St. Thomas energy inc.
We're Your Local Power Distributor

File Number: EB-2014-0113

Date Filed: April 25, 2014

Exhibit 3

OPERATING REVENUE

St. Thomas energy inc.
We're Your Local Power Distributor

File Number: EB-2014-0113

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Exhibit 3

Tab 1 of 1

Load and Revenue Forecasts

LOAD AND REVENUE FORECASTS

LOAD FORECAST

As STEI is applying for rate effective January 1, 2015, the timetable to complete and file the application requires that the load forecast to be based upon 2013 Actual and two forecast years, 2014BY and 2015TY.

STEI contracted Elenchus Research Associates ("ERA") to provide a load forecast for STEI's 2015 Cost of Service Application. The approach to the weather normalized load forecast is in the ERA report that is provided as Attachment 1 to this Exhibit.

STEI is forecasting energy consumption for the 2015 Test year, adjusted for CDM, is 282,470,283 kWh's or 5.5% less than the 2011 COS Board Approved amount of 299,029,379 kWh's. As shown in Table 1 below and discussed on the following pages, the reduction is attributed to the GS<50 kW customer class which has experienced a 25% reduction in the number of customers from the 2011 COS Board Approved load forecast.

Table 3-1

METERED KILOWATT-HOURS (kWh)

Customer Class Name	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2013 Normalized	2014 Normalized	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	122,791,452	118,988,254	117,522,946	120,233,411	120,233,411	121,125,915	121,125,915	121,139,467	(1,651,985)
GS < 50 kW	40,328,648	36,524,408	36,261,185	38,822,521	38,822,521	40,662,591	40,662,591	40,919,528	590,880
GS > 50	**132,743,408**	**136,380,632**	**134,205,543**	**119,449,425**	**119,449,425**	**118,091,878**	**118,091,878**	**117,249,967**	**(15,493,441)**
Sentinel Lighting	56,665	61,199	62,373	23,170	23,170	23,170	23,170	22,987	(33,678)
Street Lighting	3,109,206	3,083,850	3,119,827	3,124,392	3,124,392	3,143,802	3,143,802	3,138,334	29,128
TOTAL	299,029,379	295,038,343	291,171,874	281,652,919	281,652,919	283,047,356	283,047,356	282,470,283	(16,559,096)

METERED KILOWATT (kW)

Customer Class Name	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2013 Normalized	2014 Normalized	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	-	-	-	-	-	-	-	-	-
GS < 50 kW	-	-	-	-	-	-	-	-	-
GS > 50	**348,528**	**340,694**	**359,117**	**306,115**	**304,653**	**301,191**	**301,191**	**299,044**	**(49,484)**
Sentinel Lighting	157	170	174	177	177	177	177	176	19
Street Lighting	8,603	8,532	8,607	8,646	8,646	8,700	8,700	8,685	82
TOTAL	357,288	349,396	367,898	314,938	313,476	310,068	310,068	307,905	(49,383)

CUSTOMERS (CONNECTIONS)

Customer Class Name	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2013 Normalized	2014 Normalized	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	14,562	14,576	14,692	14,828	14,828	14,973	14,973	15,120	558
GS < 50 kW	1,676	1,664	1,662	1,720	1,720	1,728	1,728	1,737	61
GS > 50	**192**	**192**	**194**	**142**	**142**	**143**	**143**	**144**	**(48)**
Sentinel Lighting	50	51	51	52	52	52	52	52	2
Street Lighting	4,834	4,791	4,829	4,858	4,858	4,888	4,888	4,918	84
TOTAL	21,314	21,274	21,428	21,600	21,600	21,784	21,784	21,971	657

STEI is forecasting the numbers of customers and connections for the 2015 Test year of 21,971, an increase of 2.3% over the 2011 COS Board Approved load forecast of 21,314. As provided in the table above, the residential customer forecast of 15,120 reflects an increase of 3.8% or 558 accounts over the 2011 amount of 14,562. The GS< and > 50kW classes have been impacted by economic conditions and yearly re-classification of those accounts based upon demand usage.

STEI has also been negatively impacted by the announced closing of a significant GS > 50 kW customer whose load represented approximately 10% of the class total. The company moved its customer service to Toronto and consolidated production with existing plants in Ohio and the Carolinas.

MULTIVARIATE REGRESSION MODEL

In its 2011 test year application, STEI submitted a forecast based on a normalized average use per customer (NAC) approach. At the time, STEI and its consultant investigated an econometric (regression equation) approach to load forecasting. It was noted in Chapter 2.6.1.1 from the ERA load report at the time that the "preferred approach to forecasting weather normalized load is to develop multiple regression analysis forecasts on a class-by-class basis. This method takes into account sensitivity to weather and economic variables on a class specific basis. This approach was investigated for STEI but did not yield robust results." It was also noted that this is not an uncommon problem with some LDCs, even among the largest LDCs, and that another method to achieve a multiple regression analysis based forecast could be to develop the forecast based on wholesale purchases. However, this method was not practical for STEI for 2011 due to the extenuating circumstances facing the LDC with major loss of load. This loss of load was concentrated in the Large User Class (which no longer exists) and the GSGT50 kW Class. This presented difficulties for allocating the wholesale forecast correctly as well as estimating a robust wholesale kWh equation. For these reasons the NAC approach was adopted instead.

For the current forecasting process, multiple regression analysis was again explored. , This is the preferred approach and STEI is looking to use the best available techniques that are practical to derive the forecast. Using the current data available, the class specific regression results were sufficiently robust that Elenchus felt confident in using this approach for the current forecasting process. A multiple regression equation was estimated for each of the Residential, GSLT50 and GSGT50 customer classes, which are the weather sensitive classes.

The results of the regression analysis and the operating models are contained in Attachments to this exhibit.

NORMALIZED AVERAGE USE PER CUSTOMER ("NAC") MODEL

ERA did not use a NAC model, ERA's load forecast is based upon class specific regression results. A multiple regression equation was estimated for each of the Residential, GSLT50 and GSGT50 customer classes, which are the weather sensitive classes.

St. Thomas energy inc.
We're Your Local Power Distributor

File Number:EB-2014-0113

Exhibit: 3
Tab: 1
Schedule: 3

Date Filed: April 25, 2014

Attachment 1 of 1

Weather Normalized Distribution System Load Report

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Weather Normalized Distribution System Load Forecast – 2015 Test Year

A Report Prepared by
Elenchus Research Associates Inc.

On Behalf of
St. Thomas Energy

24/02/2014

Load Forecast Introduction

This report outlines the results and methodology used to derive the weather normal load forecast prepared for use in the COS application for 2015 rates for St. Thomas Energy Inc. (STEI). Since STEI is applying for rates to be effective January 1, 2015, the timetable to complete an application to have rates in place for January 1st makes it is necessary for the forecast to have a bridge year (2013) and two forecast years (2014 and 2015) with 2015 being the test year.

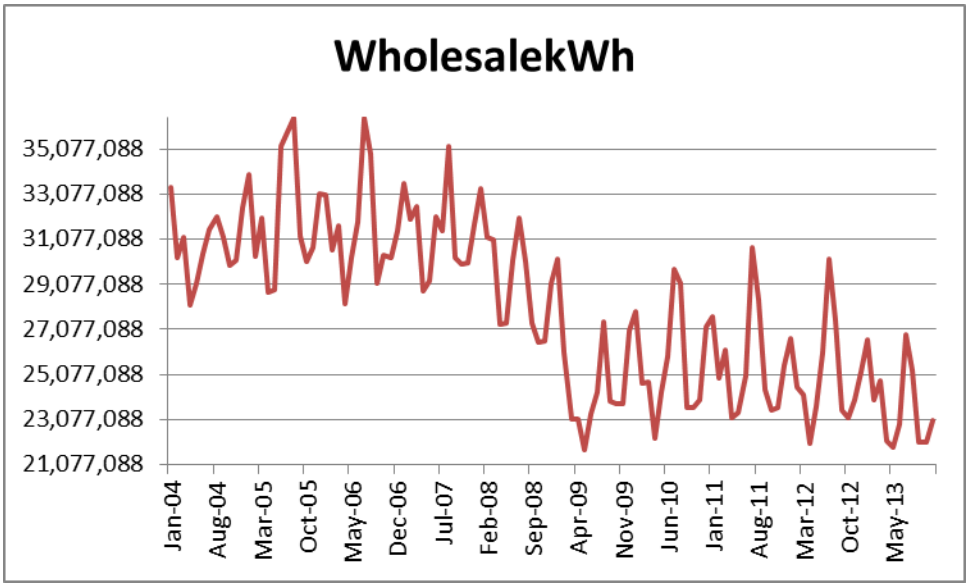
In its 2011 test year application, STEI submitted a forecast based on a normalized average use per customer (NAC) approach. At the time, STEI and its consultant investigated an econometric (regression equation) approach to load forecasting. It was noted at the time that the "preferred approach to forecasting weather normalized load is to develop multiple regression analysis forecasts on a class-by-class basis. This method takes into account sensitivity to weather and economic variables on a class specific basis. This approach was investigated for STEI but did not yield robust results." It was also noted that this is not an uncommon problem with some LDCs, even among the largest LDCs, and that another method to achieve a multiple regression analysis based forecast could be to develop the forecast based on wholesale purchases. However, this method was not practical for STEI for 2011 due to the extenuating circumstances facing the LDC with major loss of load. This loss of load was concentrated in the Large User Class (which no longer exists) and the GSGT50 kW Class. This presented difficulties for allocating the wholesale forecast correctly as well as estimating a robust wholesale kWh equation. For these reasons the NAC approach was adopted instead.

For the current forecasting process, multiple regression analysis was again explored, as this is the preferred approach and STEI is looking to use the best available techniques that are practical to derive the forecast. Using the current data available, the class specific regression results were sufficiently robust that Elenchus feels confident in using this approach for the current forecasting process. A multiple regression equation was estimated for each of the Residential, GSLT50 and GSGT50 customer classes, which are the weather sensitive classes.

NO RECOVERY IN WHOLESALE OR GSGT50 KWH

From 2008 to mid-2009, energy delivery for STEI declined significantly. Since that time, there has not been a recovery to pre-recession levels. There has been a permanent loss of several prominent consumers, including the Large User Class. The following chart illustrates wholesale energy deliveries to STEI from January 2004 to December 2013. This is actual consumption unadjusted for any weather impacts.

Chart 1.1



As will be seen in the next section, Residential kWh consumption has held steady, while GSGT50 declined significantly in 2008-09 and began declining again starting in 2012. Consumption in GSLT50 declined slightly in the recessionary period 2008-09. In 2013, there was a noticeable increase after April due to the reclassification of customers from GSGT50 to GSLT50. In addition to the elimination of the Large User Class due to the loss of the only customer, the USL class has also been eliminated as the accounts have all become metered.

The following table summarizes the kWh forecast for 2015. The calculations can be found as follows:

- Residential kWh - Schedule 2
- GSLT50 – Schedule 3

- GSGT50 – Schedule 4
- Street Light and Sentinel – Schedule 5

Table 1.1

	Actual kWh - 2012	Actual kWh - 2013	Norm/Fcst kWh - 2013	Norm/Fcst kWh - 2014	Norm/Fcst kWh - 2015
Residential	117,915,714	117,935,024	120,233,411	121,125,915	122,104,397
GSLT50	36,260,265	38,974,882	38,822,521	40,662,591	41,245,470
GSGT50	124,533,856	120,022,396	119,449,425	118,091,878	118,183,915
Street Light	3,122,082	3,124,392	3,124,392	3,143,802	3,163,332
Sentinel	22,032	23,170	23,170	23,170	23,170
Grand Total	**281,853,949**	**280,079,864**	**281,652,919**	**283,047,356**	**284,720,284**

The following table summarizes 2015 CDM Load Forecast kWh adjustment. Details for this calculation can be found in Schedule 6 of this report.

Table 1.2

Retail kWh	Weather Normalized 2015F (Elenchus) A	C = A / B	CDM Load Forecast Adjustment E = D * C	2015 CDM Adjusted Load Forecast F = A - E	
Residential (kWh)	122,104,397	43%	964,929	121,139,467	
GS<50 (kWh)	41,245,470	14%	325,942	40,919,528	
GS>50 (kW)	118,183,915	42%	933,948	117,249,967	
Street Lights (kW)	3,163,332	1%	24,998	3,138,334	
Sentinel (kW)	23,170	0%	183	22,987	
Total Customer (kWh)	284,720,284	100%	2,250,000	282,470,284	-0.8%
	B		D		

The following table summarizes the kW forecast for 2015. The calculations can be found as follows:

- GSGT50 – Schedule 4
- Street Light and Sentinel – Schedule 5
- Table 1.2

Table 1.3

	Actual kW - 2012	Actual kW - 2013	Norm/Fcst kW - 2013	Norm/Fcst kW - 2014	Norm/Fcst kW - 2015
GSGT50	321,563	306,115	304,653	301,191	301,426
Street Light	8,614	8,646	8,646	8,700	8,754
Sentinel	174	177	177	177	177
Grand Total	**330,351**	**314,938**	**313,477**	**310,068**	**310,357**

The following table summarizes 2015 CDM Load Forecast kW adjustment. Details for this calculation can be found in Schedule 6 of this report.

Table 1.4

kW	Weather Normalized 2015F (Elenchus) G	I = G / H	CDM Load Forecast Adjustment * J = G / A * E	2015 CDM Adjusted Load Forecast K = G - J	
Residential (kWh)	-	0%		-	
GS<50 (kWh)	-	0%		-	
GS>50 (kW)	301,426	97%	2,382	299,044	
Street Lights (kW)	8,754	3%	69	8,685	
Sentinel (kW)	177	0%	1	176	
Total Customer (kW)	310,357	100%	2,453	307,904	-0.8%
	H				

* Note that CDM LF kW is the proportional LF kW over LF kWh times kWH CDM LF adjustment.

The following table summarizes the customer/connections forecast for 2015. The calculations can be found as follows:

- Residential kWh - Schedule 2
- GSLT50 – Schedule 3
- GSGT50 – Schedule 4
- Street Light and Sentinel – Schedule 5

Table 1.5

	Average Customer - 2011	Average Customer - 2012	Average Customer - 2013	Average Customer - 2014	Average Customer - 2015
Residential	14,576	14,692	14,828	14,973	15,120
GSLT50	1,664	1,662	1,720	1,728	1,737
GSGT50	192	194	142	143	144
Street Light	4,791	4,829	4,858	4,888	4,918
Sentinel	51	51	52	52	52
Grand Total	**21,274**	**21,427**	**21,600**	**21,785**	**21,971**

Residential Load Forecast

For the Residential Class kWh consumption the equation was estimated using 105 observations from 2005:04-2013:12.

The regression equations used to normalize and forecast STEI's weather sensitive load use monthly heating degree days and cooling degree days as measured at London to take into account temperature sensitivity. Environment Canada defines heating degree days and cooling degree days as the difference between the average daily temperature and 18°C for each day (below for heating, above for cooling).

The regression equations also take into account changes in economic activity. The regression equation for residential consumption uses the monthly full-time employment for Ontario as the explanatory variable to account for economic activity, as reported in Statistics Canada's Monthly Labour Force Survey (Table 282-0054).

The number of days in the month was used as an explanatory variable.

A binary variable representing shoulder months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have requested that this variable be included for testing. The shoulder variable designates the months of March, April, May, September, October and November as shoulder months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months.

Table 2.1 describes the regression model:

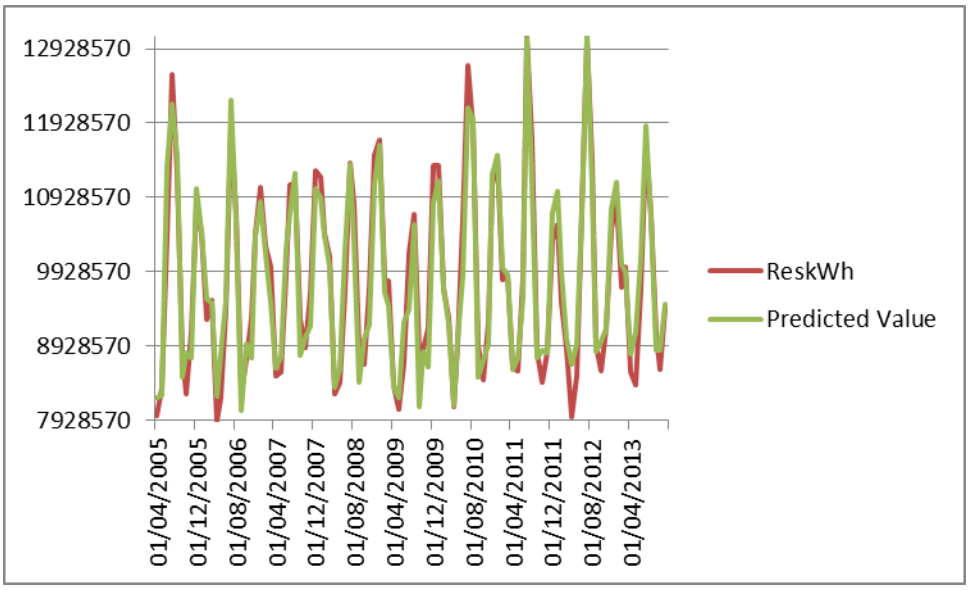
Model 1: OLS, using observations 2005:04-2013:12 (T = 105)
Dependent variable: ReskWh

	coefficient	t-ratio	p-value
const	-8181855.141	-4.470962676	2.08E-05
HDD_Lond	3616.827641	14.96784959	3.60E-27
CDD_Lond	25790.59239	15.5998401	2.01E-28
MonthDays	350571.8152	7.751257355	8.15E-12
Shoulder1	-844850.5755	-8.592572435	1.27E-13
FTE_Ont	1114.998502	4.363700083	3.14E-05

R-squared	0.925180733	Adjusted R-squared	0.921401982
F(5, 99)	244.8377174	P-value(F)	4.45E-54
Theil's U	0.27788	Durbin-Watson	1.843595826

Using the above model coefficients we derive the following:

Chart 2.1 Predicted vs Actual observations



Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 1.3%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 2.8%.

Table 2.2

Annual Predicted vs. Actual ReskWh			
	ReskWh	**Predicted Value**	**Absolute % Error**
2005	87,613,496	88,685,128	1.2%
2006	114,265,333	115,199,800	0.8%
2007	119,662,288	118,271,314	1.2%
2008	119,224,913	118,050,123	1.0%
2009	115,687,491	113,116,929	2.2%
2010	120,380,395	118,664,028	1.4%
2011	119,585,509	119,732,198	0.1%
2012	117,915,714	120,301,966	2.0%
2013	117,935,024	120,248,677	2.0%
Mean Absolute Percentage Error (Annual)			**1.3%**
Mean Absolute Percentage Error (Monthly)			**2.8%**

It is not possible to accurately forecast weather for months or years in advance. Therefore, one can only base future weather expectations on what has happened in the past. Individual years may experience unusual spells of weather (unusually cold winter, unusually warm summer, etc.). However, over time, these unusual spells “average” out. While there may be trends over several years (e.g., warmer winters for example), using several years of data rather than one particular year filters out the extremes of any particular year. While there are several different approaches to determining an appropriate weather normal, STEI has adopted the most recent 10 year monthly degree day average as the definition of weather normal, which to our knowledge, is consistent with many LDCs load forecast filings for cost-of-service rebasing applications.

The table below displays the most recent 10 year average of heating degree days and cooling degree days as reported by Environment Canada for London International Airport and London CS, which is used as the weather station for STEI.

Table 2.3 10 Year Trend HDD and CCD

2004-2013 Normalized HDDCDD

Station Name	Month	Norm HDD	Norm CDD
LONDON CS	1	716.23	0
LONDON CS	2	650.25	0
LONDON CS	3	533.91	0.22
LONDON CS	4	312.88	0.32
LONDON CS	5	145.96	16.98
LONDON CS	6	30.95	59.64
LONDON CS	7	6	109.95
LONDON CS	8	11.72	76.85
LONDON CS	9	72.85	24.35
LONDON CS	10	241.64	3.42
LONDON CS	11	414.34	0
LONDON CS	12	630.9	0

As part of the minimum filing requirements the OEB has requested monthly degree days calculated using a trend based on 20 years. This is shown in the table below.

Table 2.4 20 Year Trend HDD and CCD

1994-2013 Normalized HDDCDD

Station Name	Month	Norm HDD	Norm CDD
LONDON CS	1	726.23	0
LONDON CS	2	640.065	0
LONDON CS	3	545.605	0.2
LONDON CS	4	329.385	0.635
LONDON CS	5	159.65	13.05
LONDON CS	6	34.035	61.53
LONDON CS	7	7.34	101.53
LONDON CS	8	11.83	75.71
LONDON CS	9	78.375	25.755
LONDON CS	10	251.115	2.45
LONDON CS	11	423.235	0
LONDON CS	12	627.125	0

Forecasts for Ontario's employment outlook for 2014 and 2015 are available from four Canadian Chartered Banks at time of writing. Their forecasts are summarized below.

Table 2.5

Employment Forecast – Ontario

(figures in annual percentage change)

	BMO (January 17, 2014)	RBC (December 2013)	Scotia (January 6, 2014)	TD (January 15, 2014)	Avg
2014	1.1	1.3	1.1	1.4	1.2
2015	1.3	1.1	1.3	1.6	1.3

In order to give the annual forecast change in employment a monthly periodicity, monthly employment levels for 2012 and 2013 are compared to the annual average for each of these years. For each month, the average ratio of monthly employment level to annual average employment for 2012 and 2013, respectively, is used to project the monthly employment into 2014 and 2015. The annual average of each forecast year (2014 and 2015) will result in an annual increase over the previous year equal to the percentage averages in Table 2.6 above.

Incorporating the forecast economic variables, 10-yr weather normal heating and cooling degree days, and calendar variables, the following weather corrected consumption and forecast values are calculated:

Table 2.6

Annual Actual vs. Normalized ReskWh				
	ReskWh	% Change	Normalized Value	% Change
2006	114,265,333		116,657,165	
2007	119,662,288	4.7%	117,583,171	0.8%
2008	119,224,913	-0.4%	118,700,751	1.0%
2009	115,687,491	-3.0%	116,011,804	-2.3%
2010	120,380,395	4.1%	117,074,732	0.9%
2011	119,585,509	-0.7%	118,762,394	1.4%
2012	117,915,714	-1.4%	119,691,873	0.8%
2013	117,935,024	0.0%	120,233,411	0.5%
2014			121,125,915	0.7%
2015			122,104,397	0.8%

Since 2009, annual average[1] Residential Class customer connections have been growing at a relatively stable rate of just under 1% per year. The 2009-2013 annual average of 0.98% has been used to project Residential customers in the forecast period.

Residential customer connection forecast is based on the average growth rate over the past 4 years (2009 – 2013 geometric mean).

Table 2.7 Residential Customer Connections

Year	Average of Residential	% Chg
2006	13,609	
2007	13,948	2.49%
2008	14,166	1.56%
2009	14,261	0.67%
2010	14,435	1.22%
2011	14,576	0.98%
2012	14,692	0.79%
2013	14,828	0.93%
2014	14,973	0.98%
2015	15,120	0.98%
Geomean 2009 - 2013	0.98%	

The following table displays the calculated average use per customer, by class, for actual, predicted and normalized/forecast kWh.

[1] All annual customer counts are annual (January-December) averages.

