end of 2014. As the peak demand target requires peak demand savings to be persisting at the end of 2014, the Scenario 2 Peak Demand Savings better align with the peak demand target requirements the electricity distributors are required to meet. The Board will ultimately rely on advice received from the OPA when determining distributors' final progress towards the CDM Targets. The table included in Appendix A provides a summary of each distributor's 2013-only peak demand savings (net incremental) and its expected peak demand savings at the end of 2014 under Scenario 2.

### **3.3.1 Peak Demand Savings (kW) Results**

Overall, distributors reported having achieved just over 30% of their peak demand (kW) target from their 2013 net incremental peak demand results. However, as discussed above, it is important to remember that not all peak demand (kW) savings are assumed to persist from one year to the next and peak demand savings are not cumulative. Therefore, it is more informative to review the peak demand savings that are expected to be in place at the end of 2014. These results are discussed below.

In general, distributors advised the Board that meeting their peak demand (kW) target is not likely and that a shortfall is expected. Distributors noted that they will continue to work actively on participant engagement to achieve the most peak demand (kW) savings possible. One distributor however, has achieved its 2014 peak demand savings target in 2013. Welland Hydro-Electric System Corp. achieved 127% of its peak demand target in 2013. Additionally, Kingston Hydro Corporation ("Kingston") and Tillsonburg Hydro Inc. ("Tillsonburg") surpassed the 80% threshold of their peak demand targets after completion of 2013 programs. Kingston achieved 96% of its peak demand target while Tillsonburg achieved 90% of its peak demand target. It is very important to remember that only those peak demand savings in place as of December 31, 2014 will be considered for the purpose of reporting towards a distributor's 2011-2014 peak demand target.

Table 5 below shows the net incremental peak demand savings by program type in 2011, 2012 and 2013, as well as the persisting peak demand savings in 2014 (under Scenario 2, which includes persisting peak demand savings from both energy efficiency and demand response programs).

Table 5 – 2013 Incremental Net Peak Demand Savings (kW)<sup>7</sup>

Program/Initiative Name	Net Annual Incremental Savings			2014 Persisting Savings
	2011 Savings	2012 Savings	2013 Savings	2014 Peak Demand Savings (Scenario 2)
Consumer Program	49,681	72,377	116,886	178,582
Business Program	64,617	98,211	107,261	223,928
Industrial Program	57,098	75,141	166,395	170,645
Home Assistance Program	2	566	2,361	2,904
Aboriginal Program	n/a	n/a	267	267
Pre-2011 Program Completed in 2011	44,945	3,251	772	48,967
Other	n/a	2,304	3,692	5,996
Adjustments to 2011 Results	n/a	1,406	641	1,797
Adjustments to 2012 Results	n/a	n/a	6,260	6,180
<b>Peak Demand Savings (kW)</b>	<b>216,343</b>	<b>253,256</b>	<b>404,536</b>	<b>639,265</b>

### 3.3.2 Persisting Peak Demand Savings from CDM Programs (Scenario 1)

Peak demand savings in 2013, as calculated by the OPA under Scenario 1, represents the peak demand savings that will be in place at the end of 2014, including a level of persisting peak demand savings from all previous energy efficiency programs, but does not include any persisting peak demand savings from demand response programs as the demand response savings are only assumed to persist for the reporting year.

Based on the OPA's Scenario 1 results, distributors have collectively achieved approximately 359 MW, or 27%, of the 2014 persisting peak demand target of 1,330 MW. Table 6 below shows the Scenario 1 result by program type.

<sup>7</sup> For consistency, net incremental peak demand (kWh) totals in Table 5 has be taken from the OPA's 2013 CDM Summary Report, October 1, 2014.