Table 2.8 Residential Customer Average Use

Rate Class BD — Residential kWh

Year	Actual kWh	Predicted kWh	Average Customer	Norm/Fcst kWh
2006	114,265,333	115,199,800	13,609	116,657,165
2007	119,662,288	118,271,314	13,948	117,583,171
2008	119,224,913	118,050,123	14,166	118,700,751
2009	115,687,491	113,116,929	14,261	116,011,804
2010	120,380,395	118,664,028	14,435	117,074,732
2011	119,585,509	119,732,198	14,576	118,762,394
2012	117,915,714	120,301,966	14,692	119,691,873
2013	117,935,024	120,248,677	14,828	120,233,411
2014			14,973	121,125,915
2015			15,120	122,104,397

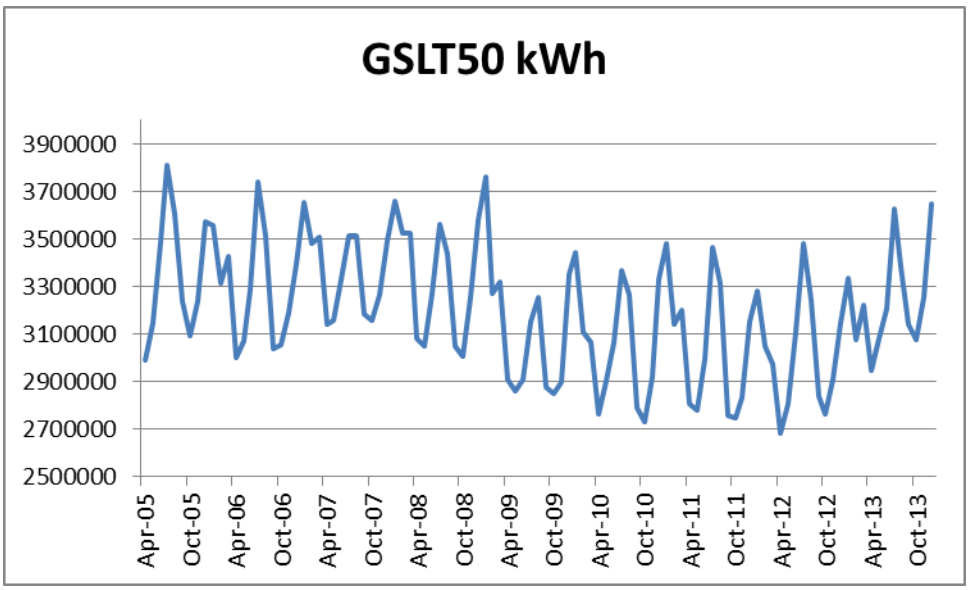
Residential kWh per Customer

Year	Actual kWh	Predicted kWh	Norm/Fcst kWh
2006	8,397	8,465	8,572
2007	8,579	8,479	8,430
2008	8,416	8,333	8,379
2009	8,112	7,932	8,135
2010	8,340	8,221	8,111
2011	8,204	8,214	8,148
2012	8,026	8,188	8,147
2013	7,954	8,110	8,109
2014			8,090
2015			8,076

GS Less Than 50 kW Load Forecast

Table 3.1 describes the regression model for GSLT50 kW Class kWh consumption. The equation was estimated using 60 observations from 2009:01-2013:12. This time period was selected due to the apparent structural shift in class throughput that occurred in 2009, as is displayed graphically in Chart 3.1 below. Regression results obtained were more robust using the time period beginning in January 2009.

Chart 3.1



The regression equations used to normalize and forecast STEI's weather sensitive load use monthly heating degree days and cooling degree days as measured at London to take into account temperature sensitivity. Environment Canada defines heating degree days and cooling degree days as the difference between the average daily temperature and 18°C for each day (below for heating, above for cooling).

The number of days in the month was used as an explanatory variable.

A binary variable representing shoulder months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have

requested that this variable be included for testing. The shoulder variable designates the months of March, April, May, September, October and November as shoulder months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months.

The regression equation for residential consumption used the monthly full-time employment for Ontario as the explanatory variable to account for economic activity. However, the regression equations to explain the consumption in the GSLT50 Class and the GSGT50 Class did not respond robustly to the inclusion of employment as an explanatory variable. They did, however, respond to the number of customers in the class with an appropriate sign and statistical significance. Therefore, customer counts for the GSLT50 class have been included as explanatory variables.

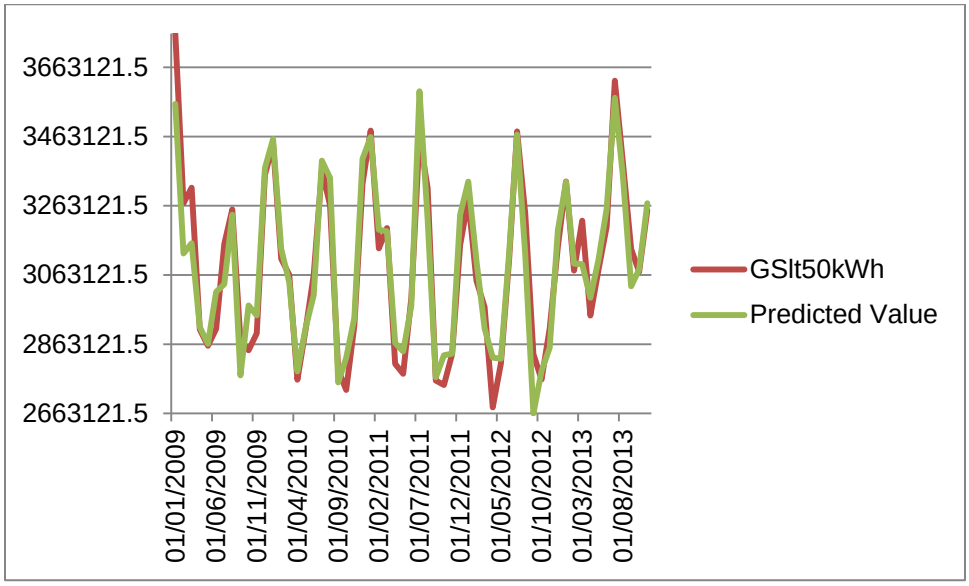
Table 3.1

Model 1: OLS, using observations 2009:01-2013:12 (T = 60)
Dependent variable: GSlt50kWh

	coefficient	t-ratio	p-value
const	-9137273.019	-8.423209789	2.05879E-11
HDD_Lond	872.8782869	12.81050228	5.28972E-18
CDD_Lond	4766.759458	10.0579317	5.57179E-14
MonthDays	77001.91061	5.86640646	2.79029E-07
Shoulder1	-166600.1397	-5.819342587	3.31731E-07
GSltCust	5714.501789	9.423761009	5.35375E-13
R-squared	0.912489789	Adjusted R-squared	0.904386992
F(5, 54)	112.6141699	P-value(F)	2.69778E-27
Theil's U	0.27629	Durbin-Watson	1.717700966

Using the above model coefficients we derive the following:

Chart 3.2 Predicted vs Actual observations



Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 0.6%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 1.9%.

Table 3.2

Annual Predicted vs. Actual GSlt50kWh			
	GSlt50kWh	**Predicted Value**	**Absolute % Error**
2009	37,389,046	36,968,708	1.1%
2010	36,738,061	36,986,411	0.7%
2011	36,663,871	37,018,153	1.0%
2012	36,260,265	36,201,680	0.2%
2013	38,974,882	38,851,173	0.3%
Mean Absolute Percentage Error (Annual)			**0.6%**
Mean Absolute Percentage Error (Monthly)			**1.9%**

It is not possible to accurately forecast weather for months or years in advance. Therefore, one can only base future weather expectations on what has happened in the past. Individual years may experience unusual spells of weather (unusually cold winter, unusually warm summer,

etc.). However, over time, these unusual spells "average" out. While there may be trends over several years (e.g., warmer winters for example), using several years of data rather than one particular year filters out the extremes of any particular year. While there are several different approaches to determining an appropriate weather normal, STEI has adopted the most recent 10 year monthly degree day average as the definition of weather normal, which to our knowledge, is consistent with many LDCs load forecast filings for cost-of-service rebasing applications.

The table below displays the most recent 10 year average of heating degree days and cooling degree days as reported by Environment Canada for London International Airport and London CS, which is used as the weather station for STEI.

Table 3.3 10 Year Trend HDD and CCD

2004-2013 Normalized HDDCDD

Station Name	Month	Norm HDD	Norm CDD
LONDON CS	1	716.23	0
LONDON CS	2	650.25	0
LONDON CS	3	533.91	0.22
LONDON CS	4	312.88	0.32
LONDON CS	5	145.96	16.98
LONDON CS	6	30.95	59.64
LONDON CS	7	6	109.95
LONDON CS	8	11.72	76.85
LONDON CS	9	72.85	24.35
LONDON CS	10	241.64	3.42
LONDON CS	11	414.34	0
LONDON CS	12	630.9	0

As part of the minimum filing requirements the OEB has requested monthly degree days calculated using a trend based on 20 years. This is shown in the table below.

Table 3.4 20 Year Trend HDD and CCD

1994-2013 Normalized HDDCDD

Station Name	Month	Norm HDD	Norm CDD
LONDON CS	1	726.23	0
LONDON CS	2	640.065	0
LONDON CS	3	545.605	0.2
LONDON CS	4	329.385	0.635
LONDON CS	5	159.65	13.05
LONDON CS	6	34.035	61.53
LONDON CS	7	7.34	101.53
LONDON CS	8	11.83	75.71
LONDON CS	9	78.375	25.755
LONDON CS	10	251.115	2.45
LONDON CS	11	423.235	0
LONDON CS	12	627.125	0

Incorporating the forecast economic variables, 10-yr weather normal heating and cooling degree days, and calendar variables, the following weather corrected consumption and forecast values are calculated.

Customer counts are a component of the regression model. The historical records for the GSLT50 class have been muddied because of customer re-assignment. Starting in 2007 STEI started to move its unmetered scattered load customers into the GSLT50 class. As mentioned earlier the GSLT50 customer class was also subject to customer reclassification in 2013. Therefore Elenchus has determined that it would be appropriate to use 50% of the residential Geomean to fairly estimate the forecast customer counts.

Table 3.5 GSLT50 Customer Connections

Year	GSLT50	Chg	% Chg
2006	1,548		
2007	1,602	54	3.46%
2008	1,666	64	4.01%
2009	1,682	16	0.95%
2010	1,671	-11	-0.66%
2011	1,664	-7	-0.41%
2012	1,662	-2	-0.12%
2013	1,720	58	3.49%
2014	1,728	8	0.49%
2015	1,737	8	0.49%

50% of Residential Geomean	
2009 - 2013	0.49%

The following table shows the actual versus normalized kWh and forecast for 2014 and 2015.

Table 3.6

Annual Actual vs. Normalized GSlt50kWh

	GSlt50kWh	% Change	Normalized Value	% Change
2009	37,389,046		37,473,899	
2010	36,738,061	-1.7%	36,713,870	-2.0%
2011	36,663,871	-0.2%	36,839,589	0.3%
2012	36,260,265	-1.1%	36,185,135	-1.8%
2013	38,974,882	7.5%	38,822,521	7.3%
2014			40,662,591	4.7%
2015			41,245,470	1.4%

The following table displays the calculated average use per customer, by class, for actual, predicted and normalized/forecast kWh.

Table 3.7 GSLT50 Customer Average Use

Rate Class GSLT50
BD kWh

Year	Actual kWh	Predicted kWh	Average Customer	Norm/Fcst kWh
2009	37,389,046	36,968,708	1,548	37,473,899
2010	36,738,061	36,986,411	1,671	36,713,870
2011	36,663,871	37,018,153	1,664	36,839,589
2012	36,260,265	36,201,680	1,662	36,185,135
2013	38,974,882	38,851,173	1,720	38,822,521
2014			1,728	40,662,591
2015			1,737	41,245,470

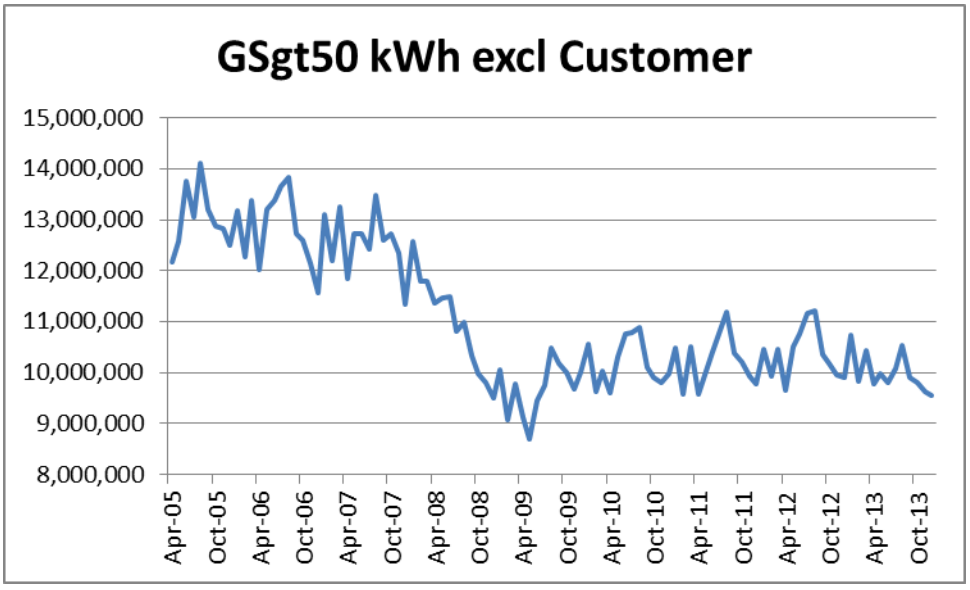
GSLT50
kWh per Customer

Year	Actual kWh	Predicted kWh	Norm/Fcst kWh
2009	24,149	23,878	24,204
2010	21,988	22,137	21,973
2011	22,034	22,246	22,139
2012	21,817	21,782	21,772
2013	22,660	22,588	22,571
2014			23,526
2015			23,747

GS Greater Than 50 kW Load Forecast

As indicated in the Introduction, the GSGT50 kW Class suffered large declines in consumption in 2008-09. Another decline began in mid-2012 culminating with the loss of another prominent industrial customer in 2013. Chart 4.1 shows the historical consumption of this class.

Chart 4.1



As a result of this major structural shift between 2008 and 2009, the regression analysis was restricted to the 2009:01 to 2013:07 time period, similar to the analysis for the GSLT50 Class.

GSGT50 CUSTOMER CLOSURE

In 2012, a GSGT50 customer announced it would be closing its STEI plant. In 2010, this customer's kWh load represented about 10% of the class total. Therefore, for the purpose of forecasting GSGT50 Class kWh, a series starting in 2009 excluding this customers consumption was derived and used to estimate the regression equation. Since May, consumption at the site has averaged about 135,000 kWh/month and 360 kW. This amount has been added back to the class in the forecast period to account for basic upkeep at the site.

REMAINING GSGT50 IS WEATHER SENSITIVE

While industrial loads generally tend to be flatter than residential and commercial/institutional loads, the GSGT50 consumption pattern since 2009 (exclusive of closing customer) exhibits weather sensitivity and is correlated with degree days. This can be seen graphically in Chart 4.2. It should be noted that closing customer's load historically did not appear to be weather sensitive.

Chart 4.2

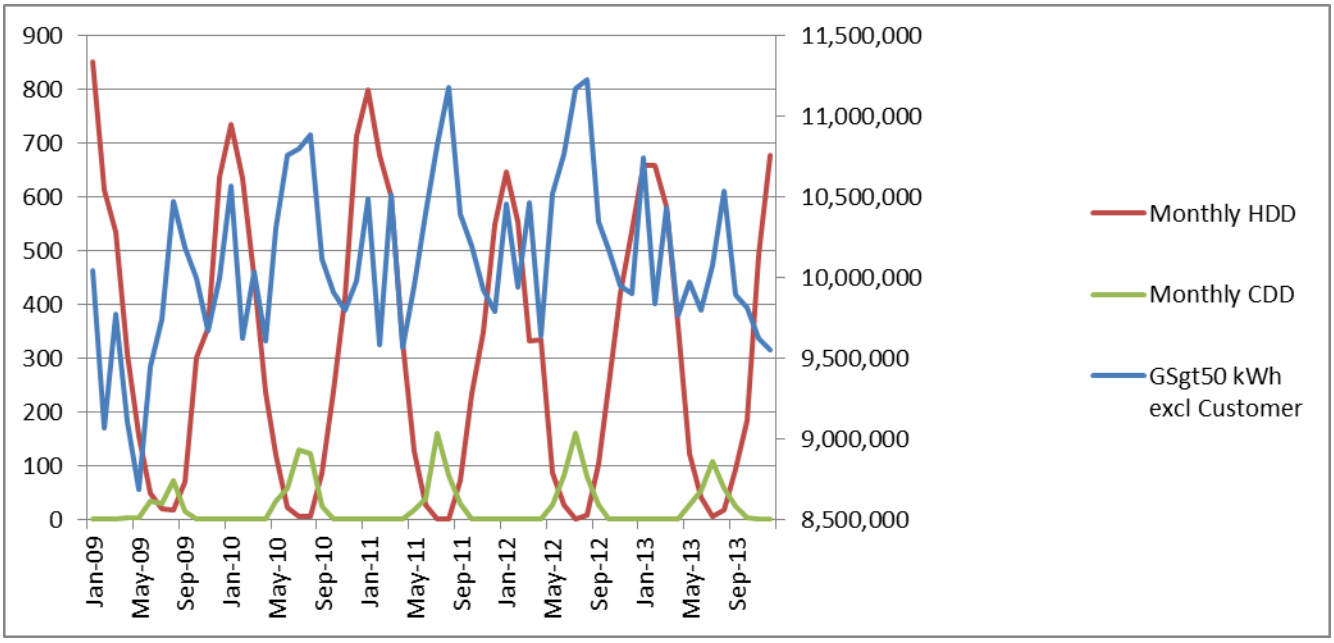


Table 4.1 describes the regression model for GSGT50 kW Class kWh consumption. The equation was estimated using 60 observations from 2009:01-2013:12. This time period was selected due to the apparent structural shift in class throughput that occurred in 2009, as is displayed graphically in Chart 4.1 above. Regression results obtained were more robust using the time period beginning in January 2009.

The regression equations used to normalize and forecast STEI's weather sensitive load use monthly heating degree days and cooling degree days as measured at London to take into account temperature sensitivity. Environment Canada defines heating degree days and cooling degree days as the difference between the average daily temperature and 18°C for each day (below for heating, above for cooling).

The number of days in the month was used as an explanatory variable.

A binary variable representing shoulder months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have requested that this variable be included for testing. The shoulder variable designates the months of March, April, May, September, October and November as shoulder months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months.

The regression equation for residential consumption used the monthly full-time employment for Ontario as the explanatory variable to account for economic activity. However, the regression equations to explain the consumption in the GSLT50 Class and the GSGT50 Class did not respond robustly to the inclusion of employment as an explanatory variable. They did, however, respond to the number customers in the class with an appropriate sign and statistical significance. Therefore, customer counts for the GSGT50 class have been included as explanatory variables.

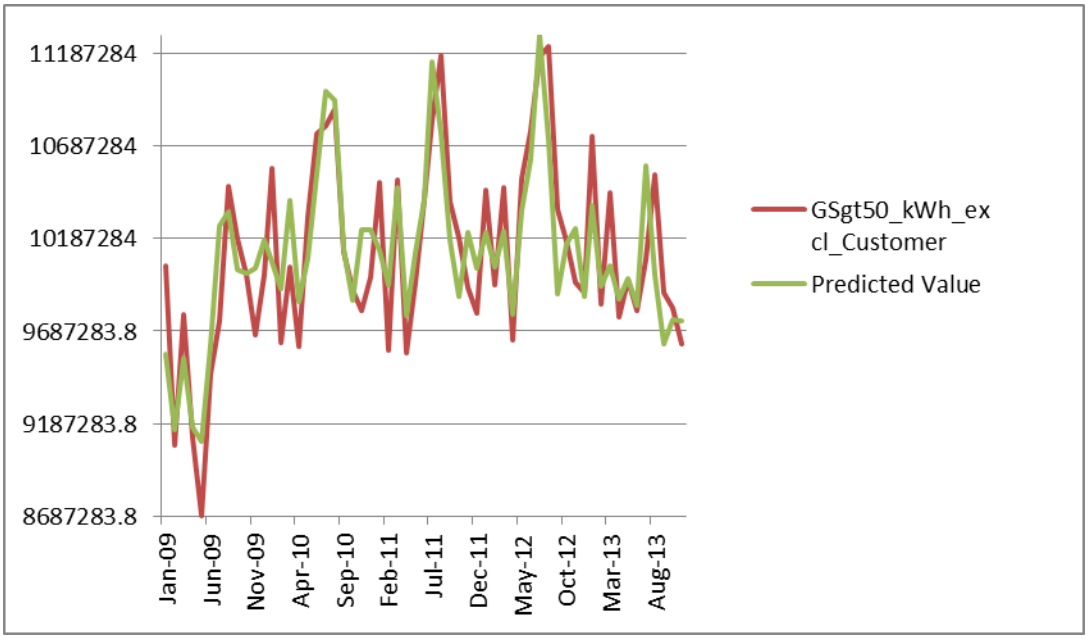
Table 4.1

Model 1: OLS, using observations 2009:01-2013:12 (T = 60)
Dependent variable: GSgt50_kWh_excl_Customer

	coefficient	t-ratio	p-value
const	5375930.482	6.236142219	7.11E-08
HDD_Lond	498.5658147	2.489608549	0.015899756
CDD_Lond	8653.142447	7.065117864	3.23E-09
GSgtCust	7669.756861	3.494609857	0.000956515
PeakDays	144250.54	4.078089583	0.00015038
RecessionD	-713277.002	-5.664062055	5.86E-07
R-squared	0.712465314	Adjusted R-squared	0.685841732
F(5, 54)	26.76068577	P-value(F)	1.68E-13
Theil's U	0.49609	Durbin-Watson	2.063708128

Using the above model coefficients we derive the following:

Chart 4.3 Predicted vs Actual observations



Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 0.6%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 2.2%.

Table 4.2

Annual Predicted vs. Actual GSgt50_kWh_excl_Customer			
	GSgt50_kWh_e	**Predicted Value**	**Absolute % Error**
2009	116,185,726	116,947,206	0.7%
2010	122,355,933	123,193,749	0.7%
2011	122,787,902	122,999,962	0.2%
2012	124,533,856	123,380,695	0.9%
2013	120,022,396	119,364,200	0.5%
Mean Absolute Percentage Error (Annual)			**0.6%**
Mean Absolute Percentage Error (Monthly)			**2.2%**

It is not possible to accurately forecast weather for months or years in advance. Therefore, one can only base future weather expectations on what has happened in the past. Individual years

may experience unusual spells of weather (unusually cold winter, unusually warm summer, etc.). However, over time, these unusual spells "average" out. While there may be trends over several years (e.g., warmer winters for example), using several years of data rather than one particular year filters out the extremes of any particular year. While there are several different approaches to determining an appropriate weather normal, STEI has adopted the most the most recent 10 year monthly degree day average as the definition of weather normal, which to our knowledge, is consistent with many LDCs load forecast filings for cost-of-service rebasing applications.

The table below displays the most recent 10 year average of heating degree days and cooling degree days as reported by Environment Canada for London International Airport and London CS, which is used as the weather station for STEI.

Table 4.3 10 Year Trend HDD and CCD

2004-2013 Normalized HDDCDD

Station Name	Month	Norm HDD	Norm CDD
LONDON CS	1	716.23	0
LONDON CS	2	650.25	0
LONDON CS	3	533.91	0.22
LONDON CS	4	312.88	0.32
LONDON CS	5	145.96	16.98
LONDON CS	6	30.95	59.64
LONDON CS	7	6	109.95
LONDON CS	8	11.72	76.85
LONDON CS	9	72.85	24.35
LONDON CS	10	241.64	3.42
LONDON CS	11	414.34	0
LONDON CS	12	630.9	0

As part of the minimum filing requirements the OEB has requested monthly degree days calculated using a trend based on 20 years. This is shown in the table below.

Table 4.4 20 Year Trend HDD and CCD

1994-2013 Normalized HDDCDD

Station Name	Month	Norm HDD	Norm CDD
LONDON CS	1	726.23	0
LONDON CS	2	640.065	0
LONDON CS	3	545.605	0.2
LONDON CS	4	329.385	0.635
LONDON CS	5	159.65	13.05
LONDON CS	6	34.035	61.53
LONDON CS	7	7.34	101.53
LONDON CS	8	11.83	75.71
LONDON CS	9	78.375	25.755
LONDON CS	10	251.115	2.45
LONDON CS	11	423.235	0
LONDON CS	12	627.125	0

Incorporating the forecast economic variables, 10-yr weather normal heating and cooling degree days, and calendar variables, the following weather corrected consumption and forecast values are calculated:

Customer counts are a component of the regression model. As mentioned earlier the GSGT50 customer class was subject to customer reclassification in 2013. For conservatism Elenchus has assumed growth of one new customer per year for this class.