Table 6 – 2014 Persisting Peak Demand Savings from CDM Programs (Scenario 1)<sup>8</sup>

Program/Initiative Name	Scenario 1: 2014 Persisting Peak Demand Savings (kW)	Percentage of Scenario 1: 2014 Persisting Peak Demand Savings (kW)
Consumer Program	85,506	23.8%
Business Program	199,449	55.5%
Industrial Program	8,101	2.3%
Home Assistance Program	2,904	1.0%
Aboriginal Program	267	0.1%
Pre-2011 Program Completed in 2011	48,967	13.6%
Other	5,996	1.7%
Adjustments to 2011 Results	1,797	n/a
Adjustments to 2012 Results	6,180	n/a
<b>2014 Persisting Peak Demand Savings (Scenario 1)</b>	<b>359,166</b>	
<b>% of Full OEB Target Achieved to Date</b>	<b>27.0%</b>	

Table 7 below shows the annual peak demand savings under the OPA's Scenario 1 which includes: peak demand savings from energy efficiency and demand response programs, persisting peak demand savings in subsequent years from energy efficiency programs, and the persisting peak demand savings in 2014 from energy efficiency programs. The OPA's Scenario 1 peak demand results assume peak demand savings from demand response programs persist for one year (i.e., the reporting year).

Table 7 –2014 Persisting peak demand savings from CDM Programs (Scenario 1)<sup>9</sup>

Implementation Period	Annual Results (MW)						
	2011		2012		2013		Persisting Savings in 2014
	EE	DR	EE	DR	EE	DR	EE
2011	136.6	79.7	136.6	0	135.8	0	129.0
2012 <sup>10</sup>	1.4		109.2	142.7	109.8	0	108.2
2013 <sup>11</sup>	0.6		7.0		117.5	280.1	122.0
2014							
Verified Net Annual Peak Demand Savings in 2014							<b>359.2</b>
2014 Annual CDM Capacity Target							<b>1,330</b>
Verified peak Demand Savings Target Achieved in 2014 (%)							<b>27.0%</b>

<sup>8</sup> Excludes Demand Response Programs

<sup>9</sup> Information taken from OPA 2013 CDM Annual Report Table 1a and Table 4, October 1, 2014, Province-Wide Net Peak Demand Savings at the End User Level (MW) Scenario 1

<sup>10</sup> Includes adjustments to previous year's verified results (shown in blue shaded cells)

### 3.3.3 Persisting Peak Demand Savings from CDM Programs and Demand Response Programs (Scenario 2)

In addition to peak demand savings from energy efficiency programs, as noted above, the OPA also calculates peak demand savings resulting from demand response programs that are expected to persist at the end of 2014. Based on the Scenario 2 peak demand savings as calculated by the OPA, distributors have collectively achieved approximately 639 MW, or 48.1%, of the 2014 persisting peak demand savings target of 1,330 MW. Table 8 below shows the Scenario 2 results by program type.

Table 8 – 2014 Persisting Peak Demand Savings from CDM Programs and Demand Response Programs (Scenario 2)

Program/Initiative Name	Scenario 2: 2014 Persisting Peak Demand Savings (kW) <sup>11</sup>	Percentage of Scenario 2: 2014 Persisting Peak Demand Savings (kW)
Consumer Program	178,582	27.9%
Business Program	223,928	35.0%
Industrial Program	170,645	26.7%
Home Assistance Program	2,904	0.5%
Aboriginal Program	267	0.04%
Pre-2011 Program Completed in 2011	48,967	7.7%
Other	5,996	0.9%
Adjustments to 2011 Results	1,797	n/a
Adjustments to 2012 Results	6,180	n/a
<b>2014 Persisting Peak Demand Savings (including DR) (Scenario 2)</b>	<b>639,265</b>	
<b>% of Full OEB Target Achieved to Date</b>	<b>48.1%</b>	

As shown in Table 9 below, by including peak demand savings attributable to both demand response initiatives and persisting peak demand savings from CDM programs, distributors have achieved 639.3 MW, or 48.1% of their 2014 peak demand target of 1,330 MW. Table 9 assumes that demand response resources available in 2013 will remain in place until 2014.