Table 4.5 GSGT50 Customer Connections

Year	Average of GSGT50	Chg	Chg %
2009	188		
2010	191	3	1.64%
2011	192	0	0.22%
2012	194	2	1.22%
2013	142	-52	-26.84%
2014	143	1	0.70%
2015	144	1	0.70%

The following table shows the actual versus normalized kWh and forecast for 2014 and 2015.

Table 4.6

Annual Actual vs. Normalized GSgt50_kWh_excl_Customer				
	GSgt50_kWh_excl_ Customer	% Change	Normalized Value	% Change
2009	116,185,726		118,022,912	
2010	122,355,933	5.3%	122,586,355	3.9%
2011	122,787,902	0.4%	122,672,197	0.1%
2012	124,533,856	1.4%	122,839,457	0.1%
2013	120,022,396	-3.6%	119,449,425	-2.8%
2014			118,091,878	-1.1%
2015			118,183,915	0.1%

In order to normalize and forecast class kW for those classes that bill based on kW (demand) billing determinants, the relationship between billed kW and kWh is used. For historic years, normalized GSGT50 Class kW is based on the actual ratio of kW/kWh in that particular year.

The following table shows the calculation of GSGT50 kW.

Table 4.7

	Actual				Normalized and Forecast		
Year	kWh	kW	kW/kWh	Year	kWh	kW	kW/kWh
	A	B	C = B / A		D	E = D * C	F= E / B
2009	116,185,726	316,878	0.002727	2009	118,022,912	321,888	0.002727
2010	122,355,933	319,420	0.002611	2010	122,586,355	320,021	0.002611
2011	122,787,902	315,409	0.002569	2011	122,672,197	315,112	0.002569
2012	124,533,856	321,563	0.002582	2012	122,839,457	317,188	0.002582
2013	120,022,398	306,115	0.002550	2013	119,449,425	304,653	0.002550
				2014	118,091,878	301,191	0.002550
				2015	118,183,915	301,426	0.002550

The following table displays the calculated average use per customer, by class, for actual, predicted and normalized/forecast kWh.

Table 4.8 GSLT50 Customer Average Use

Rate Class	GSGT50											
BD	kW								GSGT50 kWh per Customer			
Year	Actual kWh	Predicted kWh	Actual kW	Average Customer	Norm/Fcst kWh	Norm/Fcst kW		Year	Actual kWh	Predicted kWh	Norm/Fcst kWh
2009	116,185,726	116,947,206	316,878	188	118,022,912	321,888		2009	617,188	621,233	626,948
2010	122,355,933	123,193,749	319,420	191	122,586,355	320,021		2010	639,491	643,870	640,695
2011	122,787,902	122,999,962	315,409	192	122,672,197	315,112		2011	640,354	641,460	639,751
2012	124,533,856	123,380,695	321,563	194	122,839,457	317,188		2012	641,651	635,710	632,921
2013	120,022,396	119,364,200	306,115	142	119,449,425	304,653		2013	845,228	840,593	841,193
2014				143	118,091,878	301,191		2014			825,817
2015				144	118,183,915	301,426		2015			820,722

Street Light and Sentinel Load Forecast

The Street Lighting and Sentinel Lighting Classes are non-weather sensitive classes. The following tables below summarizes the historic annual energy consumption for both lighting classes and the anticipated consumption in the forecast period.

For Street Lights, energy consumption has been increasing by approximately 0.6% on average since 2009 (4-year annual average increase) with average connection growth of 0.6% per year (4-year annual average) and this has been used to project annual energy consumption in the forecast period. For Street Lighting, the forecast kW is based on the 4-year average kW/kWh ratio times the forecast kWh.

The following tables' shows actual annual class and forecasted kWh for the Streetlight class.

Table 5.1 – Street Lights

Street Lights										
Year	Actual kWh	% Change	Year	Actual kW	kW/kWh	Year	Average Conn	% Change		Average kWh
2009	3,047,942		2009	8,433	0.28%	2009	4,741			643
2010	3,067,025	0.63%	2010	8,487	0.28%	2010	4,769	0.60%		643
2011	3,082,159	0.49%	2011	8,527	0.28%	2011	4,791	0.45%		643
2012	3,122,082	1.30%	2012	8,614	0.28%	2012	4,829	0.79%		647
2013	3,124,392	0.07%	2013	8,646	0.28%	2013	4,858	0.62%		643
2014	3,143,802	0.62%	2014	8,700	0.28%	2014	4,888	0.61%		643
2015	3,163,332	0.62%	2015	8,754	0.28%	2015	4,918	0.61%		643
Geomean						Geomean				
2009 - 2013	0.62%					2009 - 2013	0.61%			

Sentinel lighting consumption has held steady at approximately 22,000 kWh per year since 2010. One new connection was added in 2013, bringing the total customer count to 52. No new connections in this class are anticipated and the consumption is forecast to be 22,050 kWh per year, the 3-year annual average. The kW forecast for Sentinel Lighting is the average of 2011 and 2012, or 172 kW.

1 The following table shows actual annual class and forecasted kWh for the Sentinel class.

2 Table 5.2 – Sentinel

Sentinel										
Year	Actual kWh	% Change	Year	Actual kW	% Change	Year	Average Conn	% Change		Average kWh
2009	21,445		2009	158		2009	47			460
2010	22,042	2.78%	2010	170	7.59%	2010	50	7.14%		441
2011	22,066	0.11%	2011	170	0.00%	2011	51	2.00%		433
2012	22,032	-0.15%	2012	174	2.12%	2012	51	0.00%		432
2013	23,170	5.17%	2013	177	1.90%	2013	52	1.80%		446
2014	23,170	0.00%	2014	177	0.00%	2014	52	0.00%		446
2015	23,170	0.00%	2015	177	0.00%	2015	52	0.00%		446

3

CDM Adjustment to Load Forecast

The current Chapter 2 OEB Minimum Filing requirements, consistent with the Board's CDM Guideline EB-2012-0003, expects the distributor to integrate an adjustment into its load forecast that takes into account the measured CDM results from 2011 and 2012 CDM programs as reported by the OPA, which are the most recent available. The OPA results are taken into account for determining the amount of CDM reductions to be achieved in 2013 and 2014 in order to achieve the four-year (2011-2014) targets for kWh and kW reductions. As this is a 2015 load forecast Elenchus includes an estimate for 2015.

The filing requirements note that the distributors license condition targets and the LRAMVA balances are based on the reported OPA results, which are annualized. It is recognized that the CDM programs in a year are not in effect for the full year, although persistence of previous year's programs will be. Therefore, the actual impact on the load forecast for the first year of the program should not be the full annualized amount. For this reason, the amount that will be used for the LRAMVA will be related to, but not necessarily equal to, the CDM adjustment for the load forecast.

The following table shows STEI's 2011 and 2012 results as reported by the final reports issued by the OPA.

Table 6.1

Post 2010 OPA Final Results

St. Thomas Energy Inc.

Source: 2011 OPA Final Report	2011	2012	2013	2014	Total
2011 Final kWh - Net	1,246,360	1,244,939	1,244,939	1,154,374	4,890,612
2011 Final kW - Net	373	301	301	301	
Source: 2012 OPA Final Report *	**2011**	**2012**	**2013**	**2014**	
2012 Final kWh - Net	-	1,763,468	1,755,803	1,755,803	5,275,074
2011 Final kW - Net	-	423	393	393	

* Currently estimated using 2012 OPA Final Report values

Comparing the actual results to STEI's licence CDM targets yields the CDM estimates needed to meet target. This estimate is consistent with the current 2013 OEB Appendix 2-I calculation. In order to calculate the CDM impact for the 2015 load forecast Elenchus includes persistence for 2013 and 2014 programs plus an estimate for 2015 programs.

Table 6.2

Calculate proportionate CDM savings required to achieve CDMTarget

St. Thomas Energy Inc.

Schedule to achieve 4 Year kWH CDM Target

4 Year 2011 - 2014 kWh CDM Target					
14,920,000					
%	2011	2012	2013	2014	Total
2011 Programs	8.4%	8.3%	8.3%	7.7%	32.8%
2012 Programs		11.8%	11.8%	11.8%	35.4%
2013 Programs			10.6%	10.6%	21.2%
2014 Programs				10.6%	10.6%
	8.4%	20.2%	30.7%	40.7%	100.0%

kWh	2011	2012	2013	2014	Total	Est 2015	Total
2011 Programs	1,246,360	1,244,939	1,244,939	1,154,374	4,890,612	-	4,890,612
2012 Programs		1,763,468	1,755,803	1,755,803	5,275,074	-	5,275,074
2013 Programs			1,584,771	1,584,771	3,169,543	-	3,169,543
2014 Programs				1,584,771	1,584,771	1,500,000	3,084,771
To 2014	1,246,360	3,008,407	4,585,513	6,079,720	14,920,000	1,500,000	16,420,000
2015 Programs						1,500,000	1,500,000
To 2015	1,246,360	3,008,407	4,585,513	6,079,720	14,920,000	3,000,000	17,920,000

Note: St Thomas last COS was for the year 2011 therefore 2015 Persistence of 2011 programs would be NIL.

Note: St Thomas 2015 Persistence of 2011 and 2012 and 2013 programs would be NIL as this would be fully embedded in the 2015 load forecast.

Consistent with recent Board decisions Elenchus includes the full value of the estimated 2014 CDM persistence is included assuming that the full influence of those programs would continue in 2015. It is also assumed that only one half of the estimated 2015 programs would impact 2015.

Table 6.3

Load Forecast Adjustment Calculation
St. Thomas Energy Inc.

	2015 CDM Threshold (kWh of incremental CDM savings needed in 2015)	Application Factor 1.0 Full Year 0.5 Half Year	2015 Net kWh Load Forecast CDM Adjustment
	A	B	C = A * B
Year			
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	1,500,000	1.0	1,500,000
2015	1,500,000	0.5	750,000
	3,000,000		2,250,000

The following is the proposed allocation of the CDM kWh load forecast adjustment and final proposed load forecast.

Table 6.4

Retail kWh	Weather Normalized 2015F (Elenchus)		CDM Load Forecast Adjustment	2015 CDM Adjusted Load Forecast	
	A	C = A / B	E = D * C	F = A - E	
Residential (kWh)	122,104,397	43%	964,929	121,139,467	
GS<50 (kWh)	41,245,470	14%	325,942	40,919,528	
GS>50 (kW)	118,183,915	42%	933,948	117,249,967	
Street Lights (kW)	3,163,332	1%	24,998	3,138,334	
Sentinel (kW)	23,170	0%	183	22,987	
Total Customer (kWh)	284,720,284	100%	2,250,000	282,470,284	-0.8%
	B		D		

In order to calculate the kW Elenchus proposes using a proportional ratio utilizing the base load forecast kW and kWh.

Table 6.5

kW	Weather Normalized 2015F (Elenchus) G	I = G / H	CDM Load Forecast Adjustment * J = G / A * E	2015 CDM Adjusted Load Forecast K = G - J	
Residential (kWh)	-	0%		-	
GS<50 (kWh)	-	0%		-	
GS>50 (kW)	301,426	97%	2,382	299,044	
Street Lights (kW)	8,754	3%	69	8,685	
Sentinel (kW)	177	0%	1	176	
Total Customer (kW)	310,357	100%	2,453	307,904	-0.8%
	H				

* Note that CDM LF kW is the proportional LF kW over LF kWh times kWH CDM LF adjustment.

For 2015 For LRAMVA Elenchus reasons that the effects of 2014 and 2015 OPA CDM programs should be included in the LRAMVA calculation.

Table 6.6

Year	2015 CDM Threshold (kWh of incremental CDM savings needed in 2015)
	A
2011	0
2012	0
2013	0
2014	1,500,000
2015	1,500,000
	3,000,000

Table 6.7 LRAMVA kWh

kWh	Weather Normalized 2015F (Elenchus)		LRAMVA (kWh)
	A	C = A / B	E = D * C
Residential (kWh)	122,104,397	43%	1,286,572
GS<50 (kWh)	41,245,470	14%	434,589
GS>50 (kW)	118,183,915	42%	1,245,263
Street Lights (kW)	3,163,332	1%	33,331
Sentinel (kW)	23,170	0%	244
Total Customer (kWh)	284,720,284	100%	3,000,000
	B		D

Table 6.8 LRAMVA kW

kW	Weather Normalized 2014F (Elenchus)		LRAMVA (kW)
	F	H = F / G	I = F / A * E
Residential (kWh)	-	0%	
GS<50 (kWh)	-	0%	
GS>50 (kW)	301,426	97%	3,176
Street Lights (kW)	8,754	3%	92
Sentinel (kW)	177	0%	2
Total Customer (kWh)	310,357	100%	3,270
	G		

* Note that LRRAMVA kW is the proportional LF kW over LF kWh times kWH LRAMVA.

CDM ADJUSTED FOR THE LOAD FORECAST FOR DISTRIBUTORS

Consistent with the Board's CDM Guideline EB-2012-0003, St. Thomas Energy Inc. proposes to integrate a manual adjustment into its 2015 load forecast that takes into account the measured CDM results from 2011 and 2012 CDM programs as reported by the OPA Annual CDM reports. For purposes of this application St. Thomas Energy Inc. has calculated the 2012 CDM results using the OPA Annual CDM Report 2012 – Draft Verified Results issued August 1, 2013. The OPA results are taken into account for determining the amount of CDM reductions to be achieved in 2013 and 2014 in order to achieve the four-year (2011-2014) targets for kWh and kW reductions. The manual adjustment for the 2015 Load Forecast is the amount manually subtracted from the load forecast derived from the base forecast from historical data, and is intended to reflect the further CDM savings that the distributor needs to achieve assuming that they meet 100% of the 2011-2014 CDM target that is a condition of their license.

St. Thomas Energy Inc.'s license condition CDM targets and the LRAMVA balances are based on the reported OPA results, which are annualized. It is recognized that the CDM programs in a year are not in effect for the full year, although persistence of previous year's programs will be. Therefore, the actual impact on the load forecast for the first year of the program should not be the full annualized amount. For this reason, the amount that will be used for the LRAMVA will be related to, but not necessarily equal to, the CDM adjustment for the load forecast.

Further, the actual results for 2011 and 2012 historical years, which will, in all likelihood, be used to develop the base forecast, includes the impacts of 2011 and 2012 CDM programs. The CDM adjustment to the load forecast should also take into account the historical CDM results factored into the base load forecast before the CDM adjustment, in order to avoid double counting of the impacts. For purposes of this application St. Thomas Energy Inc. proposes to use the following weight factors for determination of the manual CDM adjustment to its 2015 load forecast.

St. Thomas Energy Inc.'s CDM targets are expected to be "net", i.e. excluding the results of "free riders". St. Thomas Energy Inc. would suggest that the OPA reported "net" CDM result understate the real decline in demand. Normally St. Thomas Energy Inc. would have argued that the manual CDM adjustment be adjusted on a gross basis. However St. Thomas Energy Inc. notes that the Board determined that the "net" number should be used in its Decision and Order with respect to Centre Wellington Hydro Ltd.'s 2013 Cost of Service rates (EB-2012-0113). St. Thomas Energy Inc. has therefore elected calculate its adjustment on the "net" basis.

St. Thomas Energy Inc. also notes that as it has developed its load forecast on a billed basis. St. Thomas Energy Inc. therefore has excluded application of the loss factor in the calculation of the CDM manual adjustment.

For the purpose of calculating the kW manual CDM adjustment St. Thomas Energy Inc. proposes to use the proportional amount of unadjusted normalized load forecasted rate class kW to unadjusted normalized load forecasted rate class kWh and apply this factor to the rate class CDM adjustment amount.

For the purpose of calculating the LRAMVA kW St. Thomas Energy Inc. would have normally applied the same formula used for the CDM manual adjustment. However, this calculation results in a kW value well in excess of the license kW target amount of 14,920 kW. For this reason St. Thomas Energy Inc. would propose that the LRAMVA kW threshold be held to the license kW target amount of 14,920 kW.

Post 2010 OPA Final Results

The post 2010 OPA final results are shown in Table 3-2 below.

Table 3-2

Source: 2011 OPA Final Report	2011	2012	2013	2014	Total
2011 Final kWh - Net	1,246,360	1,244,939	1,244,939	1,154,374	4,890,612
2011 Final kW - Net	373	301	301	301	
Source: 2012 OPA Final Report *	**2011**	**2012**	**2013**	**2014**	
2012 Final kWh - Net	-	1,763,468	1,755,803	1,755,803	5,275,074
2011 Final kW - Net	-	423	393	393	

Comparing the actual results to STEI's licence CDM targets yields the CDM estimates needed to meet the target. The estimate is consistent with the current 2013 OEB Appendix 2-1 calculation. In order to calculate the CDM impact for the 2015 load forecast ERA includes persistence or 2013 and 2014 programs plus an estimate for 2015 programs.

Table 3-3 below is a copy of APPENDIX 2-1 from the attached load forecast study.

Table 3-3

Calculate proportionate CDM savings required to achieve CDMTarget

St. Thomas Energy Inc.

Schedule to achieve 4 Year kWH CDM Target

4 Year 2011 - 2014 kWh CDM Target					
14,920,000					
%	2011	2012	2013	2014	Total
2011 Programs	8.4%	8.3%	8.3%	7.7%	32.8%
2012 Programs		11.8%	11.8%	11.8%	35.4%
2013 Programs			10.6%	10.6%	21.2%
2014 Programs				10.6%	10.6%
	8.4%	20.2%	30.7%	40.7%	100.0%

kWh	2011	2012	2013	2014	Total	Est 2015	Total
2011 Programs	1,246,360	1,244,939	1,244,939	1,154,374	4,890,612	-	4,890,612
2012 Programs		1,763,468	1,755,803	1,755,803	5,275,074	-	5,275,074
2013 Programs			1,584,771	1,584,771	3,169,543	-	3,169,543
2014 Programs				1,584,771	1,584,771	1,500,000	3,084,771
To 2014	1,246,360	3,008,407	4,585,513	6,079,720	14,920,000	1,500,000	16,420,000
2015 Programs						1,500,000	1,500,000
To 2015	1,246,360	3,008,407	4,585,513	6,079,720	14,920,000	3,000,000	17,920,000

Consistent with recent Board decisions ERA included the full value of the estimated 2014 CDM persistence is included assuming that the full influence of those programs would continue in 2015. It is also assumed that only half of the estimated 2015 programs would impact 2015.

LOAD FORECAST ADJUSTMENT

Table 3-4 below comes from the ERA load forecast report and is what was used to reduce the weather normalized 2015TY load forecast form 2014 and 2015 CDM programs.

Table 3-4

	2015 CDM Threshold (kWh of incremental CDM savings needed in 2015)	Application Factor 1.0 Full Year 0.5 Half Year	2015 Net kWh Load Forecast CDM Adjustment
	A	B	C = A * B
Year			
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	1,500,000	1.0	1,500,000
2015	1,500,000	0.5	750,000
	3,000,000		2,250,000

The following Table 3-5 shows the proposed allocation of the CDM kWh load forecast adjustment and final proposed load forecast.

Table 3-5

Retail kWh	Weather Normalized 2015F (Elenchus) A	C = A / B	CDM Load Forecast Adjustment E = D * C	2015 CDM Adjusted Load Forecast F = A - E	
Residential (kWh)	122,104,397	43%	964,929	121,139,467	
GS<50 (kWh)	41,245,470	14%	325,942	40,919,528	
GS>50 (kW)	118,183,915	42%	933,948	117,249,967	
Street Lights (kW)	3,163,332	1%	24,998	3,138,334	
Sentinel (kW)	23,170	0%	183	22,987	
Total Customer (kWh)	284,720,284	100%	2,250,000	282,470,284	-0.8%

In order to calculate the kW ERA proposed using a proportional ratio utilizing the base load forecast kWh and kW. Table 3-6 below shows the CDM adjusted weather normalized 2015TY kW forecast.

Table 3-6

kW	Weather Normalized 2015F (Elenchus) G	I = G / H	CDM Load Forecast Adjustment * J = G / A * E	2015 CDM Adjusted Load Forecast K = G - J	
Residential (kWh)	-	0%		-	
GS<50 (kWh)	-	0%		-	
GS>50 (kW)	301,426	97%	2,382	299,044	
Street Lights (kW)	8,754	3%	69	8,685	
Sentinel (kW)	177	0%	1	176	
Total Customer (kW)	310,357	100%	2,453	307,904	-0.8%

For 2015 LRAMVA ERA reasons that the effects of 2014 and 2015 OPA CDM programs should be included in the LRAMVA calculation. Table 3-7 shows the 2015 CDM threshold in kWh of incremental CDM savings needed in 2015.

Table 3-7

Year	2015 CDM Threshold (kWh of incremental CDM savings needed in 2015) A
2011	0
2012	0
2013	0
2014	1,500,000
2015	1,500,000
	3,000,000

St. Thomas energy inc.
We're Your Local Power Distributor

File Number: EB-2014-0113

Exhibit: 3
Tab: 1
Schedule: 4

Date Filed: April 25, 2014

Attachment 1 of 2

2012 CDM Annual Report

St. Thomas energy inc.

We're Your Local Power Distributor

a division of **Ascent**

Conservation and Demand Management

2012 Annual Report

Submitted to:

Ontario Energy Board

Submitted on September 30, 2013

TABLE OF CONTENTS

Executive Summary

This annual report is submitted by St. Thomas Energy Inc. ("STEI") in accordance with the filing requirements set out in the CDM Code (Board File No. EB-2010-0215), specifically Appendix C Annual Report Template, as a progress report and modification to STEI Strategy. Accordingly, this report outlines STEI CDM activities for the period of January 1, 2012 to December 31, 2012. It includes net peak demand and net energy savings achieved from 2011 and 2012, discussion of the current/future CDM framework, CDM program activities, successes and challenges, as well as forecasted savings to the end of 2014.

STEI did not apply for any Board-Approved CDM Programs during 2012; however, as noted in the CDM guidelines, released April 26, 2012, the Ontario Energy Board (OEB) has deemed Time-of-Use (TOU) pricing a Province-wide Board-Approved CDM Program. The Ontario Power Authority (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 STEI.

In 2011, STEI contracted with the Ontario Power Authority (OPA) to deliver a portfolio of OPA-Contracted Province-Wide CDM Programs to all customer segments including residential, commercial, institutional, industrial and low income. These programs were rolled-out by the OPA in June 2011. In 2011 Program activities were centered on building a foundation for full program execution over the next three years of the program term, including staffing, procurement, and program delivery.

In 2012, STEI was active in promoting CDM programs. The LDC was well represented at various community events, participated in conservation coupon promotions and purchased advertising in local newspaper and magazine publications. Mailing, telephone and visitation campaigns were run to promote business and industrial programs. Burman Energy was under contract throughout the year to administer CDM programs on STEI's behalf. To date STEI has achieved 0.65 MW of net incremental peak demand savings and 14.92 GWh of net incremental energy savings in 2012. A summary of the achievements towards the CDM targets is shown below:

OPA-Contracted Province-Wide CDM Programs FINAL 2012 Results

LDC: St. Thomas Energy Inc.

FINAL 2012 Progress to Targets	2012 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)	0.4	0.7	**16.5%**	**17.4%**
Net Energy Savings (GWh)	1.8	10.2	**68.1%**	**68.1%**

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

Scenario 2 = Assumes that demand response resources remain in your territory until 2014

The updated forecast prepared for this report shows that there will be a shortfall of approximately 3.31 MW versus STEI's 2014 peak demand reduction target. Although, the peak demand savings are below target, STEI expects to achieve the electricity energy savings 2014 target. Given the expected shortfall, STEI continues to work actively on participant engagement. In addition STEI has partnered with other

LDCs, and has been working with the Ontario Power Authority ("OPA") and the Electrical Distribution Association ("EDA") to improve program effectiveness, however it is STEI's position that in itself will not fully overcome the forecasted peak demand savings shortfall.

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 electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution license of STEI to require STEI, as a condition of its license, to achieve 14.92 GWh of energy savings and 3.94 MW of summer peak demand savings, over the period beginning January 1, 2011 through December 31, 2014.

In accordance with the same Minister's directive, the OEB issued the Conservation and Demand Management Code for Electricity Distributors (the Code) on September 16, 2010. The code sets out the obligations and requirements with which electricity distributors must comply in relation to the CDM targets set out in their licenses. To comply with the Code requirements, STEI submitted its CDM Strategy on November 1, 2010 which provided a high level of description of how STEI intended to achieve its CDM targets.

The Code also requires a distributor to file annual reports with the Board. This is the second Annual Report by St. Thomas Energy Inc. and has been prepared in accordance with the Code requirement and covers the period from January 1, 2012 to December 31, 2012.

STEI submitted its 2011 Annual Report on September 30, 2011 which summarized the CDM activities, successes and challenges experienced by STEI for the January 1, 2011 to December 31, 2011 period. The OEB's 2011 CDM Results report identified that the delay in the full suite of CDM Programs being made available by the OPA, and the absence of some programs negatively impacted the final 2011 results for the LDCs. This issue was also highlighted in Volumes I & II of the Environmental Commissioner's Report on Ontario's Annual Energy Conservation Progress.

On December 21, 2012, the Minister of Energy directed the Ontario Power Authority (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 LDCs to achieve their energy savings and demand savings targets. Therefore, the main focus of the LDCs remains the achievement of CDM targets by December 31, 2014.

1 Conservation Framework

1.1 Current Framework

Ontario's current CDM framework is a key step towards creating a culture of conservation in the Province. The Government's Directive to the OEB to establish CDM targets that would be met by electricity distributors recognizes the importance of CDM for both electricity customers and the electricity system. CDM helps customers manage rising energy costs, support the provincial integrated supply plan, as well as address local distribution and transmission supply constraints. The current framework was intended to enable customers to benefit from a suite of both Board-Approved and OPA Province-Wide programs and be a portfolio that would meet both broad and specific customer needs.

The state of Board-Approved programs and the current suite of Province-Wide OPA programs have limited CDM offerings to customers. This has produced limited savings and has restricted the associated opportunity for LDCs to meet their targets. The process to introduce changes to current program Initiatives or to pilot new Initiatives has been challenging, taking considerable cost and effort, which has resulted in limited benefits to customers and CDM savings.

Moving forward, the future CDM framework should address the challenges of the current framework and build on its strengths. Currently overbuilt governance and excessive legal requirements results in a slow, bureaucratic process, with a burdensome administrative process. There is a misalignment of control and risk where LDCs have the accountability to achieve their respective CDM targets as a condition of distribution license, but the authority for design and funding are controlled substantially by the OPA.

The Ministerial Directive provides continuality of the conservation programs and associated compensation for the participants; however the subsequent savings would not be attributed to any LDC target and in effect would be 'lost' due to misalignment of the current CDM framework and LDC Targets. In addition, the establishment of defined administrative funding for 2015 is required to avoid a "stop and start" process.

1.2 Future Framework

LDCs are supportive of government's renewed commitment for conservation and demand management in Ontario. LDCs are committed to working with the government and other stakeholders to develop the next framework for CDM in the Province.

Long-term commitment for CDM funding and a confirmation of the role of the LDC are needed. This will allow LDCs to maintain current program infrastructure including LDC staff and third party contracts through 2015.

Providing clarity and continuity into the next framework is critical for all customers. To ensure a seamless and smooth transition that maintains and builds upon CDM momentum beyond 2014, a new CDM framework should be in place well before the expiry of the current one. Work involving key parties including LDCs, government, customer groups and OEB should start in 2013 to allow for a new framework to be in place by early 2014. The remainder of 2014 would be utilized for program development and design, economic analysis, procurement and launching of new CDM program initiatives.

2 Board-Approved CDM Programs

2.1 Introduction

In its Decision and Order dated November 12 2010 (**EB-2010-0215 & EB-2010-0216**), the OEB ordered that, (to meet its mandatory CDM targets), "Each licensed electricity distributor must, as a condition of its licence, deliver Board-Approved CDM Programs, OPA-Contracted Province-Wide CDM Programs, or a combination of the two".

At this time, the implementation of Time-of-Use ("TOU") Pricing has been deemed as a Board-Approved Conservation and Demand Management ("CDM") program that is being offered in St. Thomas Energy's service area.

2.2 TOU Pricing

2.2.1 BACKGROUND

In its April 26, 2012 CDM Guidelines, the OEB recognizes that a portion of the aggregate electricity demand target was intended to be attributable to savings achieved through the implementation of TOU Pricing. The OEB establishes TOU prices and has made the implementation of this pricing mechanism mandatory for distributors. On this basis, the OEB has determined that distributors will not have to file a Board-Approved CDM program application regarding TOU pricing. The OEB has deemed the implementation of TOU pricing to be a Board-Approved CDM program for the purposes of achieving the CDM targets. The costs associated with the implementation of TOU pricing are recoverable through distribution rates, and not through the Global Adjustment Mechanism ("GAM").

In accordance with a Directive dated March 31, 2010 by the Minister of Energy and Infrastructure, the OEB is of the view that any evaluations of savings from TOU pricing should be conducted by the OPA for the province, and then allocated to distributors. STEI will report these results upon receipt from the OPA.

At the time of preparation of this report the OPA had retained the Brattle Group as the evaluation contractor and will be working with an expert panel convened to provide advice on methodology, data collection, models, etc. The initial evaluations were conducted with 5 LDCs – Hydro One, THESL, Ottawa Hydro, Thunder Bay and Newmarket. Preliminary results from these 5 LDCs were issued and preliminary provincial results were extrapolated to assist other LDC forecasts going forward.

As of September 30, 2013, the OPA has not released any verified results of TOU savings to STEI. Therefore St. Thomas Energy is not able to provide any verified savings related to LDC's TOU program at this time.

2.2.2. TOU PROGRAM DESCRIPTION

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

Initiative Frequency: Year-Round

Objectives: TOU pricing is designed to incent the shifting of energy usage. Therefore peak demand reductions are expected, and energy conservation benefits may also be realized.

Description: In August of 2010, the OEB issued a final determination to mandate TOU pricing for Regulated Price Plan ("RPP") customers by June 2011, 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. A summary of the RPP TOU pricing is provided below:

RPP TOU		**Rates (cents/kWh)**	
Effective Date	**On Peak**	**Mid Peak**	**Off Peak**
November 1, 2010	9.9	8.1	5.1
May 1, 2011	10.7	8.9	5.9
November 1, 2011	10.8	9.2	6.2
May 1, 2012	11.7	10.0	6.5
November 1, 2012	11.8	9.9	6.3
May 1, 2013	12.4	10.4	6.7

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

Initiative Activities/Progress:

STEI began transitioning its RPP customers to TOU billing on November 1, 2011. At December 31st, 2012, 16,287 RPP customers were on TOU billing.

2.3 St. Thomas Energy's Application with the OEB

There were no LDC programs approved by the OEB in 2012.

3. OPA-Contracted Province-Wide CDM Programs

3.1 Introduction

Effective February 24, 2011, STEI entered into an agreement with the OPA to deliver CDM programs extending from January 1, 2011 to December 31, 2014, which are listed below. Program details are included in Appendix A. In addition, results include projects started pre 2011 which were completed in 2011:

Initiative	Schedule	Date schedule posted	Customer Class
Residential Program			
Appliance Retirement	Schedule B-1, Exhibit D	*Jan 26,2011*	*All residential rate classes*
Appliance Exchange	Schedule B-1, Exhibit E	*Jan 26, 2011*	*All residential rate classes*
HVAC Incentives	Schedule B-1, Exhibit B	*Jan 26, 2011*	*All residential rate classes*
Conservation Instant Coupon Booklet	Schedule B-1, Exhibit A	*Jan 26, 2011*	*All residential rate classes*
Bi-Annual Retailer Event	Schedule B-1, Exhibit C	*Jan 26, 2011*	*All residential rate classes*
Retailer Co-op	n/a	*n/a*	*All residential rate classes*
Residential Demand Response	Schedule B-3	*Aug 22, 2011*	*All general service classes*
New Construction Program	Schedule B-2	*Jan 26, 2011*	*All residential rate classes*
Commercial & Institutional Program			
Efficiency: Equipment Replacement	Schedule C-2	*Jan 26, 2011*	*All general service classes*
Direct Install Lighting	Schedule C-3	*Jan 26, 2011*	*General Service < 50 kW*
Existing Building Commissioning Incentive	Schedule C-6	*Feb 2011*	*All general service classes*
New Construction and Major Renovation Initiative	Schedule C-4	*Feb 2011*	*All general service classes*
Energy Audit	Schedule C-1	*Jan 26, 2011*	*All general service classes*
Commercial Demand Response (part of the Residential program schedule)	Schedule B-3	*Jan 26, 2011*	*All general service classes*
Demand Response 3 (part of the Industrial program schedule)	Schedule D-6	*May 31, 2011*	*General Service 50 kW & above*

Industrial Program			
Process & System Upgrades	Schedule D-1	*May 31, 2011*	*General Service 50 kW & above*
Monitoring & Targeting	Schedule D-2	*May 31, 2011*	*General Service 50 kW & above*
Energy Manager	Schedule D-3	*May 31, 2011*	*General Service 50 kW & above*
Key Account Manager ("KAM")	Schedule D-4	*May 31,2011*	*General Service 50 kW & above*
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Schedule C-2	*May 31, 2011*	*General Service 50 kW & above*
Demand Response 3	Schedule D-6	*May 31, 2011*	*General Service 50 kW & above*
Home Assistance Program			
Home Assistance Program	Schedule E-1	*May 9, 2011*	*All residential rate classes*

In addition, results were realized towards LDC's 2011-2014 target through the following pre-2011 programs:

Pre-2011 Programs			
Electricity Retrofit Incentive Program	n/a	*n/a*	*All general service classes*
High Performance New Construction	n/a	*n/a*	*All general service classes*
~~Toronto Comprehensive~~	n/a	*n/a*	*All general service classes*
Multifamily Energy Efficiency Rebates	n/a	*n/a*	*All general service classes*
~~Data Centre Incentive Program~~	n/a	*n/a*	*All general service classes*
~~EnWin Green Suites~~	n/a	*n/a*	*All general service classes*

As per the table below, several program initiatives are no longer available to customer or have not been launched in 2012.

Initiative Not in Market in 2012	Objective	Status
Residential Program		
Midstream Electronics	The objective of this initative is to encourage retailers to promote and sell high efficency televisions, and for distributors to distribute high efficiency set top boxes.	Never launched and removed from Schedule in Q2, 2013.
Midstream Pool Equipment	The objective of this initiative is to encourage pool installers to sell and install efficient pool pump equipment in residential in-ground pools.	Never launched and removed from Schedule in Q2, 2013.
Aboriginal Conservation Program	First Nations programs are delivered by the OPA and results are attributed to LDCs for reporting.	Launched in 2013 by OPA.
Home Energy Audit Tool	This is a provincial online audit tool to engage customers in conservation and help drive customer participation to CDM programs.	Never launched and removed from Schedule in Q2, 2013.
Commercial & Institutional Program		
Direct Service Space Cooling	The objective of this initiative is to offer free servicing of air conditioning systems and refrigeration units for the purpose of achieving energy savings and demand reduction.	Not launched to market in 2011/2012. As per the OPA there no plans to launch this Initiative in 2013.
Demand Response 1 ("DR1")	This initiative allows distribution customers to voluntarily reduce electricity demand during certain periods of the year pursuant to the DR 1 contract. The initiative provides DR payment for service for the actual electricity reduction provided during a demand response event.	No customer uptake for this initiative. As a result this Initiative was removed from the Schedule in Q4, 2012.
Industrial Program		
DR1	As above	No customer uptake for this initiative. Removed in Q4, 2012.

The Master CDM Program Agreement includes program change management provision in Article 3. Collaboration between the OPA and the Local Distribution Companies (LDCs) commenced in 2011, and continued in 2012, as the change management process was implemented to enhance the saveONenergy program suite. The change management process allows for modifications to the Master Service Agreement and initiative Schedules. The program enhancements give LDCs additional tools and greater flexibility to deliver programs in a way that meets the needs of customers and further drives participation in the Initiatives.

3.2 Program Descriptions

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 initiative information can be found on the saveONenergy website at https://saveonenergy.ca. The targeted customer types, objectives, and individual descriptions for each Program Initiative are detailed in Appendix A.

3.2.1 RESIDENTIAL PROGRAMS

Description: Provides residential customers with programs and tools to help them understand and manage the amount of energy they use throughout their entire home and help the environment.

Objective: To provide incentives to both existing homeowners and developers/builders to motivate the installation of energy efficiency measures in both existing and new home construction.

Discussion:

The inclusion of LED technology into the Biannual Retailers events in 2012 and the annual coupons in 2013, as well as some LDC custom coded coupons, has had a positive effect on consumer engagement. The revamped PeaksaverPLUS program is the main Residential Initiative which drives savings for LDCs and has been well received by consumers eager to utilize an In Home Display to help manage their energy consumption.

STEI focused primarily on Bi-annual Retailer Events, Coupons and HVAC incentives initiatives to build CDM savings in the Residential program area in 2012. The revamped peaksaver PLUS® program will be a major Residential Initiative in 2014. However, provincial advertising for peaksaver PLUS® in 2012 was both premature and created customer service concerns, since St. Thomas Energy had decided not to install poor technology into customers' homes in order to accommodate the advertising.

The Residential Program Portfolio is predominately a carryover of Initiatives from previous programs. It is mostly driven by retailers and contractors who many not have fully delivered what was anticipated. Three new initiatives were never launched and subsequently removed from schedule in 2013 with no new additions. Delays in communication with regards to Initiative offerings and results reporting have hampered LDCs abilities to engage customers and promote participation. Provincial wide advertising has provided limited value due to inconsistency and non-specific messaging.

Work to revitalize and increase the effectiveness and breadth of the Initiatives through the Residential Program needs to be a high priority. There are opportunities within the Residential marketplace that need to be identified, developed and offered to customers. A revised home audit and other Initiatives which could engage an average residential customer could be considered. Increased control by the LDCs such as 100% attributable coupons for LDCs and/or LDC hosted exchange events may present an opportunity for improved saving.

3.2.1.1 Appliance Retirement Initiative (Exhibit D)

Initiative Activities/Progress:

For St. Thomas, there were 119 old appliances removed from service in 2012, representing a net energy savings of 48,303 kWh per year. The cumulative energy savings for this initiative were verified at 439,307 kWh. The 2012 count was down from 175 units in 2011, supporting the view that the market is nearing saturation. New initiatives will be needed to encourage further homeowner savings in the appliance category. Marketing activity with respect to the program included distributing a bill insert in March 2012 to all residential customers (16,500), to match with radio advertising conducted by the OPA.

Additional Comments:

- With the increase in appliance age to 20 years in 2013, many LDCs increased marketing and outreach throughout 2012 in an effort to increase uptake and achieve savings.
- Due to the duration of the program, and the revised eligibility requirements to a minimum of 20 years old, this Initiative appears to have reached market saturation and has been under consideration for removal from the Portfolio.
- Rather than strictly remove this Initiative from the schedules, the OPA and LDCs could review what opportunities there are to include other measures such as stoves, dishwashers, washers and dryers. The framework of this Initiative may be a suitable foundation for a more holistic residential appliance retirement program. As such, the Residential portfolio could be straightened through program evolution rather than weakened through diminished program offerings.
- As results are very responsive to province wide advertising OPA provincial marketing should continue to play a key role.
- The OPA and LDCs can continue working to establish partnerships with Independent retailers and municipalities.

3.2.1.2 Appliance Exchange Initiative (Exhibit E)

Initiative Activities/Progress:

In St. Thomas, 86 appliances were exchanged under the program in 2012, representing a net energy savings of 22,042 kWh per year. The cumulative energy savings for this initiative were verified at 75,366 kWh. Better advertising and understanding of the initiative by retailers probably contributed to the better participation in 2012. There were only 24 exchanges in 2011. STEI printed an ad in the local community

paper for two weeks prior to the event and a bill insert was sent out to all residential customers. Posters were also displayed for walk in customers at the STEI office.

Additional Comments:

- This Initiative, eligible measures and incentive amounts are influenced by the retail partner with no direct involvement from the LDCs. The restrictive, limited and sometimes non-participation of local stores can diminish the savings potential for this Initiative.
- To date there has only been one retailer participant in the Appliance Exchange Initiative. The Fall events have not had retailer participation, therefore savings budgeted by the LDCs have not materialized.
- Evaluation, Measurement, and Verification (EMV) results indicated that the value of savings for retired room AC has dropped resulting in the retail participant not accepting window a/c's during the Spring 2013 event.
- Notification regarding retailer participation and eligible measures continues to be delayed. Improved communications will aid in appropriate resource allocation and marketing of the Initiative.
- This Initiative may benefit from the disengagement of the retailer and allowing LDCs to conduct these events, possibly as part of a larger community engagement effort, with the backing of ARCA for appliance removal.
- The initiative appears to require more promotion from retailers and LDCs.

3.2.1.3 HVAC Incentives Initiative (Exhibit B)

Initiative Activities/Progress:

In St. Thomas, there were 345 HVAC units replaced in 2012 under the program, representing a net energy savings of 127,224 kWh per year. The cumulative energy savings for this initiative were verified at 1,352,724 kWh.

Marketing activities for this program included the contracting all participating local contractors to promote the program and offer assistance and marketing materials. A newspaper ad was also placed in the local paper in time for the fall heating season, September 2012.

Additional Comments:

- Incentive levels appear to be insufficient to prompt Participants to upgrade HVAC equipment prior to end of useful life. It is hoped that the introduction of an Air Miles incentive in 2013 may help with this.

- This Initiative is contractor driven with LDCs responsible for marketing efforts to customers. More engagement with the HVAC contractor channel should be undertaken to drive a higher proportion of furnace and CAC sales to eligible units.

- Channel partners require timeliness of the Rebate process to maintain a positive relationship between consumers, contractors, the OPA, and the participating LDC. Due to a contracting delay no applications were processed from approximately the end of October 2012 to February 2013.

- LDC HVAC reports have been delayed and are not as complete and accurate as are required by LDCs to make adjustments to their marketing strategies.

- In an effort to build capacity, mandatory training has been instituted for all participating HVAC contractors. This could present too much of a barrier for participation for some contractors as the application process already presents a restriction to contractor sales. It has been noted that there are approximately 4500-5000 HVAC contractors in the Province, however only 1500 are participating in program.

- There are cases where non-participating contractors are offering their own incentives (by discounting their installations to match value of the OPA incentive) to make the sale. As this occurs outside of the Initiative, these installations should be attributed to the appropriate LDC.

3.2.1.4 Conservation Instant Coupon Initiative (Exhibit A)

Initiative Activities/Progress:

In ST. Thomas, only 91 coupons were reported used in 2012 to achieve product discounts under this program, representing a net energy savings of 4,110 kWh per year. This was a drastic decline compared with 2011 when 1,482 coupons were used. The cumulative energy savings for this initiative were verified at 237,857 kWh.

STEI made a strong marketing effort to boost usage of the LDC specific coupons during the year. The coupons were posted on the website with promotional news items. STEI sent a bill insert to all residential customers and distributed the LDC specific coupons

Additional Comments:

- This Initiative was ineffective for most of 2012 as the Instant coupons (annual) were not available to consumers until September 2012. As such, savings budgeted by LDCs did not materialize.

- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer and in some cases has been lengthy. The delays and incomplete results reporting limits the ability to react and respond to Initiative performance or changes in consumer behaviour. This also resulted in the delayed launch of the Initiative in 2012.

- Coupon booklets were not printed and mailed out in 2012. As such, Coupons were not widely available to consumers without the ability to download and print them.
- Without Provincial coupon distribution, and delay in Initiative launch, consumers may not have been aware of the online coupons. This Initiative could benefit from provincial marketing as a substitute to distribution.
- LDCs should be able to custom code all coupons to provide 100% allocation and push specific coupons based on localized needs.
- The product list could be distinctive from the Bi-Annual Retailer Event Initiative in order to gain more consumer interest and uptake.
- Program evolution, including new products and review of incentive pricing for the coupon Initiatives, should be a regular activity to ensure continued consumer interest.

3.2.1.5 Bi-Annual Retailer Event Initiative (Exhibit C)

Initiative Activities/Progress:

In St. Thomas, consumers redeemed 3,118 coupons in 2012 to acquire product discounts under this program, representing a net energy savings of 78,720 kWh per year. The cumulative energy savings for this initiative were verified at 581,680 kWh.

STEI was active in promoting the bi-annual event, setting up booths at the Home Hardware store and promoting them on the website and STEI offices. Newspaper ads were placed two weeks prior to the in store event in addition to bill inserts that were distributed to 10,500 customers.

Additional Comments:

- This Initiative is strongly influenced by the retail participants and has no direct involvement from the LDCs.
- The Product list has changed very little over the past four years.
- Limited engagement of local retailers can restrict the savings potential for this Initiative.
- Program evolution, including new products and review of incentive pricing for the coupon Initiatives, must be a regular activity to ensure continued consumer interest.

- The Product list could be distinctive from the Conservation Instant Coupon Initiative in order to gain more consumer interest and uptake.

- A review conducted by the Residential Working Group in Q4 2011 identified three areas of need for Initiative evolution: 1) introduction of product focused marketing; 2) enhanced product selection and 3) improved training for retailers as retail staff tend not to be knowledgeable regarding the products or promotion.

- LDCs should be able to custom code all coupons to provide 100% allocation and push specific coupons based on localized needs.

- Communications regarding retailer participation continues to be delayed. Improved communications will aid in appropriate resource allocation and marketing of the Initiative.

- This Initiative may benefit from a more exclusive relationship with a retailer appropriate to the program. There should be a value proposition for both the retailer and LDC.

3.2.1.6 Retailer Co-op

Initiative Activities/Progress:

St. Thomas Energy did not participate in this program in 2012.

Additional Comments:

- This is a retailer Initiative with no direct benefit to the LDCs
- Limited engagement of local retailers can restrict the savings potential for this Initiative.
- The availability of retailer and/or LDC staff with product knowledge and the ability to conduct demonstration in store during the events would be an asset. This could be a valuable role for LDCs, however many LDCs are limited by available resources and unable to participate.

3.2.1.7 New Construction Program (Schedule B-2)

Initiative Activities/Progress:

In St. Thomas, none of the homebuilders submitted an application under this program in 2012 despite being contacted and receiving information packages on the initiative. The CRM reveals that five applications were started, however none were actually submitted. Comments from the builders indicate the process may have been too onerous.

Additional Comments:

- This Initiative provides incentives to home builders for incorporating energy efficiency into their buildings. To support this, LDCs need to provide education to the consumers regarding the importance of choosing the energy efficient builder upgrade options without an immediate benefit to the consumer.

- Following limited participation in 2011, the application process was revisited in 2012 to streamline administration in response to builder feedback. Participation levels are expected to grow but there will be a lag to when results materialize as homes pre-approved could take a year or more to be completed.

- Administrative requirements, in particular individual home modeling, must align with perceived stakeholder payback. As per the Electricity Distributors Association ("EDA") Working Groups, changes are being processed through change management for 2012. However, the lengthy change management process has resulted in continued non-participation from builders.

3.2.1.8 Residential Demand Response Program (Schedule B-3)

Initiative Activities/Progress:

STEI did not launch the RDR Program in 2012. It is expected to launch in 2014. The year focused on gathering data and researching viable technology options.

Additional Comments:

- The schedule for Peaksaver Plus was posted in August 2011, but this did not provide adequate time for product procurement for 2011, and part of 2012. The product procurement process uncovered that the In Home Display units that communicate with installed smart meter technology were still in development and not ready for market deployment. Consequently, LDCs could not be in market with the Peaksaver Plus program until 2012, or later which has resulted in delayed savings.

- Smart Meters installed by most LDCs do not have the capability to communicate directly to an In Home Display. When proposing technical Initiatives that rely on existing LDC hardware or technology there should be an extensive consultative process.