<sup>11</sup> Includes peak demand savings from Demand Response Programs that persist in 2014

Table 9 – Province-Wide Net Peak Demand Savings at the End User Level (MW) Scenario 2<sup>12</sup>

Implementation Period	Annual Results (MW)						Persisting Savings in 2014	
	2011	%	2012	%	2013	%	2014	%
2011	216.3	16.2%	136.6	10.2%	135.8	10.2%	129.0	9.7%
2012 <sup>13</sup>	1.4		253.3	19.1%	109.8	8.3%	108.2	8.1%
2013 <sup>14</sup>	0.6		7.0		404.5	30.4%	402.1	30.2%
2014								
Verified Net Annual Peak Demand Savings in 2014							639.3	48.1%
2014 Annual CDM Capacity Target							1,330	

## 4. Board-Approved CDM Programs

There is one distributor-specific Board-Approved CDM program, PowerStream Inc.'s Direct Install Refrigeration ("DIR") program. PowerStream Inc. received Board-approval for this CDM program beginning in 2013 and the results have been reported in PowerStream Inc.'s Annual Report and are summarized below. The Board also deemed TOU pricing to be a Board-Approved program for the purpose of distributor target achievement. The OPA's TOU evaluation is briefly discussed below.

### 4.1 PowerStream Inc. – Direct Install Refrigeration (DIR) Program

PowerStream Inc. launched the DIR Program on September 20, 2013. A total of 286 businesses enrolled in the program in the last four months of 2013. By the end of the 2013, 249 of these participants had site audits completed and six participants had their energy savings measures installed. PowerStream Inc. indicated in its 2013 Annual Report that by the end of August 2014, 687 installations were completed under the DIR program.

The DIR program yielded net peak demand savings of 6.05 kW and net energy savings of 57,427 kWh in 2013<sup>14</sup>. These results are less than projected for a full year of program delivery due to a late start to the program in 2013, which resulted in a reduced number of installations completed by December 31, 2013.

<sup>12</sup> Information taken from OPA 2013 CDM Annual Report, Table 1b, October 1, 2014

<sup>13</sup> Includes adjustments to previous years' verified results (shown in the blue shaded cells)

<sup>14</sup> PowerStream Inc.'s 2013 program results are preliminary and not yet verified.

## 4.2 Time-of-Use Rates

In the Board's updated version of the CDM Guidelines issued on April 26, 2012 (EB-2012-0003), it indicated that TOU Rates would be considered a Board-Approved CDM Program for the purpose of the CDM Targets. The OPA has developed the evaluation criteria used to quantify the savings associated with TOU implementation across the province. In its October 1, 2014 Report, the OPA indicated that final TOU savings will be available in the summer of 2015 and will inform the value of TOU to the province in meeting its conservation targets.

## 5. 2013 CDM Spending

Table 10 shows the amount of spending in 2011, 2012 and 2013 by CDM program. Overall in 2013, a total of \$266,502,036 was spent on CDM programs across Ontario.<sup>15</sup> Over the last three years, CDM spending has totalled \$612.3 million<sup>16</sup> with the largest amount of \$348.6 million dedicated to the Business Program followed by the Consumer Program with \$194.8 million. Chart 2 below compares spending by program over the three year period 2011 to 2013.