- Introduction of new technology requires incentives for the development of such technology. Appropriate lead times for LDC analysis and assessment, product procurement, and testing and integration into the Smart Meter environment are also required. Making seemingly minor changes to provincial technical specifications can create significant issues when all LDCs attempt to implement the solution in their individual environments.

- The variable funding associated with installing a load controllable thermostat is not sufficient unless it is combined with an In Home Display (IHD) which might not be possible all the time and when IHD is optional.
- This is the main Initiative within the Residential portfolio that drives savings for LDCs.
- Given the different LDCs smart meter environments, and needs, each LDC is positioning the Initiative slightly different. As such, greater program flexibility is required to address unique LDC needs.
- Provincial wide marketing needs to be sensitive to the variations of the Initiative and provide solid, consistent messaging.
- There currently is not an avenue for participants without the ability to provide demand response capabilities to obtain an IHD and gain energy saving benefits.

3.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAM

Description: Provides commercial, institutional, agricultural and industrial organizations with energy-efficiency programs to help reduce their electrical costs while helping Ontario defer the need to build new generation and reduce its environmental footprint. Programs to help fund energy audits, to replace energy-wasting equipment or to pursue new construction that exceed our existing codes and standards. Businesses can also pursue incentives for controlling and reducing their electricity demand at specific times.

Targeted Customer Type(s): Commercial, Institutional, Agricultural, Multi-family buildings, Industrial

Objective: Designed to assist building owners and operators as well as tenants and occupants in achieving demand and energy savings, and to facilitate a culture of conservation among these communities as well as the supply chains which serve them.

Discussion:

Throughout 2011 and 2012 the Commercial and Institutional (C&I) Working Group has strived to enhance the existing C&I programs and rectify identified program and system deficiencies. This has proven to be a challenging undertaking, normally taking months to complete sometimes relatively minor changes due to the current CDM framework. Overbuilt governance, numerous initiative requirements, complex program structure and lengthy change management have restricted growth without providing the anticipated improved Measurement and Verification results. In addition, Evaluation, Measurement and Verification (EM&V) has not yet achieved transparency. LDCs are held accountable for these results yet are mostly completely removed from the process.

LDC program management has been hampered by varying rule interpretation, limited marketing ability, a somewhat inflexible online system of checks and balances and revolving OPA support personnel.

Despite these challenges the C&I Working Group, working in cooperation with the OPA, have managed to iron out many of the issues which could be rectified. In particular, an accomplishment of 2012 was the advent of the expedited change management as means to accelerate certain program changes.

Looking ahead there is minimal opportunity to make valuable changes to the current program suite and have these changes reflected in LDC 2014 results. LDCs and the OPA should look beyond the current Initiatives and work to launch new programs, built on the strengths of the 2011-2014 programs, which will meet the needs of the industry and consumers.

3.2.2.1 Efficiency: Equipment Replacement Incentive (ERII) (Schedule C-2)

Initiative Activities/Progress:

In St. Thomas, 21 RETROFIT projects were completed in 2012. This produced a net energy of 461,385 kWh for the year. The cumulative energy savings for this initiative were verified at 1,952,103 kWh.

Marketing initiatives included:

- Contractor visits and facility audits of local St. Thomas businesses
- Promotional mailings to key customers, including a brochure containing all Business CDM Programs mailed to the 50 top consuming customers in St. Thomas
- Telephone solicitation for participation
- Breakfast seminars on key energy-saving topics of interest to local businesses
- Website postings
- Community newspaper and Chamber of Commerce advertising
- Local Community events, such as the Library event

Additional Comments:

- It appears that the marketplace largely understands the programs now and a large proportion of LDC savings are attributed to ERII.
- The centralized process review used for 2012 project payment has been streamlined by the OPA and payments for projects were greatly improved – faster and more consistent compared to 2011.
- Capability building programs from Industrial programs have had very positive contributions to ERII program.

- This Initiative is limited by the state of the economy and the ability of commercial/institutional facility to complete capital upgrades.

- A number of customer facing issues in CRM (the OPA centralized application system) have been resolved; however key LDC administrative back office processing issues continue to be a challenge.

- Applicants and Applicant Representatives continue to express dissatisfaction and difficulty with the online application system. This issue has been addressed by LDCs through application training workshops, Key Account Managers, channel partner/contractor training and LDC staff acting as customer Application Representatives. Although this has been an effective method of overcoming these issues and encouraging submissions, it also reflects on the complexity and time consuming nature of the application process. As such, Applicant Representatives continue to influence the majority of applications submitted. Continued development of Channel Partners is essential to program success.

- Lighting is still the most popular measure. Other market sectors are not as engaged yet, specifically the mechanical world. There continues to be significant barriers to program participation from HVAC (Unitary AC) and compressed air channel partners

- Prescriptive and Engineered worksheets provide a much needed simplified application process for customers. However, the eligible measures need to be updated and expanded in both technology and incentive amounts to address changing product costs and evolution of the marketplace.

- Expanding the capacity of the engineered applications can offer customers an opportunity to maximize savings and incentives. Recognizing this, Toronto Hydro and London Hydro worked together to develop and provide the OPA with compressed air engineered worksheets for inclusion in the Initiative in Q3, 2012. To date, these have not been accepted and provided to LDCs for use.

- An identified deficiency in the various renditions of the equipment replacement is the “hard stop” of the program as of a specific date. Without a streamlined transition into a new program, many customers become frustrated and refused to participate. LDCs struggle to repair customer and channel partner relationships and gain momentum in the market place once again.

- While the Ministerial Directive provides continuality of the conservation programs for the participant, unclear direction on LDC administrative funding could result in many LDCs ‘ramping down’ programs in 2015. The establishment of defined administrative funding for 2015 is required to avoid a “stop and start” process.

3.2.2.2 Direct Install Initiative (DIL) (Schedule C-3)

Initiative Activities/Progress:

The Direct Install program has met with considerable success in St. Thomas. There were an additional 115 applications completed in 2012 representing net energy savings of 461,385 kWh per year. The cumulative 2011-2014 energy savings for this initiative were verified at 1,952,103 kWh.

Marketing activates included:

- Contractor visits and facility audits of local St. Thomas businesses
- Telephone solicitation for participation
- Direct Mail-outs to all remaining eligible businesses
- Website postings
- Community newspaper advertising
- Promotional mailings to key customers, including a brochure containing all Business CDM Programs mailed to the 50 top consuming customers in St. Thomas

Additional Comments:

- Successful execution of the previous rendition of this Initiative has resulted in diminished potential for the 2011-2014 Initiative in some LDC's territories.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results in some situations.
- Electrical contractor's margins have been reduced due to no labour rate increase, increase cost of materials, greater distances between retrofits, more door knocking required before a successful sale and no funding for lifts. This has led to a reduction in vendor channel participation in some regions.
- Ambiguity with regard to eligibility resulted in large lists of customers rejected following installation due to preserved ineligibility. Due to this, some LDCs were forced to carry considerable financial burden while this was worked through.
- The eligibility requirements have now been revamped and expanded however there has been limited communication and documentation of this to the marketplace.
- Currently LDCs are unable to offer these standard incentives to prior participants. The ability to return to prior participants and offer a standard incentive on the remaining measures has potential to provide additional energy and demand savings.

3.2.2.3 Existing Building Commissioning Incentive Initiative (Schedule C-6)

Initiative Activities/Progress:

St. Thomas Energy did not have any participation in the Existing Building Commissioning Initiative.

Marketing activates included:

- Promotional mailings to key customers, including a brochure containing all Business CDM Programs mailed to the 50 top consuming customers in St. Thomas

Additional Comments:

- Initiative name does not properly describe the Initiative.
- There was minimal participation for this Initiative. It is suspected that the lack of participation in the program is a result of the Initiative being limited to space cooling and a limited window of opportunity (cooling season) for participation.
- Participation is mainly channel partner driven, however the particulars of the Initiative have presented a too significant of a barrier for many channel partners to participate.
- The customer expectation is that the program be expanded to include a broader range of measures for a more holistic approach to building recommissioning and chilled water systems used for other purposes should be made eligible and considered through Change Management.
- This initiative should be reviewed for incentive alignment with ERII, as currently a participant will not receive an incentive if the overall payback is less than 2 years.

3.2.2.4 New Construction and Major Renovation Initiative (HPNC) (Schedule C-4)

Initiative Activities/Progress:

There has been no uptake for this initiative in St. Thomas

Marketing Initiatives included

- Promotional mailings to key customers, including a brochure containing all Business CDM Programs mailed to the 20 top consuming customers in St. Thomas
- Sell sheets specific to HPNC were made available at various events

Additional Comments

- There is typically a long sales cycle for these projects, and then a long project development cycle. As the program did not launch until mid-2011 and had limited participation, results did not appear in 2011. Minimum results are expected to appear in 2012. The majority of the results are expected in 2013-2014, with a reduced benefit to cumulative energy savings targets.
- With the Ministerial Directive facilities with a completion date near the end of 2014 currently have some security that they will be compensated for choosing efficient measures.
- Participants estimated completion dates tend to be inaccurate and are usually 6 months longer. This could result in diminished savings towards target when facilities are not substantially completed by December 31, 2014.
- The custom application process requires considerable customer support and skilled LDC staff. As there has been no defined administrative funding beyond 2014, many LDCs are unsure how these project applications will be finalized.
- The effort required to participate through the custom stream exceeds the value of the incentive for many customers.
- This Initiative has a very low Net-to-Gross ratio, which results in half the proposed target savings being 'lost'.

3.2.2.5 Energy Audit Initiative

Initiative Activities/Progress:

St. Thomas Energy had two Energy Audits submitted for pre-approval; however the audits were not conducted in 2012. It is expected the audits would be completed in 2013.

- Customer uptake was limited in 2011, however improved throughout 2012 especially with the new audit component for one system (i.e. compressed air).
- The energy audit Initiative is considered an 'enabling' Initiative and 'feeds into' other saveONenergy Initiatives. There are no savings attributed to LDC targets from an audit.
- Audit reports from consultants vary considerably and in some cases, while they adhere to the Initiative requirements, do not provide value for the Participant. A standard template with specific energy saving calculation requirements should be considered.
- Customers look to the LDCs to recommend audit companies. A centralized prequalified list provided by the OPA may be beneficial.

- Participants are limited to one energy audit which restricts enabling and direction to the other Initiatives. This Initiative should be evaluated for additional customer participation when presented with a new scope of work.

3.2.3 INDUSTRIAL PROGRAM

Description: Large facilities are discovering the benefits of energy efficiency through the Industrial Programs which are designed to help identify and promote energy saving opportunities. It includes financial incentives and technical expertise to help organizations modernize systems for enhanced productivity and product quality, as wells as provide a substantial boost to energy productivity. This allows facilities to take control of their energy so they can create long-term competitive energy advantages which reach across the organization.

Targeted Customer Type(s): Industrial, Commercial, Institutional, Agricultural

Objective: To provide incentives to both existing and new industrial customers to motivate the installation of energy efficient measures and to promote participation in demand management.

Discussion:

The Industrial Program Portfolio has been able to provide valuable resources to large facilities such as Energy Managers and enabling Engineering Studies. The Engineering Studies in particular provide a unique opportunity for a customer to complete a comprehensive analysis of an energy intensive process that they would not otherwise be able to undertake. Energy Managers provide customers with a skilled individual whose only role is to assist them with conservation initiatives. To date these Energy Managers have played a key role in customer participation.

Due to the size, scope and long lead time of these Initiatives and associated projects, the Ministerial Directive provides some security for the continuation of the conservation programs and associated compensation for the participant; however the subsequent savings would not be attributed to any LDC target.

Extensive legal documents, complex program structure and lengthy change management have restricted the change and growth of this Portfolio. While the expedited change management has benefited the Commercial Portfolio, the Industrial Portfolio has not seen the same results due to the narrow scope of the process. For 2013, a change to the threshold for small capital projects and a new small capital project agreement are expected to improve the number of projects and savings achieved within PSUI. Likewise, a decision to proceed with natural gas load displacement generation projects will also increase uptake although results may not be counted towards LDC targets due to in-service dates beyond 2014. Looking ahead there is minimal opportunity to make additional valuable changes to the current program suite and have these changes reflected in LDC 2014 results

3.2.3.1 Process & Systems Upgrades Initiative (PSUI) (Schedule D-1)

Initiative Activities/Progress:

STEI received one PSUI application in 2012. The application was approved and final documents are expected to be finalized in 2013.

Additional Comments:

- Approximately 100 engineering study applications have been submitted. This is a strong indication that there is the potential for large projects with corresponding energy savings. Most of these studies have been initiated through the Energy Manager and KAM resources.
- This Initiative is limited by the state of the economy and the ability of a facility to complete large capital upgrades.
- There is typically a long sales cycle for these projects, and then a long project development cycle. As such, limited results are expected to be generated in 2012. The majority of the results are expected in 2013-2014, with a much reduced benefit to cumulative energy savings targets.
- Delays with processing funding payments have caused delayed payments to Participants beyond contract requirements. In some cases, LDCs have developed a separate side agreement between the LDC and Participant acknowledging that the Participant cannot be paid until the funds are received.
- The contract required for PSUI is a lengthy and complicated document. A key to making PSUI successful is a new agreement for 'small' projects which is a simplified with less onerous conditions for the customer.
- To partially address this, changes were made to the ERII Initiative which allowed smaller projects to be directed to the Commercial stream. . Most industrial projects to-date have been submitted as ERII projects due to less onerous contract and M&V requirements.
- A business case was submitted by the Industrial Working Group in July 2012 which would change the upper limit for a small project from 700 MWh to 1 million dollars in incentives. This would allow more projects to be eligible for the new small capital project agreement and increase participant uptake, while still protecting the ratepayer. To date this change has not been implemented. (OR the small capital project agreement was finalized through change management in XX 2013).
- While there is considerable customer interest in on-site Load Displacement (Co-Generation) projects, in 2012 the OPA was accepting waste heat/waste fuel projects only. Natural gas generation projects were on hold awaiting a decision on whether PSUI will fund these types of projects. In June 2013, a decision was made to allow natural gas load displacement generation projects to proceed under PSUI. It is expected that a number of projects will proceed although results may not be counted towards LDC targets due to in-service dates beyond 2014.

3.2.3.2 Monitoring & Targeting Initiative (Schedule D-2)

Initiative Activities/Progress:

STEI did not receive any applications under this initiative.

Additional Comments:

- The M&T initiative is targeted at larger customers with the capacity to review the M&T data. This review requires the customer facility to employ an Energy Manager, or a person with equivalent qualifications, which has been a barrier for some customers. As such, a limited number of applications have been received to date.
- The savings target required for this Initiative can present a significant challenge for smaller customers.
- Through the change management process in 2013, changes are being made to ERII to allow smaller facilities to employ M&T systems.

3.2.3.3 Energy Manager Initiative (Schedule D-3)

Initiative Activities/Progress:

STEI did not engage an Energy Manager in 2012.

Additional Comments:

- The Energy Managers have proven to be a popular and useful resource for larger customers. There are approximately 70 Embedded Energy Managers (EEMs) and 25 Roving Energy Managers (REMs) being utilized by customers across the province.
- LDCs that are too small to qualify for their own REM are teaming up with other utilities to hire an REM to be shared by the group of utilities.
- At the beginning, it took longer than expected to set up the energy manager application process and unclear communication resulted in marketing and implementation challenges for many LDCs.
- Some LDCs and Customers are reporting difficulties in hiring capable Roving and Embedded Energy Managers (REM/EEM), in some instances taking up to 7 months to have a resource in place.
- New energy managers require training, time to familiarize with facilities and staff and require time to establish “credibility”. Energy Managers started filling their pipeline with projects but few projects were implemented in 2012.

- Delays with processing EEM payments causing LDCs to delay payments to Participants beyond contract requirements.

- There have been a number of studies identified by Energy Managers and they have been able to build capacity and deliver energy saving projects within their respective large commercial/industrial facilities.

- Requirement that 30% of target must come from Non-incented projects is identified as an issue for most REMs, although final targets not due to 2013. Working group has proposed to remove this requirement for REM's only as they are not resident full time at a customer facility to find the non-incented savings.

- A decision on extending funding for EM's is required in 2013 for this important Initiative, which should continue beyond 2014, failing which these expert resources will be lost in favour of full-time employment elsewhere.

3.2.3.4 Key Account Manager (Schedule D-4)

Initiative Activities/Progress:

STEI did not engage any Key Account Managers in 2012.

Additional Comments

- Customers appreciate dealing with a single contact to interface with an LDC, a resource that has both the technical and business background who can communicate easily with the customer and the LDC.

- Finding this type of skill set has been difficult. In addition, the short-term contract and associated energy targets discourage some skilled applicants resulting in longer lead times to acquire the right resource.

- This resource has been found by some LDCs to be of limited value due to the part-time nature of the position and limited funding. In addition, the position role has been too narrow in scope to provide assistance to the wider variety of projects LDCs may be struggling with.

- A decision on extending funding for KAM's is required in 2013 for this important Initiative, which should continue beyond 2014, failing which these expert resources will be lost in favour of full-time employment elsewhere.

3.2.3.5 Demand Response 3 (D-6)

Initiative Activities/Progress:

STEI had one customer enrolled in the DR3 program in 2012. This has resulted in 37 kW of peak demand reduction and 531 kWh in energy savings. The cumulative energy savings for the DR3 initiative was 1,952 kWh.

Additional Comments:

- Until early 2013 customer data was not provided on an individual customer basis due to contractual requirements with the aggregators. This limited LDCs' ability to effectively market to prospective participants and verify savings.
- No program improvements were made in 2012 however, it was accepted that prior participants who renew their DR3 contract within the 2011-2014 term will contribute to LDC targets.
- As of 2013, Aggregators are able to enter into contracts beyond 2014. This has allowed them to offer a more competitive contract price (5 year) than if limited to 1 or 2 year contracts.
- Metering and settlement requirements are expensive and complicated and can reduce customer compensation amounts, and present a barrier to smaller customers.
- Compensation amounts for new contracts and renewals have been reduced from the initial launch of this program (premium zones and 200 hour option have been discontinued) and subsequently there has been a corresponding decrease in renewal revenue.

3.2.4 LOW INCOME INITIATIVE (HOME ASSISTANCE PROGRAM) (Schedule E-1)

Initiative Activities/Progress:

STEI spent most of 2012 preparing for the launch of the Home Assistance Program. No activity was recorded for 2012 however it is expected that 2013 will engage significant participation.

Additional Comments:

- Awareness of the program amongst social agencies took time to develop. Benefits started to become evident in late 2012.
- Centralized payment processes were not developed in 2011. The payment process was established in 2012.
- The process for enrolling in social housing was complicated and time consuming. This was addressed in late 2012 and is showing benefits in 2013.

- The financial scope, complexity, and customer privacy requirements of this Initiative are challenging for LDCs and most have contracted this program out. This Initiative may benefit from an OPA contracted centralized delivery agent.

3.2.5 PRE-2011 PROGRAMS

Savings were realized towards LDC's 2011-2014 target through pre-2011 programs. The targeted customer types, objectives, descriptions, and activities of these programs are detailed in Appendix B

4 2012 LDC CDM Results

4.1 Participation and Savings

Table 1:

To be cut and paste from OPA provided report

Table 1: St. Thomas Energy Inc. Initiative and Program Level Savings by Year (Scenario 1)

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	175	119			11	7			73,726	48,303			17	439,307
Appliance Exchange	Appliances	24	86			2	13			2,671	22,042			13	75,366
HVAC Incentives	Equipment	458	345			131	75			242,763	127,224			206	1,352,724
Conservation Instant Coupon Booklet	Items	1,482	91			3	1			56,382	4,110			4	237,857
Bi-Annual Retailer Event	Items	2,558	3,118			5	4			86,380	78,720			9	581,680
Retailer Co-op	Items	0	0			0	0			0	0			0	0
Residential Demand Response (switch/pstat)	Devices	56	0			31	0			0	0			0	0
Residential Demand Response (IHD)	Devices	0	0			0				0					
Residential New Construction	Homes	0	0			0	0			0	0			0	0
Consumer Program Total						185	99			461,921	280,399			250	2,686,934
Business Program															
Retrofit	Projects	5	21			83	180			593,844	1,013,698			256	5,386,388
Direct Install Lighting	Projects	47	115			61	114			161,971	461,385			147	1,952,103
Building Commissioning	Buildings	0	0			0	0			0	0			0	0
New Construction	Buildings	0	0			0	0			0	0			0	0
Energy Audit	Audits	0	0			0	0			0	0			0	0
Small Commercial Demand Response	Devices	6	0			4	0			0	0			0	0
Small Commercial Demand Response (IHD)	Devices	0	0			0				0				0	0
Demand Response 3	Facilities	1	1			36	37			1,421	531			0	1,952
Business Program Total						184	330			757,237	1,475,613			402	7,340,443
Industrial Program															
Process & System Upgrades	Projects	0	0			0	0			0	0			0	0
Monitoring & Targeting	Projects	0	0			0	0			0	0			0	0
Energy Manager	Projects	0	0			0	0			0	0			0	0
Retrofit	Projects	2				4				26,362				4	105,446
Demand Response 3	Facilities	0	0			0	0			0	0			0	0
Industrial Program Total						4	0			26,362	0			4	105,446
Home Assistance Program															
Home Assistance Program	Homes	0	0			0	0			0	0			0	0
Home Assistance Program Total						0	0			0	0			0	0
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	0	0			0	0			0	0			0	0
High Performance New Construction	Projects	0	0			0	0			841	322			0	4,328
Toronto Comprehensive	Projects	0	0			0	0			0	0			0	0
Multifamily Energy Efficiency Rebates	Projects	0	0			0	0			0	0			0	0
LDC Custom Programs	Projects	0	0			0	0			0	0			0	0
Pre-2011 Programs completed in 2011 Total						0	0			841	322			0	4,328
Other															
Program Enabled Savings	Projects	0	0			0	0			0	0			0	0
Time-of-Use Savings	Homes														
Other Total							0				0			0	0
Adjustments to Previous Year's Verified Results							-7				7,134			-7	28,535
Energy Efficiency Total						301	393			1,244,939	1,755,803			657	10,135,199
Demand Response Total (Scenario 1)						72	37			1,421	531			0	1,952
OPA-Contracted LDC Portfolio Total (inc. Adjustments)						373	423			1,246,360	1,763,468			650	10,165,686
													Full OEB Target:	3,940	14,920,000
													% of Full OEB Target Achieved to Date (Scenario 1):	16.5%	68.1%

Activity & savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.

Due to the limited timeframe of data, which didn't include the summer months, 2012 IHD results have been deemed inconclusive. The IHD line item on the 2012 annual report will be left blank. Once a full year of data is available (2013 evaluation), and the savings are quantified, 2012 results will be updated to reflect the quantified savings.