Table 10 – CDM Program Spending<sup>17</sup>

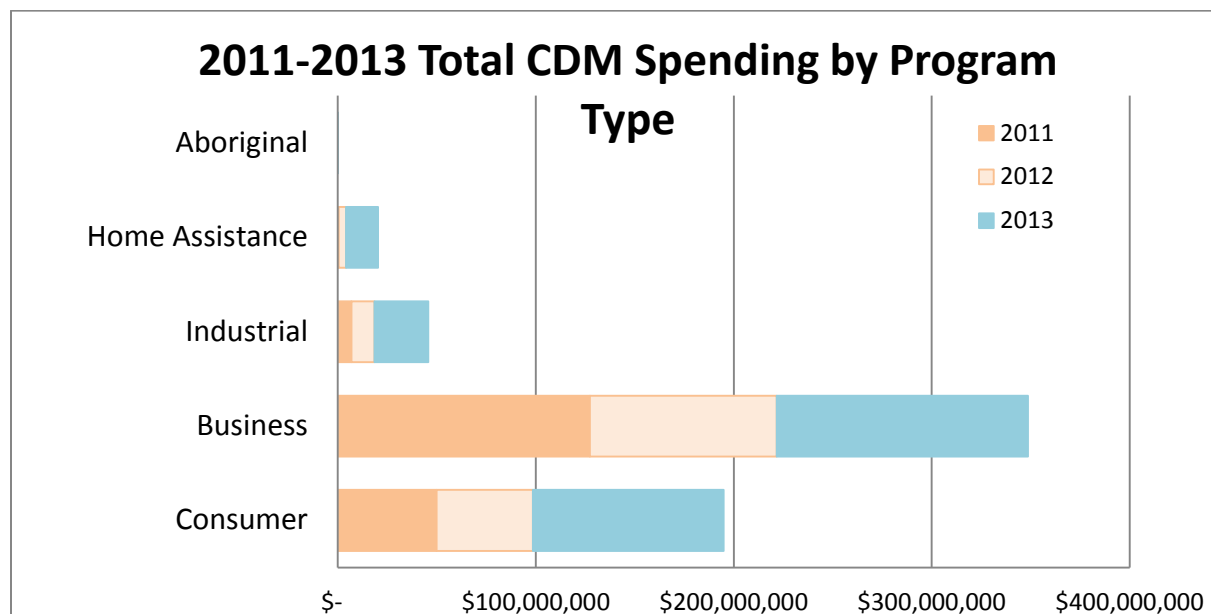
Program Type	2011 Spending	2012 Spending	2013 Spending	Total Spending
Consumer Program	\$49,893,144	\$48,610,411	\$96,326,179	\$194,829,734
Business Program	\$127,315,855	\$94,417,579	\$126,837,880	\$348,571,314
Industrial Program	\$6,915,605	\$11,633,659	\$27,074,097	\$45,623,361
Home Assistance Program	\$457,911	\$3,677,417	\$16,176,229	\$20,311,557
Aboriginal Program	N/A	N/A	\$87,651	\$87,651
<b>Total CDM Spending</b>	<b>\$184,582,515</b>	<b>\$158,339,066</b>	<b>\$266,502,036</b>	<b>\$609,423,617</b>
Adjustments				\$2,879,165
<b>Total 2011-2013 Spending</b>				<b>\$612,302,783</b>

<sup>15</sup> As outlined in the OPA's 2013 CDM Annual Report, October 1, 2014, spending figures reflects actual dollars spent, net of unspent LDCs Program Administration Budget and any adjustments from prior years.

<sup>16</sup> Includes adjustments

<sup>17</sup> For consistency, spending totals in Table 10 have been taken from the OPA's 2013 CDM Summary Report, October 1, 2014.

Chart 2 – Total Provincial CDM Spending by Program Type



## 6. General Comments

Below are some general comments distributors shared in the 2013 CDM Annual Reports. Distributors noted that, while there have been some improvements made to overcome operational and structural issues that have previously limited program effectiveness across all market sectors, there still remain some shortcomings to the design and delivery of some initiatives that had negative impacts on some program results in 2013.

Further, collaboration between LDCs and the OPA has contributed and resulted in some improvements to existing initiatives. While there has been some development of new initiatives and improvements to the process to implement changes to the current initiatives (i.e., the change management process), distributors noted that more needs to be done in both areas. Distributors noted that some initiatives are reaching the point of market saturation and that new initiatives need to be developed in order to take the place of the exiting initiatives.

Overall, distributors were generally optimistic regarding the possible achievement of the energy (kWh) savings target. It appears that approximately two-thirds of distributors will be able to meet 100% of their energy savings target and that at least 80% of distributors will achieve 80% of their energy savings target by December 31, 2014, if new program

activity in 2014 is similar to that which has been achieved in 2011, 2012 and 2013. Distributors stressed the need to continue aggressively pursuing all savings opportunities and to have the technologies and resources in place to enable their efforts.

Distributors were cautious when discussing the possibility of achieving the peak demand (kW) target. The overwhelming majority of distributors do not expect to meet the peak demand (kW) savings target, and figures reported in 2013 reinforced distributor expectations. Some distributors noted that the peak demand (kW) target will not be met unless the targets are extended, although generally, distributors did not suggest that the peak demand (kW) targets should be extended. Distributors reiterated that the main issue with the peak demand (kW) targets could be that they were too high when they were initially set.

## 6.1 Program-Specific Comments<sup>18</sup>

The distributors provided a number of comments about specific programs. The Board notes that current CDM framework concludes December 31, 2014 and a new framework in which distributors will take a larger role in developing programs will begin. The Board has provided a summary of program specific comments to the OPA for its consideration. The Board also encourages distributors to continue to work cooperatively and share experiences with each other.

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<sup>18</sup> Full OPA-Contracted Province-Wide CDM Program descriptions can be found at [www.saveonenergy.ca](http://www.saveonenergy.ca)