Table 2: Summarized Program Results

Program	Gross Savings		Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Consumer Program Total			99	280,399	250	2,686,934
Business Program Total			330	1,475,613	402	7,340,443
Industrial Program Total					4	105,446
Home Assistance Program Total						
Pre-2011 Programs completed in 2011 Total				322		4,328
Adjustments to Previous Year's Verified results			-7	7,134	-7	28,535
Total OPA Contracted Province-Wide CDM Programs			**422**	**1,763,468**	**649**	**10,165,686**

4.2 Evaluation

METHODOLOGY	
All results are at the end-user level (not including transmission and distribution losses)	
EQUATIONS	
Prescriptive Measures and Projects	**Gross Savings** = Activity * Per Unit Assumption **Net Savings** = Gross Savings * Net-to-Gross Ratio All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)
Engineered and Custom Projects	**Gross Savings** = Reported Savings * Realization Rate **Net Savings** = Gross Savings * Net-to-Gross Ratio All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)
Demand Response	**Peak Demand: Gross Savings = Net Savings** = contracted MW at contributor level * Provincial contracted to ex ante ratio **Energy: Gross Savings = Net Savings** = provincial ex post energy savings * LDC proportion of total provincial contracted MW All savings are annualized (i.e. the savings are the same regardless of the time of year a participant began offering DR)
Adjustments to Previous Year's Verified Results	All errors and omissions from the prior years Final Annual Results report will be adjusted within this report. Any errors and ommissions with regards to projects counts, data lag, and calculations etc., will be made within this report. Considers the cumulative effect of energy savings.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Consumer Program			
Appliance Retirement	Includes both retail and home pickup stream; Retail stream allocated based on average of 2008 & 2009 residential throughput; Home pickup stream directly attributed by postal code or customer selection	Savings are considered to begin in the year the appliance is picked up.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Appliance Exchange	When postal code information is provided by customer, results are directly attributed to the LDC. When postal code is not available, results allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year that the exchange event occurred	
HVAC Incentives	Results directly attributed to LDC based on customer postal code	Savings are considered to begin in the year that the installation occurred	

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Conservation Instant Coupon Booklet	LDC-coded coupons directly attributed to LDC; Otherwise results are allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year in which the coupon was redeemed.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Bi-Annual Retailer Event	Results are allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year in which the event occurs.	
Retailer Co-op	When postal code information is provided by the customer, results are directly attributed. If postal code information is not available, results are allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year of the home visit and installation date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Residential Demand Response	Results are directly attributed to LDC based on data provided to OPA through project completion reports and continuing participant lists	Savings are considered to begin in the year the device was installed and/or when a customer signed a ***peaksaver*** PLUS™ participant agreement.	**Peak demand savings** are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. **Energy savings** are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year and accounts for any "snapback" in energy consumption experienced after the event. Savings are assumed to **persist** for only 1 year, reflecting that savings will only occur if the resource is activated.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Residential New Construction	Results are directly attributed to LDC based on LDC identified in application in the saveONenergy CRM system; Initiative was not evaluated in 2011, reported results are presented with forecast assumptions as per the business case.	Savings are considered to begin in the year of the project completion date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Business Program			
Efficiency: Equipment Replacement	Results are directly attributed to LDC based on LDC identified at the facility level in the saveONenergy CRM; Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see "Reference Tables" tab for Building type to Sector mapping	Savings are considered to begin in the year of the actual project completion date on the iCON CRM system.	**Peak demand and energy savings** are determined by the total savings for a given project as reported in the iCON CRM system (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
	Additional Note: project counts were derived by filtering out "Application Status" = "Post-Project Submission - Payment denied by LDC" and only including projects with an "Actual Project Completion Date" in 2012 and pulling both the "Application Name" field followed by the "Building Address 1" field from the Post Stage Retrofit Report and finally performing a count of the Building Addresses.		

Final 2012 EM&V Findings

*The following document provides a summary of the 2012 EM&V findings for all of the evaluated **save**ON**energy** initiatives.*

Consumer Program

Bi-Annual Coupons

- 15% lower net savings due to a change in the net-to-gross factors (increased free-ridership, less participant behavior spillover, and less non-participant like spillover).
- Majority of participation, energy, & demand savings are from standard CFLs.
- 15% of net savings due to ~73,000 coupons for new LED measures.

Annual Coupons

- The number of coupons associated with the redemption of 2012 Annual Coupons was 90% lower than 2011 Instant Coupon Booklet. Key factors for the decrease include:
    - Shorter duration of available coupons (September 2012 – December 2012)
    - In 2012, only online coupons were available
        - 2011 had both online coupons AND coupon mailing booklets.

HVAC

- Small decrease (10%) in per unit savings assumptions for furnace with ECM due to change in 2012 customer mix and furnace fan usage.
- Small increase (10%) in free-ridership related to the furnace with ECM measure.
- Participation remains relatively steady once 2011 true-up values are included.

Appliance Retirement

- Decrease in 2012 participation by 39% compared to 2011.
- In-site metering provided updated per unit assumptions:
    - Small decrease (3.5%) in savings for refrigerators; and
    - Sizeable increase (17.5%) in savings for freezers

Appliance Exchange

- Increase of 30% for exchanged dehumidifiers over 2011, leading to an increase of 4% in overall participation.
- Higher per unit savings for dehumidifiers drove the overall increase in 2012 savings.

***peaksaver*PLUS**

- Province-wide per-unit *ex ante* estimates for a 1-in-10 August peak day were determined to be 0.50 kW for residential CACs and 0.64 kW for small commercial CACs.

- Evaluation to date has indicated savings from in-home displays (IHDs) are not statistically significant (in and around zero).
    - However, since 2012 evaluation did not include full year analysis (specifically the summer months), these results have been deemed inconclusive.
- The IHD offer had a positive influence on enrollment and re-enrollment with between 20 to 35% of new enrollees said they wouldn't have enrolled without the IHD offer.

Residential New Construction

- All projects are opting for the prescriptive or performance path - there have been no custom project applications to date.

Business Programs

Retrofit

- Reported savings for prescriptive lighting projects continue to be overstated:
    - Verified wattage reductions were 15% higher than assumed; and
    - Verified operating hours were 11% higher than assumed.
- A lower realization rate in the engineered measure track can be partially explained by overstated lighting operation hour assumptions reported on the application.
- Net-to-gross ratios for the initiatives were above 75% in 2012, which is consistent with 2011.

Small Business Lighting

- Reported hours of usage continue to be inaccurate - only 12% of site visits had verified annual hours of use within +/-10% of the assumed value.
- The saturation of eligible customers and preferred business types are resulting in participation from building types that may not fully operate during the summer peak period.
    - This trend contributes to lower realization rates for demand savings in 2012.
- Due to changing regulations in lighting measures, the assumed baseline technology will eventually be phased out. This regulation impacts the persistence of savings over the lifetime of lighting measures.

Existing Building Commissioning (EBC)

- There were no applications in 2012.
- Market feedback suggests that EBC's focus on chilled-water space-cooling systems may be too narrow, and participation could be expanded by incenting a wider range of measures.

New Construction

- Custom projects account for 66% of program savings, with the remainder coming from the prescriptive track.

Audit Funding Program

- Through Audit Funding, 280 projects were completed in 2012 based on recommendations from the auditors, resulting in1.4 MW and 7 GWh of Program Enabled Savings.
- Office buildings represented the largest portion of applicants for 2012.

Industrial Programs

Process and Systems Upgrade Initiative

- Energy managers are seen as important drivers of Program Enabled savings projects.
    - 88% of survey respondents indicated that the assistance provided by energy managers was "somewhat" or "very" important to implementing projects.
- Energy Managers indicated that additional support (additional training and guides) may further help influence the adoption of energy efficiency measures by the participants.
- Documentation for Program Enabled Savings projects varied substantially by LDC. More guidance on documentation requirements would be beneficial to all parties

DR-3

- 2012 saw improvements in the performance of DR-3 participants resulting higher *ex ante* realization rates, particularly for the industrial participants.

Home Assistance Program

- Participation in the initiative ramped up in 2012, with over 5,000 homes participating in the initiative.
- Majority of energy savings (62%) comes from lighting measures, while 21% of energy savings resulting from refrigerator and freezer replacements.

4.3 Spending

Table 3: 2012 Spending

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Consumer Program		**$78,505.76**	**$0.00**	**$0.00**	**$0.00**	**$78,505.76**
1	Appliance Retirement	$11,389.67				**$11,389.67**
2	Appliance Exchange	$11,389.62				**$11,389.62**
3	HVAC Incentives	$10,817.12				**$10,817.12**
4	Conservation Instant Coupon Booklet	$12,758.02				**$12,758.02**
5	Bi-Annual Retailer Event	$10,704.62				**$10,704.62**
6	Retailer Co-op					**$0.00**
7	Residential Demand Response	$10,704.62				**$10,704.62**
10	New Construction Program	$10,742.12				**$10,742.12**
Business Program		**$98,544.81**	**$30,525.00**	**$237,835.93**	**$0.00**	**$366,905.74**
11	Efficiency: Equipment Replacement	$43,675.58		$126,867.18		**$170,542.76**
12	Direct Installed Lighting	$18,525.15	$30,525.00	$110,968.75		**$160,018.90**
14	Existing Building Commissioning Incentive					**$0.00**
15	New Construction and Major Renovation Initiative	$17,972.04				**$17,972.04**
16	Energy Audit	$18,372.04				**$18,372.04**
17	Commercial Demand Response (part of the Residential program schedule)					**$0.00**
19	Demand Response 3 (part of the Industrial program schedule)					**$0.00**
Industrial Program		**$13,474.52**	**$0.00**	**$0.00**	**$0.00**	**$13,474.52**
20	Process & System Upgrades					**$0.00**
	a) preliminary study	$3,894.90				**$3,894.90**
	b) engineering study	$2,394.90				**$2,394.90**
	c) program incentive	$2,394.90				**$2,394.90**
21	Monitoring & Targeting	$2,394.90				**$2,394.90**
22	Energy Manager					**$0.00**
23	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)					**$0.00**
25	Demand Response 3	$2,394.90				**$2,394.90**

Home Assistance Program		**$2,362.14**				
26	Home Assistance Program	$2,362.14				$2,362.14
Pre 2011 Programs Completed in 2011						
27	Electricity Retrofit Incentive Program					$0.00
28	High Performance New Construction					$0.00
29	Toronto Comprehensive					$0.00
30	Multifamily Energy Efficiency Rebates					$0.00
31	Data Centre Incentive Program					$0.00
32	EnWin Green Suites					$0.00
	TOTAL Province-wide CDM PROGRAMS	$192,887.23	$30,525.00	$237,835.93	$0.00	$458,886.02

#	Initiative	Program Administration Budget (PAB)
Initiatives Not In Market		**$0.00**
8	Midstream Electronics	
9	Midstream Pool Equipment	
13	Demand Service Space Cooling	
18	Demand Response 1 (Commercial)	
19	Demand Response 1 (Industrial)	

Table 4: Cumulative Spending (2011-2014)

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Consumer Program		**$109,329.96**	**$0.00**	**$0.00**	**$0.00**	**$109,329.96**
1	Appliance Retirement	$16,216.02	$0.00	$0.00	$0.00	**$16,216.02**
2	Appliance Exchange	$15,500.93	$0.00	$0.00	$0.00	**$15,500.93**
3	HVAC Incentives	$16,018.44	$0.00	$0.00	$0.00	**$16,018.44**
4	Conservation Instant Coupon Booklet	$16,869.33	$0.00	$0.00	$0.00	**$16,869.33**
5	Bi-Annual Retailer Event	$14,815.93	$0.00	$0.00	$0.00	**$14,815.93**
6	Retailer Co-op	$0.00	$0.00	$0.00	$0.00	**$0.00**
7	Residential Demand Response	$14,815.92	$0.00	$0.00	$0.00	**$14,815.92**
10	New Construction Program	$15,093.42	$0.00	$0.00	$0.00	**$15,093.42**
Business Program		**$136,442.81**	**$43,450.00**	**$363,386.76**	**$0.00**	**$543,279.57**
11	Efficiency: Equipment Replacement	$68,143.38	$0.00	$207,050.51	$0.00	**$275,193.89**
12	Direct Installed Lighting	$22,946.95	$43,450.00	$156,336.25	$0.00	**$222,733.20**
14	Existing Building Commissioning Incentive	$3,002.80	$0.00	$0.00	$0.00	**$3,002.80**
15	New Construction and Major Renovation Initiative	$20,974.84	$0.00	$0.00	$0.00	**$20,974.84**
16	Energy Audit	$21,374.84	$0.00	$0.00	$0.00	**$21,374.84**
17	Commercial Demand Response (part of the Residential porogram schedule)	$0.00	$0.00	$0.00	$0.00	**$0.00**
19	Demand Response 3 (part of the Industrial program schedule)	$0.00	$0.00	$0.00	$0.00	**$0.00**
Industrial Program		**$19,332.80**	**$0.00**	**$0.00**	**$0.00**	**$19,332.80**
20	Process & System Upgrades	$0.00	$0.00	$0.00	$0.00	**$0.00**
	a) preliminary study	$4,871.28	$0.00	$0.00	$0.00	**$4,871.28**
	b) engineering study	$3,371.28	$0.00	$0.00	$0.00	**$3,371.28**
	c) program incentive	$3,371.28	$0.00	$0.00	$0.00	**$3,371.28**
21	Monitoring & Targeting	$3,371.28	$0.00	$0.00	$0.00	**$3,371.28**
22	Energy Manager	$976.38	$0.00	$0.00	$0.00	**$976.38**
23	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	$0.00	$0.00	$0.00	$0.00	**$0.00**
25	Demand Response 3	$3,371.28	$0.00	$0.00	$0.00	**$3,371.28**

Home Assistance Program		**$2,362.14**				
26	Home Assistance Program	$2,362.14	$0.00	$0.00	$0.00	$2,362.14
Pre 2011 Programs Completed in 2011						
27	Electricity Retrofit Incentive Program					$0.00
28	High Performance New Construction					$0.00
29	Toronto Comprehensive					$0.00
30	Multifamily Energy Efficiency Rebates					$0.00
31	Data Centre Incentive Program					$0.00
32	EnWin Green Suites					$0.00
	TOTAL Province-wide CDM PROGRAMS	$267,467.71	$43,450.00	$363,386.76	$0.00	$671,942.33

#	Initiative	Program Administration Budget (PAB)
Initiatives Not In Market		**$3,979.18**
8	Midstream Electronics	$ -
9	Midstream Pool Equipment	$ -
13	Demand Service Space Cooling	$ 3,002.80
18	Demand Response 1 (Commercial)	$ -
19	Demand Response 1 (Industrial)	$ 976.38

4.4 Additional Comments

Burman Energy was contracted by STEI to administer all CDM programs. They were active in the St. Thomas service area:

They promoted the Direct Install and Retrofit programs with direct visits to over 150 local small businesses.

STEI hopes to build on momentum from 2012, and with several new initiatives slated to start in 2013, the potential for renewed success is high.

5 Combined CDM Reporting Elements

5.1 Progress Towards CDM Targets

Table 5: Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual			
	2011	2012	2013	2014
2011 - Verified	0.4	0.3	0.3	0.3
2012 - Verified		0.4	0.4	0.4
2013				
2014				
Verified Net Annual Peak Demand Savings Persisting in 2014:				0.7
St. Thomas Energy Inc. 2014 Annual CDM Capacity Target				3.9
Verified Portion of Peak Demand Savings Target Achieved in 2014(%):				16.5%

Table 6: Net Energy Savings at the End-User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011 - Verified	1.2	1.2	1.2	1.2	4.9
2012 - Verified		1.8	1.8	1.7	5.3
2013					
2014					
Verified Net Cumulative Energy Savings 2011-2014:					10.2
St. Thomas Energy Inc. 2011-2014 Annual CDM Energy Target					14.9
Verified Portion of Cumulative Energy Target Achieved (%):					68.1%

5.2 Variance from Strategy

At the time of development, the 2011-2014 CDM Strategy did not take into account persistence that would be realized for the energy savings. Therefore, while STEI has not achieved a 4,000 MWh reduction annually, STEI feels they are still on track to hit the overall energy savings target of 14.92 MWh.

STEI will place more emphasis on demand savings over the next two years to contribute to the overall demand savings of 3.94 MW.

Table: Summary of forecasts and Milestones from *St. Thomas Energy Inc. 2011-2013 Conservation and Demand Management Strategy*.

	2014 Forecasts		Annual Milestones	
Programs	**MW**	**MWh**	**MW**	**MWh**
Consumer	0.89	3,722	0.23	931
Commercial and Institutional	2.46	8,549	0.60	2137
Industrial	0.55	2,577	0.14	644
Low Income	0.10	1,152	0.03	288
TOTAL	**4.00**	**16,000**	**1.00**	**4,000**

5.3 Outlook to 2014 and Strategy Modifications

For the last two years of the programs, STEI expects to focus more heavily on demand reductions, mainly targeting the large industrial customers. Demand savings will also be realized through new initiatives starting in 2013 and 2014 such as Low Income and Residential Demand Response.

Programs such as Small Business Lighting and RETROFIT will continue to generate energy and demand savings with an additional 150 Small Business Lighting installs and 25-30 RETROFIT projects expected in 2013.

6.0 Conclusion

Over the course of 2012, STEI has achieved 0.7 MW in peak demand savings and 10.2 GWh in energy savings, which represents 16.5% and 68.1% of STEI 2014 target, respectively. These results are representative of a considerable effort expended by LDC Name, in cooperation with other LDCs, customers, channel partners and stakeholders to overcome many operational and structural issues that limited program effectiveness across all market sectors. This achievement is a success and the relationships built within the 2011-2014 CDM program term will aid results in a subsequent CDM term.

However, despite continuing improvements to existing programs STEI faces challenges in the remaining years of the current CDM framework. With the current slate of available OPA Programs, and the current forecast of implementation and projected savings, STEI expects to meet its 14.9 GWh consumption target but may fall short of its 3.9 MW savings target.

Looking ahead there is limited opportunity to make valuable changes to the current program portfolios and have these changes reflected in LDC 2014 results. However, LDCs and the OPA can build on the strengths and key successes of the 2011-2014 programs to launch new programs which will meet the needs of the industry and consumers.

Appendix A: Initiative Descriptions

Residential Program

APPLIANCE RETIREMENT INITIATIVE (Exhibit D)

Target Customer Type(s): Residential Customers

Initiative Frequency: Year round

Objectives: Achieve energy and demand savings by permanently decommissioning certain older, inefficient refrigeration appliances.

Description: This is an energy efficiency Initiative that offers individuals and businesses free pick-up and decommissioning of old large refrigerators and freezers. Window air conditioners and portable dehumidifiers will also be picked up if a refrigerator or a freezer is being collected.

Targeted End Uses: Large refrigerators, large freezers, window air conditioners and portable dehumidifiers.

Delivery: OPA centrally contracts for the province-wide marketing, call centre, appliance pick-up and decommissioning process. LDC's provides local marketing and coordination with municipal pick-up where available.

Additional detail is available:

- Schedule B-1, Exhibit D: http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer/Programs/Appliance-Retirement.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

APPLIANCE EXCHANGE INITIATIVE (Exhibit E)

Target Customer Type(s): Residential Customers

Initiative Frequency: Spring and Fall

Objective: The objective of this Initiative is to remove and permanently decommission older, inefficient window air conditioners and portable dehumidifiers that are in Ontario.

Description: This Initiative involves appliance exchange events. Exchange events are held at local retail locations and customers are encouraged to bring in their old room air conditioners (AC) and dehumidifiers in exchange for coupons/discounts towards the purchase of new energy efficient equipment.

Targeted End Uses: Window air conditioners and portable dehumidifiers

Delivery: OPA contracts with participating retailers for collection of eligible units. LDCs provide local marketing.

Additional detail is available:

- Schedule B-1, Exhibit C http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

HVAC INCENTIVES INITIATIVE (Exhibit B)

Target Customer Type(s): Residential Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to encourage the replacement of existing heating systems with high efficiency furnaces equipped with Electronically Commutated Motors (ECM), and to replace existing central air conditioners with ENERGY STAR qualified systems and products**.**

Description: This is an energy efficiency Initiative that provides rebates for the replacement of old heating or cooling systems with high efficiency furnaces (equipped with ECM) and Energy Star qualified central air conditioners by approved Heating, Refrigeration, and Air Conditioning Institute (HRAI) qualified contractors.

Targeted End Uses: Central air conditioners and furnaces

Delivery: OPA contracts centrally for delivery of the program. LDCs provide local marketing and encourage local contractors to participate in the Initiative.

Additional detail is available:

- Schedule B-1, Exhibit B http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

CONSERVATION INSTANT COUPON INITIATIVE (Exhibit A)

Target Customer Type(s): Residential Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to encourage households to purchase energy efficient products by offering discounts.

Description: This Initiative provides customers with year round coupons. The coupons offer instant rebates towards the purchase of a variety of low cost, easy to install energy efficient measures and can be redeemed at participating retailers. Booklets were directly mailed to customers and were also available at point-of-purchase. Downloadable coupons were also available at www.saveoneenergy.ca.

Targeted End Uses: ENERGY STAR® qualified Standard Compact Flourescent Lights ("CFLs"),ENERGY STAR® qualified Light Fixtures lighting control products, weather-stripping, hot water pipe wrap, electric water heater blanket, heavy duty plug-in Timers, Advanced power bars, clothesline, baseboard programmable thermostats.

Delivery: The OPA develops the electronic version of the coupons and posts them online for download. Three LDC specific coupons were made available for local marketing and utilization by LDCs. The OPA enters into agreements with retailers to honour the coupons.

Additional detail is available:

- Schedule B-1, Exhibit A http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

BI-ANNUAL RETAILER EVENT INITIATIVE (Exhibit C)

Target Customer Type(s): Residential Customers

Initiative Frequency: Bi-annual events

Objective: The objective of this Initiative is to provide instant point of purchase discounts to individuals at participating retailers for a variety of energy efficient products.

Description: Twice a year (Spring and Fall), participating retailers host month-long rebate events. During the months of April and October, 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.

Targeted End Uses: As per the Conservation Instant Coupon Initiative

Delivery: The OPA enters into arrangements with participating retailers to promote the discounted products, and to post and honour related coupons. LDCs also refer retailers to the OPA and market this initiative locally.

Additional detail is available:

- Schedule B-1, Exhibit C http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

RETAILER CO-OP

Target Customer Type(s): Residential Customers

Initiative Frequency: Year Round

Objective: Hold promotional events to encourage customers to purchase energy efficiency measures (and go above-and-beyond the traditional Bi-Annual Coupon Events).

Description: The Retailer Co-op Initiative provides LDCs with the opportunity to work with retailers in their service 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).

Targeted End Uses: As per the Conservation Instant Coupon Initiative

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

In Market Date: St. Thomas Energy did not offer this program.

NEW CONSTRUCTION PROGRAM (Schedule B-2)

Target Customer Type(s): Residential Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to provide incentives to participants for the purpose of promoting the construction of energy efficient residential homes in the Province of Ontario.

Description: This is an energy efficiency Initiative that provides incentives to homebuilders for constructing new homes that are efficient, smart, and integrated (applicable to new single family dwellings). Incentives are provided in two key categories as follows:

- Incentives for homebuilders who install electricity efficiency measures as determined by a prescriptive list or via a custom option.
- Incentives for homebuilders who meet or exceed aggressive efficiency standards using the EnerGuide performance rating system.

Targeted End Uses: All off switch, ECM motors, ENERGY STAR qualified central a/c, lighting control products, lighting fixtures, Energuide 83 whole home, energuide 85 whole homes

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

Additional detail is available:

- Schedule B-1, Exhibit C http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-2%20New%20Construction%20Program.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

RESIDENTIAL DEMAND RESPONSE PROGRAM (Schedule B-3)

Target Customer Type(s): Residential and Small Commercial Customers

Initiative Frequency: Year round

Objective: The objectives of this Initiative are to enhance the reliability of the IESO-controlled grid by accessing and aggregating specified residential and small commercial end uses for the purpose of load reduction, increasing consumer awareness of the importance of reducing summer demand and providing consumers their current electricity consumption and associated costs.

Description*: In* ***peaksaver***PLUS ™ participants are eligible to receive a free programmable thermostat or switch, including installation. Participants also receive access to price and real-time consumption information on an In Home Display (IHD).

Targeted End Uses: central air conditioning, electric hot water heaters and pool pumps

Delivery: LDC's recruit customers and procure technology

Additional detail is available:

- Schedule B-1, Exhibit C http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/SCHED_2011_ResDR_B_3_110727%28MJB%29v15_redacted.pdf and
- SaveONenergy website https://saveonenergy.ca/Consumer.aspx

In Market Date: Expected late 2013 early 2014.

C&I Program

EFFICIENCY: EQUIPMENT REPLACEMENT INCENTIVE (ERII) (Schedule C-2)

Target Customer Type(s): Commercial, Institutional, Agricultural and Industrial Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to offer incentives to non-residential distribution customers to achieve reductions in electricity demand and consumption by upgrading to more energy efficient equipment for lighting, space cooling, ventilation and other measures.

Description: The Equipment Replacement Incentive Initiative (ERII) offers financial incentives to customers for the upgrade of existing equipment to energy efficient equipment. Upgrade projects can be classified into either: 1) prescriptive projects where prescribed measures replace associated required base case equipment; 2) engineered projects where energy and demand savings and incentives are calculated for associated measures; or 3) custom projects for other energy efficiency upgrades.