## **Appendix A**

### **2013 CDM Summary Report: 2013 Verified Results**

LDC	2014 OEB Peak Demand Target (kW)	2013 Net Incremental Peak Demand Savings (kW) per OEB Scorecard methodology	Achievement Towards 2014 OEB Peak Demand Target		2011-14 Net Cumulative Energy Savings Target (kWh)	2013 Net Incremental Energy Savings (kWh)	Achievement Towards 2011-2014 Cumulative OEB Energy Target	
			(Scenario 2: DR persists)				kWh	%
			kW	%				
Algoma Power Inc.	1,280	156.7	251.3	20%	7,370,000	645	3,281,903	45%
Atikokan Hydro Inc.	200	9.4	39.1	20%	1,160,000	39	688,023	59%
Attawapiskat Power Corporation	70	0.4	1.8	3%	290,000	6	87,661	30%
Bluewater Power Distribution Corporation	10,650	2,603.5	4,578.2	43%	53,730,000	2,784	38,551,485	72%
Brant County Power Inc.	3,300	249.4	638.7	19%	9,850,000	651	7,121,428	72%
Brantford Power Inc.	11,380	1,846.5	3,713.3	33%	48,920,000	5,079	43,800,009	90%
Burlington Hydro Inc.	21,950	6,348.7	9,917.6	45%	82,370,000	8,221	71,479,751	87%
Cambridge and North Dumfries Hydro Inc.	17,680	3,211.0	7,266.9	41%	73,660,000	10,952	98,190,785	133%
Canadian Niagara Power Inc.	6,400	1,704.9	2,385.7	37%	25,080,000	2,274	16,182,238	65%
Centre Wellington Hydro Ltd.	1,640	691.8	1,130.9	69%	7,810,000	689	8,540,246	109%
Chapleau Public Utilities Corporation	170	36.3	121.6	72%	1,210,000	154	1,692,115	140%
COLLUS Power Corporation	3,140	518.1	903.6	29%	14,970,000	1,694	9,609,495	64%
Cooperative Hydro Embrun Inc.	340	93.3	160.1	47%	1,120,000	220	1,390,137	124%
E.L.K. Energy Inc.	2,690	278.6	666.1	25%	8,250,000	648	6,927,489	84%
Enersource Hydro Mississauga Inc.	92,980	33,047.9	50,873.2	55%	417,220,000	39,440	357,691,574	86%
ENTEGRUS	12,120	1,374.4	3,223.4	27%	46,530,000	4,743	37,738,850	81%
ENWIN Utilities Ltd.	26,810	8,410.1	13,252.8	49%	117,890,000	21,422	128,449,967	109%
Erie Thames Powerlines Corporation	5,220	1,081.5	1,768.9	34%	22,970,000	5,901	25,092,107	109%
Espanola Regional Hydro Distribution Corporation	520	37.5	207.7	40%	2,760,000	159	2,989,676	108%
Essex Powerlines Corporation	7,190	3,325.3	4,180.9	58%	21,540,000	2,357	19,320,665	90%
Festival Hydro Inc.	6,230	906.9	2,844.7	46%	29,250,000	2,807	37,222,928	127%
Fort Albany Power Corporation	50	0.4	1.5	3%	240,000	5	73,183	30%
Fort Frances Power Corporation	610	301.4	429.1	70%	3,640,000	1,048	3,942,166	108%
Greater Sudbury Hydro Inc.	8,220	1,102.7	2,560.0	31%	43,710,000	4,739	32,602,357	75%
Grimsby Power Inc.	2,060	593.1	1,040.1	50%	7,760,000	1,225	9,552,388	123%
Guelph Hydro Electric Systems Inc.	16,710	6,090.8	12,974.9	78%	79,530,000	8,102	101,314,073	127%
Haldimand County Hydro Inc.	2,850	404.3	974.5	34%	13,300,000	1,355	11,933,763	90%
Halton Hills Hydro Inc.	6,150	1,406.9	2,160.1	35%	22,480,000	1,236	16,234,251	72%
Hearst Power Distribution Company Limited	680	86.2	180.0	26%	3,910,000	363	1,922,204	49%
Horizon Utilities Corporation	60,360	23,179.8	33,679.4	56%	281,420,000	27,151	240,899,774	86%
Hydro 2000 Inc.	190	34.4	81.5	43%	1,040,000	366	1,461,676	141%
Hydro Hawkesbury Inc.	1,820	151.5	419.2	23%	9,280,000	588	6,133,283	66%
Hydro One Brampton Networks Inc.	45,610	8,589.6	14,681.5	32%	189,540,000	22,264	146,581,807	77%
Hydro One Networks Inc.	213,660	84,230.3	114,458.3	54%	1,130,210,000	80,075	673,449,016	60%
Hydro Ottawa Limited	85,260	22,503.5	38,855.4	46%	374,730,000	42,598	332,358,930	89%
Innisfil Hydro Distribution Systems Limited	2,500	688.0	857.5	34%	9,200,000	1,299	6,853,957	74%
Kashechewan Power Corporation	70	0.5	2.1	3%	330,000	7	98,375	30%
Kenora Hydro Electric Corporation Ltd.	860	69.4	116.6	14%	5,220,000	306	1,323,789	25%