Targeted End Uses: lighting, space cooling, ventilation and other measures

Delivery: LDC delivered.

Additional detail is available:

- Schedule C-2 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf and
- SaveONenergy website https://saveonenergy.ca/Business/Program-Overviews/Retrofit-for-Commercial.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

Lessons Learned:

DIRECT INSTALL INITIATIVE (DIL) (Schedule C-3)

Target Customer Type(s): Small Commercial, Institutional, Agricultural facilities and multi-family buildings

Initiative Frequency: Year round

Objective: The objective of this Initiative is to offer a free installation of eligible lighting and water heating measures of up to $1,000 to eligible owners and tenants of small commercial, institutional and agricultural facilities and multi-family buildings, for the purpose of achieving electricity and peak demand savings.

Description: The Direct Installed Lighting Initiative targets customers in the General Service <50kW account category. This Initiative offers turnkey lighting and electric hot water heater measures with a value up to $1,000 at no cost to qualifying small businesses. In addition, standard prescriptive incentives are available for eligible equipment beyond the initial $1,000 limit.

Target End Uses: Lighting and electric water heating measures

Delivery: Participants can enroll directly with the LDC, or would be contacted by the LDC/LDC-designated representative.

Additional detail is available:

- Schedule C-3 http://www.powerauthority.on.ca/sites/default/files/page/Schedule%20C-3%20Direct%20Install%20Initiative%20-%20redacted.pdf and
- SaveONenergy website https://saveonenergy.ca/Business.aspx

Initiative Activities/Progress:

High penetration of the previous version of this initiative within the BPI service territory has resulted in limited uptake potential for the 2011-2014 program. BPI utilized the previous programs Service Provider to aid in maintaining Initiative momentum, however the diminished number of eligible customers limited program uptake. BPI continued to provide local marketing and customer support for this Initiative.

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

EXISTING BUILDING COMMISSIONING INCENTIVE INITIATIVE (Schedule C-6)

Target Customer Type(s): Commercial, Institutional, and Agricultural Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to offer incentives for optimizing (but not 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:

- scoping study phase
- investigation phase
- implementation phase
- hand off/completion phase

Targeted End Uses: Chilled water systems for space cooling

Delivery: LDC delivered.

Additional detail is available:

- Schedule C-6 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-6%20Commissioning%20Initiative.pdfand
- SaveONenergy website https://saveonenergy.ca/Business/Program-Overviews/Existing-Building-Commissioning.aspx

Initiative Activities/Progress:

BPI provided local marketing and customer support for this Initiative, but had no customer interest or uptake.

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

NEW CONSTRUCTION AND MAJOR RENOVATION INITIATIVE (HPNC) (Schedule C-4)

Target Customer Type(s): Commercial, Institutional, Agricultural and Industrial Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to encourage builders/major renovators of commercial, institutional, and industrial buildings (including multi-family buildings and agricultural facilities) to reduce electricity demand and/or consumption by designing and building new buildings with more energy-efficient equipment and systems for lighting, space cooling, ventilation and other Measures.

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

Targeted End Uses: New building construction, building modeling, lighting, space cooling, ventilation and other Measures

Delivery: LDC delivers to customers and design decision makers.

Additional detail is available:

- Schedule C-4 http://www.powerauthority.on.ca/sites/default/files/page/ScheduleC-4NewContructionInitiativeV2.pdf and
- SaveONenergy website https://saveonenergy.ca/Business/Program-Overviews/New-Construction.aspx

Initiative Activities/Progress:

BPI provided local marketing and customer support for this Initiative, however received no applications in 2011.

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

ENERGY AUDIT INITIATIVE (Schedule C-1)

Target Customer Type(s): Commercial, Institutional, Agricultural and Industrial Customers

Initiative Frequency: Year round

Objective: The objective of this Initiative is to offer incentives to owners and lessees of commercial, institutional, multi-family buildings and agricultural facilities for the purpose of undertaking assessments

to identify all possible opportunities to reduce electricity demand and consumption within their buildings or premises.

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

Targeted End Uses: Various

Delivery: LDC delivered.

Additional detail is available:

- Schedule C-1 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-1%20Energy%20Audit%20Initiative.pdf and
- SaveONenergy website https://saveonenergy.ca/Business/Program-Overviews/Audit-Funding.aspx

Initiative Activities/Progress:

BPI marketed this Initiative to its commercial and institutional customers and received one application in 2011.

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

Industrial Program

PROCESS & SYSTEMS UPGRADES INITIATIVE (PSUI) (Schedule D-1)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

Objectives: The objectives of this Initiative are to:

- Offer distribution customers capital incentives and enabling initiatives to assist with the implementation of large projects and project portfolios;
- Implement system optimization project in systems which are intrinsically complex and capital intensive; and
- Increase the capability of distribution customers to implement energy management and system optimization projects.

Description: PSUI is an energy management Initiative that includes three Initiatives: (preliminary engineering study, detailed engineering study, and project incentive Initiative). The incentives are available to large distribution connected customers with projects or portfolio 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. The capital incentive for this Initiative is the lowest of:

a) $200/MWh of annualized electricity savings

b) 70% of projects costs

c) A one year pay back

Targeted End Uses: Process and systems

Delivery: LDC delivered with Key Account Management support, in some cases.

Additional detail is available:

- Schedule D-1 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf and
- SaveONenergy website https://saveonenergy.ca/Business.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

MONITORING & TARGETING INITIATIVE (Schedule D-2)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

Objective: This Initiative offers access to funding for the installation of Monitoring and Targeting systems in order to deliver a minimum savings target at the end of 24 months and sustained for the term of the M&T Agreement.

Description: This Initiative offers customers funding for the installation of a Monitoring and Targeting system to help them understand how their energy consumption might be reduced. A facility energy manager, who regularly oversees energy usage, will now be able to use historical energy consumption performance to analyze and set targets.

Targeted End Uses: Process and systems

Delivery: LDC delivered with Key Account Management support, in some cases.

Additional detail is available:

- Schedule D-2 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-2%20Monitoring%20and%20Targeting%20Initiative.pdf and
- SaveONenergy website https://saveonenergy.ca/Business.aspx

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

ENERGY MANAGER INITIATIVE (Schedule D-3)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

Objective: The objective of this initiative is to provide customers and LDCs the opportunity to access funding for the engagement of energy managers in order to deliver a minimum annual savings target.

Description: This Initiative provides customers the opportunity to access funding to engage an on-site, full time embedded energy manager, or an off-site roving energy manager who is engaged by the LDC. The role of the energy manager 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 embedded energy manager's salary up to $100,000 plus 80% of the energy manager's actual reasonable expenses incurred up to $8,000 per year. Each embedded energy manager has a target of 300 kW/year of energy savings from one or more facilities. LDCs receive funding of up to $120,000 for a Roving Energy Manager plus $8,000 for expenses.

Targeted End Uses: Process and systems

Delivery: LDC delivered with Key Account Management support, in some cases.

Additional detail is available:

- Schedule D-3 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-3%20Energy%20Manager%20Initiative%202011-2014.pdf and
- SaveONenergy website https://saveonenergy.ca/Business.aspx

In Market Date: St. Thomas Energy has not engaged an Energy Manager

KEY ACCOUNT MANAGER (KAM) (Schedule D-4)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

Objective: This initiative offers LDCs the opportunity to access funding for the employment of a KAM in order to support them in fulfilling their obligations related to the PSUI.

Description: This Initiative provides LDCs the opportunity to utilize a KAM to assist their customers. The KAM is considered to be a key element in assisting the consumer in overcoming traditional barriers related to energy management and help them achieve savings since the KAM can build relationships and become a significant resource of knowledge to the customer.

Targeted End Uses: Process and systems

Delivery: LDC delivered

Additional detail is available:

- ScheduleD-4 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/projects_programs/pdfs/PSUI%20Initiative%20Schedule%20D-4.Key%20Account%20Manager.20110322.pdf

In Market Date: St. Thomas Energy did not engage a Key Account Manager

DEMAND RESPONSE 3 (Schedule D-6)

Target Customer Type(s): Industrial, Commercial, Institutional and Agricultural Customers

Initiative Frequency: Year round

Objective: This Initiative provides for Demand Response ("DR") payments to contracted participants to compensate them for reducing their electricity consumption by a pre-defined amount during a DR event.

Description: Demand Response 3 ("DR3") is a demand response Initiative for commercial and industrial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the year. The DR3 Initiative is a contractual resource that is an economic alternative to procurement of new generation capacity. DR3 comes with specific contractual obligations requiring participants to reduce their use of electricity relative to a baseline when called upon. This Initiative makes payments for participants to be on standby and payments for the actual electricity reduction provided during a demand response

event. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year depending on the contract.

Targeted End Uses: Commercial and Industrial Operations

Delivery: DR3 is delivered by Demand Response Providers ("DRPs"), under contract to the OPA. The OPA administers contracts with all DRPs and Direct Participants (who provide in excess of 5 MW of demand response capacity). OPA provides administration including settlement, measurement and verification, and dispatch. LDCs are responsible for local customer outreach and marketing efforts.

Additional detail is available:

- Schedule D-6 http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-6%20Demand%20Response%203%202011-2014.pdf and
- SaveONenergy website https://saveonenergy.ca/Business.aspx

In Market Date: January 2011

It is noted that while the Schedule for this Initiative was not posted until May 2011, the Aggregators reported that they were able to enroll customers as of January 2011.

Target Customer Type(s): Income Qualified Residential Customers

Initiative Frequency: Year Round

Objective: The objective of this Initiative is to offer free installation of energy efficiency measures to income qualified households for the purpose of achieving electricity and peak demand savings.

Description: This is a turnkey Initiative for income qualified customers. It offers residents the opportunity to take advantage of free installation of energy efficient measures that improve the comfort of their home, increase efficiency, and help them save money. All eligible customers receive a Basic and Extended Measures Audit, while customers with electric heat also receive a Weatherization Audit. The Initiative is designed to coordinate efforts with gas utilities.

Targeted End Uses: End use measures based on results of audit (i.e. compact fluorescent light bulbs)

Delivery: LDC delivered.

Additional detail is available:

- Schedule E http://www.powerauthority.on.ca/sites/default/files/page/Low%20Income%20Schedule%20-%20redacted%20version.pdf

Initiative Activities/Progress:

BPI took the lead on a group RFP for Home Assistance Program provider in 2011. Due to the delay in schedule release, and the time required for the RFP process, BPI was not in market in 2011, however launched in early 2012.

In Market Date: St. Thomas Energy began actively offering this initiative March, 2011.

Appendix B: Pre-2011 Programs

ELECTRICITY RETROFIT INCENTIVE PROGRAM

Target Customer Type(s): Commercial, Institutional, and Agricultural Customers

Initiative Frequency: Year Round

Objective: The objective of this Initiative is to offer incentives to non-residential distribution customers to achieve reductions in electricity demand and consumption by upgrading to more energy efficient equipment for lighting, space cooling, ventilation and other measures.

Description: The Equipment Replacement Incentive Program (ERIP) offered financial incentives to customers for the upgrade of existing equipment to energy efficient equipment. This program was available in 2010 and allowed customers up to 11 months following Pre-Approval to complete their projects. As a result, a number of projects Pre-Approved in 2010 were not completed and in-service until 2011. The electricity savings associated with these projects are attributed to 2011.

Targeted End Uses: Electricity savings measures

Delivery: LDC Delivered

HIGH PERFORMANCE NEW CONSTRUCTION

Target Customer Type(s): Commercial, Institutional, and Agricultural Customers

Initiative Frequency: Year round

Objective: The High Performance New Construction Initiative provided incentives for new buildings to exceed existing codes and standards for energy efficiency. The Initiative uses both a prescriptive and custom approach and was delivered by Enbridge Gas under contract with the OPA (and subcontracted to Union Gas), which ran until December 2010.

Description: The objective of this Initiative is to encourage builders of commercial, institutional, and industrial buildings (including multi-family buildings and agricultural facilities) to reduce electricity demand and/or consumption by designing and building new buildings with more energy-efficient equipment and systems for lighting, space cooling, ventilation and other Measures.

Targeted End Uses: New Building construction, building modeling, lighting, space cooling, ventilation and other measures

Delivery: Through Enbridge Gas (and subcontracted to Union Gas)

MULTIFAMILY ENERGY EFFICIENCY REBATES

Target Customer Type(s): Residential Multi-unit buildings

Initiative Frequency: Year round

Objective: Improve energy efficiency of Multi-unit building

Description: OPA's Multifamily Energy Efficiency Rebates (MEER) Initiative applies to multifamily buildings of six units or more, including rental buildings, condominiums, and assisted social housing. The OPA contracted with GreenSaver to deliver the MEER Initiative outside of the Toronto Hydro service territory. Activities delivered in Toronto were contracted with the City.

Similar to ERII and ERIP, MEER provides financial incentives for prescriptive and custom measures, but also funds resident education. Unlike ERII, where incentives are paid by the LDC, all incentives through MEER are paid through the contracted partner (i.e. GreenSaver).

Targeted End Uses: Electricity saving measures

Delivery: OPA contracted with Greensaver

St. Thomas energy inc.
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File Number:EB-2014-0113

Exhibit: 3
Tab: 1
Schedule: 4

Date Filed: April 25, 2014

Attachment 2 of 2

Final Verified 2012 CDM Annual Report

Message from the Vice President:

The OPA is pleased to provide you with the enclosed Final 2012 Results Report. We have seen a 39% increase in energy savings for our new province-wide 2011-2014 suite of saveONenergy initiatives. Overall progress to targets is moving up with 29% of demand and 65% of energy savings achieved. Many LDCs, both large and small, continue to stay on track to meet or exceed their OEB targets. Conservation programs continue to be a valuable and cost effective resource for customers across the province, over the past two years the program cost to consumers remains within 3 cents per kWh.

Further to programmatic savings, capability building efforts launched in 2011 are yielding healthy enabled savings through Embedded Energy Managers and Audit initiative projects. The strong momentum continues in 2013.

We remain committed to ensuring LDCs are successful in meeting their objectives and our collective efforts to date have improved the current program suite by offering more local program opportunities, implementing a new expedited change management process, and enhancing incentives to make it easier for customers to participate in programs. We invite you to continue to provide your feedback to us and to celebrate our successes as we move forward.

The format of this report was developed in collaboration with the OPA-LDC Reporting and Evaluation Working Group and is designed to help populate LDC annual report templates that will be submitted to the OEB in late September. All results are now considered final for 2012. Any additional 2012 program activity not captured will be reported in the Final 2013 Results Report.

Please continue to monitor saveONenergy E-blasts for any further updates and should you have any other questions or comments please contact LDC.Support@powerauthority.on.ca.

We appreciate your ongoing collaboration and cooperation throughout the reporting and evaluation process. We look forward to another successful year.

Sincerely,

Andrew Pride

Table of Contents

OPA-Contracted Province-Wide CDM Programs FINAL 2012 Results

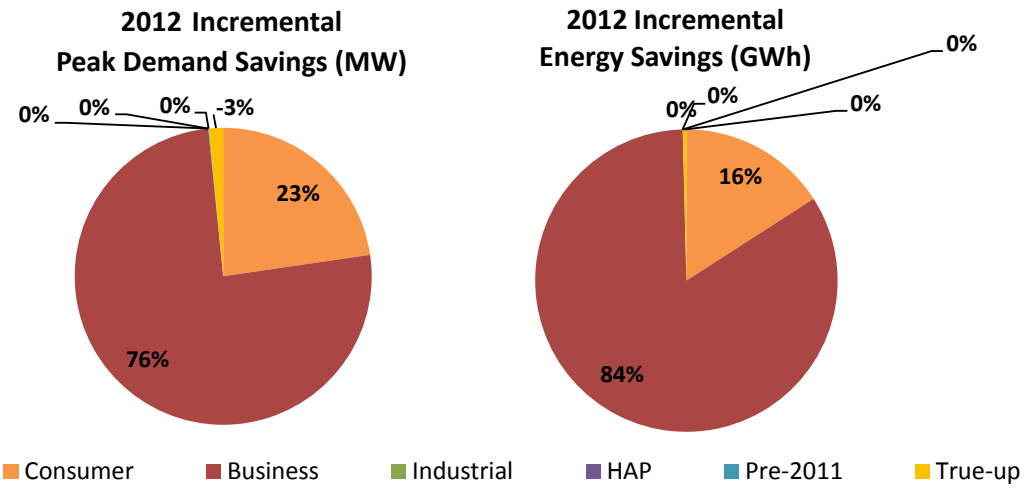
LDC: St. Thomas Energy Inc.

FINAL 2012 Progress to Targets	2012 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)	0.4	0.7	**16.5%**	**17.4%**
Net Energy Savings (GWh)	1.8	10.2	**68.1%**	**68.1%**

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

Scenario 2 = Assumes that demand response resources remain in your territory until 2014

Achievement by Sector



Comparison: Your Achievement vs. LDC Community Achievement (Progress to Target)

The following graphs assume that demand response resources remain in your territory until 2014 (aligns with Scenario 2)

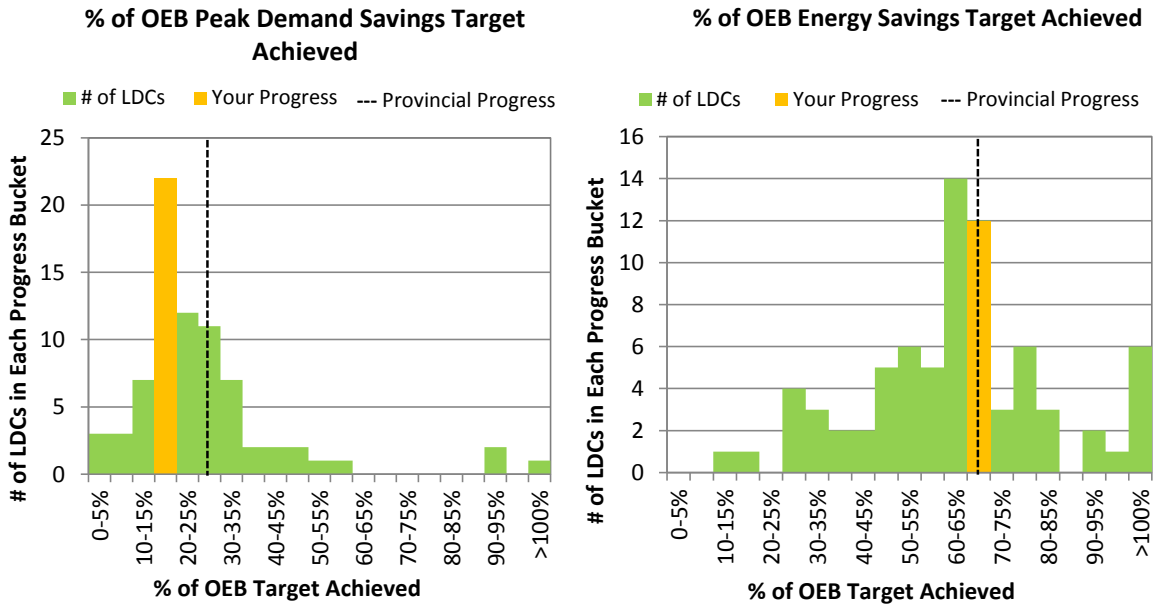


Table 1: **St. Thomas Energy Inc.** Initiative and Program Level Savings by Year (Scenario 1)

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	175	119			11	7			73,726	48,303			17	439,307
Appliance Exchange	Appliances	24	86			2	13			2,671	22,042			13	75,366
HVAC Incentives	Equipment	458	345			131	75			242,763	127,224			206	1,352,724
Conservation Instant Coupon Booklet	Items	1,482	91			3	1			56,382	4,110			4	237,857
Bi-Annual Retailer Event	Items	2,558	3,118			5	4			86,380	78,720			9	581,680
Retailer Co-op	Items	0	0			0	0			0	0			0	0
Residential Demand Response (switch/pstat)	Devices	56	0			31	0			0	0			0	0
Residential Demand Response (IHD)	Devices	0	0			0				0					
Residential New Construction	Homes	0	0			0	0			0	0			0	0
Consumer Program Total						**185**	**99**			**461,921**	**280,399**			**250**	**2,686,934**
Business Program															
Retrofit	Projects	5	21			83	180			593,844	1,013,698			256	5,386,388
Direct Install Lighting	Projects	47	115			61	114			161,971	461,385			147	1,952,103
Building Commissioning	Buildings	0	0			0	0			0	0			0	0
New Construction	Buildings	0	0			0	0			0	0			0	0
Energy Audit	Audits	0	0			0	0			0	0			0	0
Small Commercial Demand Response	Devices	6	0			4	0			0	0			0	0
Small Commercial Demand Response (IHD)	Devices	0	0			0				0				0	0
Demand Response 3	Facilities	1	1			36	37			1,421	531			0	1,952
Business Program Total						**184**	**330**			**757,237**	**1,475,613**			**402**	**7,340,443**
Industrial Program															
Process & System Upgrades	Projects	0	0			0	0			0	0			0	0
Monitoring & Targeting	Projects	0	0			0	0			0	0			0	0
Energy Manager	Projects	0	0			0	0			0	0			0	0
Retrofit	Projects	2				4				26,362				4	105,446
Demand Response 3	Facilities	0	0			0	0			0	0			0	0
Industrial Program Total						**4**	**0**			**26,362**	**0**			**4**	**105,446**
Home Assistance Program															
Home Assistance Program	Homes	0	0			0	0			0	0			0	0
Home Assistance Program Total						**0**	**0**			**0**	**0**			**0**	**0**
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	0	0			0	0			0	0			0	0
High Performance New Construction	Projects	0	0			0	0			841	322			0	4,328
Toronto Comprehensive	Projects	0	0			0	0			0	0			0	0
Multifamily Energy Efficiency Rebates	Projects	0	0			0	0			0	0			0	0
LDC Custom Programs	Projects	0	0			0	0			0	0			0	0
Pre-2011 Programs completed in 2011 Total						**0**	**0**			**841**	**322**			**0**	**4,328**
Other															
Program Enabled Savings	Projects	0	0			0	0			0	0			0	0
Time-of-Use Savings	Homes														
Other Total							**0**				**0**			**0**	**0**
Adjustments to Previous Year's Verified Results							**-7**				**7,134**			**-7**	**28,535**
Energy Efficiency Total						**301**	**393**			**1,244,939**	**1,755,803**			**657**	**10,135,199**
Demand Response Total (Scenario 1)						**72**	**37**			**1,421**	**531**			**0**	**1,952**
OPA-Contracted LDC Portfolio Total (inc. Adjustments)						**373**	**423**			**1,246,360**	**1,763,468**			**650**	**10,165,686**
													Full OEB Target:	**3,940**	**14,920,000**
													% of Full OEB Target Achieved to Date (Scenario 1):	**16.5%**	**68.1%**

Activity & savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.

Due to the limited timeframe of data, which didn't include the summer months, 2012 IHD results have been deemed inconclusive. The IHD line item on the 2012 annual report will be left blank. Once a full year of data is available (2013 evaluation), and the savings are quantified, 2012 results will be updated to reflect the quantified savings.