Kingston Hydro Corporation	6,630	4,686.9	6,376.2	96%	37,160,000	6,159	41,577,146	112%
Kitchener-Wilmot Hydro Inc.	21,560	8,973.4	12,981.8	60%	90,290,000	8,930	88,933,965	98%
Lakefront Utilities Inc.	2,770	435.5	807.9	29%	13,590,000	777	9,053,628	67%
Lakeland Power Distribution Ltd.	2,320	197.0	613.3	26%	10,180,000	865	8,048,562	79%
London Hydro Inc.	41,440	5,927.2	12,642.3	31%	156,640,000	15,838	157,449,386	101%
Midland Power Utility Corporation	2,390	1,109.9	1,511.8	63%	10,820,000	1,404	9,328,142	86%
Milton Hydro Distribution Inc.	8,050	723.5	1,896.7	24%	33,500,000	2,017	24,408,044	73%
Newmarket - Tay Power Distribution Ltd.	8,760	949.6	2,493.8	28%	33,050,000	3,120	31,025,939	94%
Niagara Peninsula Energy Inc.	15,490	2,000.4	4,331.4	28%	58,040,000	7,082	54,973,341	95%
Niagara-on-the-Lake Hydro Inc.	2,420	381.2	803.8	33%	8,270,000	1,007	8,580,037	104%
Norfolk Power Distribution Inc.	4,250	689.4	1,340.5	32%	15,680,000	1,926	12,618,641	80%
North Bay Hydro Distribution Limited	5,050	1,485.0	2,528.9	50%	26,100,000	3,030	23,429,366	90%
Northern Ontario Wires Inc.	1,060	144.2	348.8	33%	5,880,000	671	4,661,768	79%
Oakville Hydro Electricity Distribution Inc.	20,700	3,732.6	6,788.3	33%	74,060,000	5,230	55,732,109	75%
Orangeville Hydro Limited	2,780	1,184.5	1,663.8	60%	11,820,000	585	8,473,592	72%
Orillia Power Distribution Corporation	3,070	727.4	1,381.8	45%	15,050,000	955	14,166,096	94%
Oshawa PUC Networks Inc.	12,520	2,644.4	4,181.7	33%	52,240,000	5,363	33,315,620	64%
Ottawa River Power Corporation	1,610	171.5	548.5	34%	8,970,000	728	6,952,486	78%
Parry Sound Power Corporation	740	31.7	112.8	15%	4,160,000	141	1,654,950	40%
Peterborough Distribution Incorporated	8,720	1,476.1	2,943.5	34%	38,450,000	3,092	28,708,184	75%
PowerStream Inc.	95,570	31,664.0	48,722.2	51%	407,340,000	52,140	377,376,078	93%
PUC Distribution Inc.	5,580	1,070.7	2,430.0	44%	30,830,000	3,930	26,873,941	87%
Renfrew Hydro Inc.	1,050	100.3	359.9	34%	4,860,000	252	3,873,083	80%
Rideau St. Lawrence Distribution Inc.	1,220	60.1	469.2	38%	5,100,000	280	5,816,791	114%
Sioux Lookout Hydro Inc.	510	56.4	81.9	16%	3,320,000	207	925,130	28%
St. Thomas Energy Inc.	3,940	639.6	1,275.8	32%	14,920,000	2,701	15,694,301	105%
Thunder Bay Hydro Electricity Distribution Inc.	8,480	2,636.8	3,728.7	44%	47,380,000	7,520	31,884,235	67%
Tillsonburg Hydro Inc.	2,290	1,707.2	2,061.8	90%	10,250,000	372	5,839,771	57%
Toronto Hydro-Electric System Limited	286,270	93,630.7	150,993.2	53%	1,303,990,000	135,453	1,301,485,103	100%
Veridian Connections Inc.	29,050	6,342.2	10,384.1	36%	115,740,000	8,666	79,841,858	69%
Wasaga Distribution Inc.	1,340	125.1	294.7	22%	4,010,000	226	3,491,862	87%
Waterloo North Hydro Inc.	15,790	2,776.9	5,378.0	34%	66,490,000	6,358	54,390,283	82%
Welland Hydro-Electric System Corp.	5,560	6,328.4	7,045.8	127%	20,600,000	4,485	21,028,072	102%
Wellington North Power Inc.	930	61.8	232.3	25%	4,520,000	354	2,960,239	65%
West Coast Huron Energy Inc.	880	86.9	222.8	25%	8,280,000	271	3,031,911	37%
Westario Power Inc.	4,240	475.8	1,390.4	33%	20,950,000	2,020	19,679,596	94%
Whitby Hydro Electric Corporation	10,900	3,164.5	4,334.6	40%	39,070,000	3,204	25,708,255	66%
Woodstock Hydro Services Inc.	4,490	571.8	1,963.8	44%	18,880,000	2,283	33,332,946	177%
All LDCs	1,330,040	404,535.6	639,265.1	48%	5,999,970,000	603,259	5,139,107,980	86%



## **Appendix B**

### **2013 CDM Summary Report: Distributor Progress Charts**

2011-2014 Cumulative Energy Savings (kWh)  
Percentage of Target Achieved