Table 2: Adjustments to **St. Thomas Energy Inc.** Verified Results due to Errors or Omissions (Scenario 1)

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)	
		2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2014 Net Annual Peak Demand Savings (kW) 2014	2011-2014 Net Cumulative Energy Savings (kWh) 2014
Consumer Program															
Appliance Retirement	Appliances	0				0				0				0	0
Appliance Exchange	Appliances	0				0				0				0	0
HVAC Incentives	Equipment	-44				-13				-24,326				-13	-97,306
Conservation Instant Coupon Booklet	Items	24				0				810				0	3,241
Bi-Annual Retailer Event	Items	240				0				6,418				0	25,671
Retailer Co-op	Items	0				0				0				0	0
Residential Demand Response (switch/pstat)*	Devices	0				0				0				0	0
Residential Demand Response (IHD)	Devices	0				0				0				0	0
Residential New Construction	Homes	0				0				0				0	0
Consumer Program Total						**-13**				**-17,099**				**-13**	**-68,394**
Business Program															
Retrofit	Projects	2				6				24,232				6	96,929
Direct Install Lighting	Projects	0				0				0				0	0
Building Commissioning	Buildings	0				0				0				0	0
New Construction	Buildings	0				0				0				0	0
Energy Audit	Audits	0				0				0				0	0
Small Commercial Demand Response (switch/pstat)*	Devices	0				0				0				0	0
Small Commercial Demand Response (IHD)	Devices	0				0				0				0	0
Demand Response 3*	Facilities	0				0				0				0	0
Business Program Total						**6**				**24,232**				**6**	**96,929**
Industrial Program															
Process & System Upgrades	Projects	0				0				0				0	0
Monitoring & Targeting	Projects	0				0				0				0	0
Energy Manager	Projects	0				0				0				0	0
Retrofit	Projects	0				0				0				0	0
Demand Response 3*	Facilities	0				0				0				0	0
Industrial Program Total						**0**				**0**				**0**	**0**
Home Assistance Program															
Home Assistance Program	Homes	0				0				0				0	0
Home Assistance Program Total						**0**				**0**				**0**	**0**
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	0				0				0				0	0
High Performance New Construction	Projects	0				0				0				0	0
Toronto Comprehensive	Projects	0				0				0				0	0
Multifamily Energy Efficiency Rebates	Projects	0				0				0				0	0
LDC Custom Programs	Projects	0				0				0				0	0
Pre-2011 Programs completed in 2011 Total						**0**				**0**				**0**	**0**
Other															
Program Enabled Savings	Projects	0				0				0				0	0
Time-of-Use Savings	Homes														
Other Total						**0**				**0**				**0**	**0**
Adjustments to Previous Year's Verified Results						**-7**				**7,134**				**-7**	**28,535**

* Activity & savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.

Table 3: St. Thomas Energy Inc. Realization Rate & NTG

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				0.47				1.00				0.47		
Appliance Exchange		1.00				0.52				1.00				0.52		
HVAC Incentives		1.00				0.50				1.00				0.49		
Conservation Instant Coupon Booklet		1.00				1.00				1.00				1.05		
Bi-Annual Retailer Event		1.00				0.91				1.00				0.92		
Retailer Co-op		n/a				n/a				n/a				n/a		
Residential Demand Response (switch/pstat)*		n/a				n/a				n/a				n/a		
Residential Demand Response (IHD)		n/a				n/a				n/a				n/a		
Residential New Construction		n/a				n/a				n/a				n/a		
Business Program																
Retrofit		0.94				0.75				1.11				0.74		
Direct Install Lighting		0.68				0.94				0.85				0.94		
Building Commissioning		n/a				n/a				n/a				n/a		
New Construction		n/a				n/a				n/a				n/a		
Energy Audit		n/a				n/a				n/a				n/a		
Small Commercial Demand Response (switch/pstat)*		n/a				n/a				n/a				n/a		
Small Commercial Demand Response (IHD)		n/a				n/a				n/a				n/a		
Demand Response 3*		n/a				n/a				n/a				n/a		
Industrial Program																
Process & System Upgrades		n/a				n/a				n/a				n/a		
Monitoring & Targeting		n/a				n/a				n/a				n/a		
Energy Manager		n/a				n/a				n/a				n/a		
Retrofit																
Demand Response 3*		n/a				n/a				n/a				n/a		
Home Assistance Program																
Home Assistance Program		n/a				n/a				n/a				n/a		
Pre-2011 Programs completed in 2011																
Electricity Retrofit Incentive Program		n/a				n/a				n/a				n/a		
High Performance New Construction		1.00				0.50				1.00				0.50		
Toronto Comprehensive		n/a				n/a				n/a				n/a		
Multifamily Energy Efficiency Rebates		n/a				n/a				n/a				n/a		
LDC Custom Programs		n/a				n/a				n/a				n/a		
Other																
Program Enabled Savings		n/a				n/a				n/a				n/a		
Time-of-Use Savings		n/a				n/a				n/a				n/a		

Progress Towards CDM Targets

Results are attributed to target using current OPA reporting policies. Energy efficiency resources persist for the duration of the effective useful life. Any upcoming code changes are taken into account. Demand response resources persist for 1 year. Please see methodology tab for more detailed information.

Table 4: Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual			
	2011	2012	2013	2014
2011 - Verified	0.4	0.3	0.3	0.3
2012 - Verified		0.4	0.4	0.4
2013				
2014				
Verified Net Annual Peak Demand Savings Persisting in 2014:				0.7
St. Thomas Energy Inc. 2014 Annual CDM Capacity Target				3.9
Verified Portion of Peak Demand Savings Target Achieved in 2014(%):				16.5%

Table 5: Net Energy Savings at the End User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011 - Verified	1.2	1.2	1.2	1.2	4.9
2012 - Verified		1.8	1.8	1.7	5.3
2013					
2014					
Verified Net Cumulative Energy Savings 2011-2014:					10.2
St. Thomas Energy Inc. 2011-2014 Annual CDM Energy Target					14.9
Verified Portion of Cumulative Energy Target Achieved (%):					68.1%

*2011 energy adjustments included in cumulative energy savings.

Table 6: Province-Wide Initiatives and Program Level Savings by Year

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	56,110	34,146			3,299	2,011			23,005,812	13,424,518			5,171	132,176,857
Appliance Exchange	Appliances	3,688	3,836			371	556			450,187	974,621			689	4,512,525
HVAC Incentives	Equipment	111,587	85,221			32,037	19,060			59,437,670	32,841,283			51,097	336,274,530
Conservation Instant Coupon Booklet	Items	559,462	30,891			1,344	230			21,211,537	1,398,202			1,575	89,040,754
Bi-Annual Retailer Event	Items	870,332	1,060,901			1,681	1,480			29,387,468	26,781,674			3,161	197,894,897
Retailer Co-op	Items	152	0			0	0			2,652	0			0	10,607
Residential Demand Response (switch/pstat)*	Devices	19,550	98,388			10,947	49,038			24,870	359,408			0	384,279
Residential Demand Response (IHD)	Devices	0	49,689			0				0					
Residential New Construction	Homes	7	19			0	2			743	17,152			2	54,430
Consumer Program Total						**49,681**	**72,377**			**133,520,941**	**75,796,859**			**61,696**	**760,348,879**
Business Program															
Retrofit	Projects	2,516	5,605			24,467	61,147			136,002,258	314,922,468			84,018	1,480,647,459
Direct Install Lighting	Projects	20,297	18,494			23,724	15,284			61,076,701	57,345,798			31,181	391,072,869
Building Commissioning	Buildings	0	0			0	0			0	0			0	0
New Construction	Buildings	10	69			123	764			411,717	1,814,721			888	7,091,031
Energy Audit	Audits	103	280			0	1,450			0	7,049,351			1,450	21,148,054
Small Commercial Demand Response	Devices	132	294			84	187			157	1,068			0	1,224
Small Commercial Demand Response (IHD)	Devices	0	0			0				0				0	0
Demand Response 3*	Facilities	145	151			16,218	19,389			633,421	281,823			0	915,244
Business Program Total						**64,617**	**98,221**			**198,124,253**	**381,415,230**			**117,535**	**1,900,875,881**
Industrial Program															
Process & System Upgrades	Projects	0	0			0	0			0	0			0	0
Monitoring & Targeting	Projects	0	0			0	0			0	0			0	0
Energy Manager	Projects	0	39			0	1,086			0	7,372,108			1,086	22,116,324
Retrofit	Projects	433				4,615				28,866,840				4,613	115,462,282
Demand Response 3*	Facilities	124	185			52,484	74,056			3,080,737	1,784,712			0	4,865,449
Industrial Program Total						**57,098**	**75,141**			**31,947,577**	**9,156,820**			**5,699**	**142,444,054**
Home Assistance Program															
Home Assistance Program	Homes	46	5,033			2	566			39,283	5,442,232			569	16,483,831
Home Assistance Program Total						**2**	**566**			**39,283**	**5,442,232**			**569**	**16,483,831**
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	2,016	0			21,662	0			121,138,219	0			21,662	484,552,876
High Performance New Construction	Projects	145	69			5,098	3,251			26,185,591	11,901,944			8,349	140,448,197
Toronto Comprehensive	Projects	577	0			15,805	0			86,964,886	0			15,805	347,859,545
Multifamily Energy Efficiency Rebates	Projects	110	0			1,981	0			7,595,683	0			1,981	30,382,733
LDC Custom Programs	Projects	8	0			399	0			1,367,170	0			399	5,468,679
Pre-2011 Programs completed in 2011 Total						**44,945**	**3,251**			**243,251,550**	**11,901,944**			**48,195**	**1,008,712,030**
Other															
Program Enabled Savings	Projects	0	16			0	2,304			0	1,188,362			2,304	3,565,086
Time-of-Use Savings	Homes														
Other Total							**2,304**				**1,188,362**			**2,304**	**3,565,086**
Adjustments to Previous Year's Verified Results							**1,406**				**18,689,081**			**1,156**	**73,918,598**
Energy Efficiency Total						**136,610**	**109,191**			**603,144,419**	**482,474,435**			**235,998**	**3,826,263,564**
Demand Response Total (Scenario 1)						**79,733**	**142,670**			**3,739,185**	**2,427,011**			**0**	**6,166,196**
OPA-Contracted LDC Portfolio Total (inc. Adjustments)						**216,343**	**253,267**			**606,883,604**	**503,590,526**			**237,154**	**3,906,348,358**
													Full OEB Target:	**1,330,000**	**6,000,000,000**
													% of Full OEB Target Achieved to Date (Scenario 1):	**17.8%**	**65.1%**

* Activity & savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.

Due to the limited timeframe of data, which didn't include the summer months, 2012 IHD results have been deemed inconclusive. The IHD line item on the 2012 annual report will be left blank. Once a full year of data is available (2013 evaluation), and the savings are quantified, 2012 results will be updated to reflect the quantified savings.

Table 7: Adjustments to **Province-Wide** Verified Results due to Errors & Omissions (Scenario 1)

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)	
		2011	2012	2013	2014	2011	2012	2013	2014	2011	2012	2013	2014	2014 Net Annual Peak Demand Savings (kW) 2014	2011-2014 Net Cumulative Energy Savings (kWh) 2014
Consumer Program															
Appliance Retirement	Appliances	0				0				0				0	0
Appliance Exchange	Appliances	0				0				0				0	0
HVAC Incentives	Equipment	-18,866				-5,278				-9,721,817				-5,278	-38,887,267
Conservation Instant Coupon Booklet	Items	8,216				16				275,655				16	1,102,621
Bi-Annual Retailer Event	Items	81,817				108				2,183,391				108	8,733,563
Retailer Co-op	Items	0				0				0				0	0
Residential Demand Response (switch/pstat)*	Devices	0				0				0				0	0
Residential Demand Response (IHD)	Devices	0				0				0				0	0
Residential New Construction	Homes	19				1				13,767				1	55,069
Consumer Program Total						**-5,153**				**-7,249,004**				**-5,153**	**-28,996,015**
Business Program															
Retrofit	Projects	303				3,204				16,216,165				3,083	64,398,674
Direct Install Lighting	Projects	444				501				1,250,388				372	4,624,945
Building Commissioning	Buildings	0				0				0				0	0
New Construction	Buildings	12				828				3,520,620				828	14,082,482
Energy Audit	Audits	93				481				2,341,392				481	9,365,567
Small Commercial Demand Response (switch/pstat)*	Devices	0				0				0				0	0
Small Commercial Demand Response (IHD)	Devices	0				0				0				0	0
Demand Response 3*	Facilities	0				0				0				0	0
Business Program Total						**5,014**				**23,328,565**				**4,764**	**92,471,668**
Industrial Program															
Process & System Upgrades	Projects	0				0				0				0	0
Monitoring & Targeting	Projects	0				0				0				0	0
Energy Manager	Projects	0				0				0				0	0
Retrofit	Projects	0				0				0				0	0
Demand Response 3*	Facilities	0				0				0				0	0
Industrial Program Total						**0**				**0**				**0**	**0**
Home Assistance Program															
Home Assistance Program	Homes	0				0				0				0	0
Home Assistance Program Total						**0**				**0**				**0**	**0**
Pre-2011 Programs completed in 2011															
Electricity Retrofit Incentive Program	Projects	12				138				545,536				138	2,182,145
High Performance New Construction	Projects	34				1,407				2,065,200				1,407	8,260,800
Toronto Comprehensive	Projects	0				0				0				0	0
Multifamily Energy Efficiency Rebates	Projects	0				0				0				0	0
LDC Custom Programs	Projects	0				0				0				0	0
Pre-2011 Programs completed in 2011 Total						**1,545**				**2,610,736**				**1,545**	**10,442,945**
Other															
Program Enabled Savings	Projects	0				0				0				0	0
Time-of-Use Savings	Homes														
Other Total						**0**				**0**				**0**	**0**
Adjustments to Previous Year's Verified Results						**1,406**				**18,690,297**				**1,156**	**73,918,598**

* Activity & savings for Demand Response resources for each year and quarter represent the savings from all active facilities or devices contracted since January 1, 2011.

Table 8: Province-Wide Realization Rate & NTG

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				0.46				1.00				0.47		
Appliance Exchange		1.00				0.52				1.00				0.52		
HVAC Incentives		1.00				0.50				1.00				0.49		
Conservation Instant Coupon Booklet		1.00				1.00				1.00				1.05		
Bi-Annual Retailer Event		1.00				0.91				1.00				0.92		
Retailer Co-op		n/a				n/a				n/a				n/a		
Residential Demand Response (switch/pstat)*		n/a				n/a				n/a				n/a		
Residential Demand Response (IHD)		n/a				n/a				n/a				n/a		
Residential New Construction		3.65				0.49				7.17				0.49		
Business Program																
Retrofit		0.93				0.75				1.05				0.76		
Direct Install Lighting		0.69				0.94				0.85				0.94		
Building Commissioning		n/a				n/a				n/a				n/a		
New Construction		0.98				0.49				0.99				0.49		
Energy Audit		n/a				n/a				n/a				n/a		
Small Commercial Demand Response (switch/pstat)*		n/a				n/a				n/a				n/a		
Small Commercial Demand Response (IHD)		n/a				n/a				n/a				n/a		
Demand Response 3*		n/a				n/a				n/a				n/a		
Industrial Program																
Process & System Upgrades		n/a				n/a				n/a				n/a		
Monitoring & Targeting		n/a				n/a				n/a				n/a		
Energy Manager		1.16				0.90				1.16				0.90		
Retrofit																
Demand Response 3*		n/a				n/a				n/a				n/a		
Home Assistance Program																
Home Assistance Program		0.32				1.00				0.99				1.00		
Pre-2011 Programs completed in 2011																
Electricity Retrofit Incentive Program		n/a				n/a				n/a				n/a		
High Performance New Construction		1.00				0.50				1.00				0.50		
Toronto Comprehensive		n/a				n/a				n/a				n/a		
Multifamily Energy Efficiency Rebates		n/a				n/a				n/a				n/a		
LDC Custom Programs		n/a				n/a				n/a				n/a		
Other																
Program Enabled Savings		1.06				1.00				2.26				1.00		
Time-of-Use Savings		n/a				n/a				n/a				n/a		

Summary - Provincial Progress

Table 9: Province-Wide Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual			
	2011	2012	2013	2014
2011	216.3	136.6	135.8	129.0
2012		253.3	109.8	108.2
2013				
2014				
Verified Net Annual Peak Demand Savings in 2014:				237.2
2014 Annual CDM Capacity Target				1,330
Verified Peak Demand Savings Target Achieved - 2011 (%):				17.8%

Table 10: Province-Wide Net Energy Savings at the End-User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011	606.9	603.0	601.0	582.3	2,393
2012		503.6	498.4	492.6	1,513
2013					
2014					
Verified Net Cumulative Energy Savings 2011-2014:					3,906
2011-2014 Cumulative CDM Energy Target:					6,000
Verified Portion of Energy Target Achieved - 2011 (%):					65.1%

*2011 energy adjustments included in cumulative energy savings.

METHODOLOGY

All results are at the end-user level (not including transmission and distribution losses)

EQUATIONS	
Prescriptive Measures and Projects	**Gross Savings =** Activity * Per Unit Assumption **Net Savings =** Gross Savings * Net-to-Gross Ratio All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)
Engineered and Custom Projects	**Gross Savings =** Reported Savings * Realization Rate **Net Savings =** Gross Savings * Net-to-Gross Ratio All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)
Demand Response	**Peak Demand: Gross Savings = Net Savings =** contracted MW at contributor level * Provincial contracted to ex ante ratio **Energy: Gross Savings = Net Savings =** provincial ex post energy savings * LDC proportion of total provincial contracted MW All savings are annualized (i.e. the savings are the same regardless of the time of year a participant began offering DR)
Adjustments to Previous Year's Verified Results	All errors and omissions from the prior years Final Annual Results report will be adjusted within this report. Any errors and ommissions with regards to projects counts, data lag, and calculations etc., will be made within this report. Considers the cumulative effect of energy savings.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Consumer Program			
Appliance Retirement	Includes both retail and home pickup stream; Retail stream allocated based on average of 2008 & 2009 residential throughput; Home pickup stream directly attributed by postal code or customer selection	Savings are considered to begin in the year the appliance is picked up.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Appliance Exchange	When postal code information is provided by customer, results are directly attributed to the LDC. When postal code is not available, results allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year that the exchange event occurred	
HVAC Incentives	Results directly attributed to LDC based on customer postal code	Savings are considered to begin in the year that the installation occurred	

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Conservation Instant Coupon Booklet	LDC-coded coupons directly attributed to LDC; Otherwise results are allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year in which the coupon was redeemed.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Bi-Annual Retailer Event	Results are allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year in which the event occurs.	
Retailer Co-op	When postal code information is provided by the customer, results are directly attributed. If postal code information is not available, results are allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year of the home visit and installation date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Residential Demand Response	Results are directly attributed to LDC based on data provided to OPA through project completion reports and continuing participant lists	Savings are considered to begin in the year the device was installed and/or when a customer signed a ***peaksaver*** PLUS™ participant agreement.	**Peak demand savings** are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. **Energy savings** are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year and accounts for any “snapback” in energy consumption experienced after the event. Savings are assumed to **persist** for only 1 year, reflecting that savings will only occur if the resource is activated.

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Residential New Construction	Results are directly attributed to LDC based on LDC identified in application in the saveONenergy CRM system; Initiative was not evaluated in 2011, reported results are presented with forecast assumptions as per the business case.	Savings are considered to begin in the year of the project completion date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Business Program			
Efficiency: Equipment Replacement	Results are directly attributed to LDC based on LDC identified at the facility level in the saveONenergy CRM; Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see "Reference Tables" tab for Building type to Sector mapping	Savings are considered to begin in the year of the actual project completion date on the iCON CRM system.	**Peak demand and energy savings** are determined by the total savings for a given project as reported in the iCON CRM system (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
	Additional Note: project counts were derived by filtering out "Application Status" = "Post-Project Submission - Payment denied by LDC" and only including projects with an "Actual Project Completion Date" in 2012 and pulling both the "Application Name" field followed by the "Building Address 1" field from the Post Stage Retrofit Report and finally performing a count of the Building Addresses.		

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Direct Installed Lighting	Results are directly attributed to LDC based on the LDC specified on the work order	Savings are considered to begin in the year of the actual project completion date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumptions multiplied by the uptake of each measure accounting for the realization rate for both peak demand and energy to reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings take into account net-to-gross factors such as free-ridership and spillover for both peak demand and energy savings at the program level (net).
Existing Building Commissioning Incentive	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated, no completed projects in 2011 or 2012.	Savings are considered to begin in the year of the actual project completion date.	**Peak demand and energy savings** are determined by the total savings for a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
New Construction and Major Renovation Incentive	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year of the actual project completion date.	
Energy Audit	Projects are directly attributed to LDC based on LDC identified in the application	Savings are considered to begin in the year of the audit date.	**Peak demand and energy savings** are determined by the total savings resulting from an audit as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Commercial Demand Response (part of the Residential program schedule)	Results are directly attributed to LDC based on data provided to OPA through project completion reports and continuing participant lists	Savings are considered to begin in the year the device was installed and/or when a customer signed a ***peaksaver*** PLUS™ participant agreement.	**Peak demand savings** are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. **Energy savings** are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year. Savings are assumed to **persist** for only 1 year, reflecting that savings will only occur if the resource is activated.
Demand Response 3 (part of the Industrial program schedule)	Results are attributed to LDCs based on the total contracted megawatts at the contributor level as of December 31st, applying the provincial ex ante to contracted ratio (ex ante estimate/contracted megawatts); Ex post energy savings are attributed to the LDC based on their proportion of the total contracted megawatts at the contributor level.	Savings are considered to begin in the year in which the contributor signed up to participate in demand response.	**Peak demand savings** are ex ante estimates based on the load reduction capability that can be expected for the purposes of planning. The ex ante estimates factor in both scheduled non-performances (i.e. maintenance) and historical performance. **Energy savings** are based on an ex post estimate which reflects the savings that actually occurred as a results of activations in the year. Savings are assumed to persist for 1 year, reflecting that savings will not occur if the resource is not activated and additional costs are incurred to activate the resource.
Industrial Program			
Process & System Upgrades	Results are directly attributed to LDC based on LDC identified in application in the saveONenergy CRM system; Initiative was not evaluated, no completed projects in 2011 or 2012.	Savings are considered to begin in the year in which the incentive project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Monitoring & Targeting	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated, no completed projects in 2011 or 2012.	Savings are considered to begin in the year in which the incentive project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
Energy Manager	Results are directly attributed to LDC based on LDC identified in the application; No completed projects in 2011 or 2012.	Savings are considered to begin in the year in which the project was completed by the energy manager. If no date is specified the savings will begin the year of the Quarterly Report submitted by the energy manager.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Results are directly attributed to LDC based on LDC identified at the facility level in the saveONenergy CRM; Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see "Reference Tables" tab for Building type to Sector mapping	Savings are considered to begin in the year of the actual project completion date on the iCON CRM system.	**Peak demand and energy savings** are determined by the total savings for a given project as reported in the iCON CRM system (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
Demand Response 3	Results are attributed to LDCs based on the total contracted megawatts at the contributor level as of December 31st, applying the provincial ex ante to contracted ratio (ex ante estimate/contracted megawatts); Ex post energy savings are attributed to the LDC based on their proportion of the total contracted megawatts at the contributor level.	Savings are considered to begin in the year in which the contributor signed up to participate in demand response.	**Peak demand savings** are ex ante estimates based on the load reduction capability that can be expected for the purposes of planning. The ex ante estimates factor in both scheduled non-performances (i.e. maintenance) and historical performance. **Energy savings** are based on an ex post estimate which reflects the savings that actually occurred as a results of activations in the year. Savings are assumed to persist for 1 year, reflecting that savings will not occur if the resource is not activated and additional costs are incurred to activate the resource.
Home Assistance Program			

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Home Assistance Program	Results are directly attributed to LDC based on LDC identified in the application.	Savings are considered to begin in the year in which the measures were installed.	**Peak demand and energy savings** are determined using the measure level per unit assumption multiplied by the uptake of each measure (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Pre-2011 Programs completed in 2011			
Electricity Retrofit Incentive Program	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated in 2011 or 2012, assumptions as per 2010 evaluation	Savings are considered to begin in the year in which a project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). **If energy savings are not available,** an estimate is made based on the kWh to kW ratio in the provincial results from the 2010 evaluated results (http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports).
High Performance New Construction	Results are directly attributed to LDC based on customer data provided to the OPA from Enbridge; Initiative was not evaluated in 2011 or 2012, assumptions as per 2010 evaluation	Savings are considered to begin in the year in which a project was completed.	
Toronto Comprehensive	Program run exclusively in Toronto Hydro-Electric System Limited service territory; Initiative was not evaluated in 2011 or 2012, assumptions as per 2010 evaluation		

Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
Multifamily Energy Efficiency Rebates	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated in 2011 or 2012, assumptions as per 2010 evaluation	Savings are considered to begin in the year in which a project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). **If energy savings are not available,** an estimate is made based on the kWh to kW ratio in the provincial results from the 2010 evaluated results (http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports).
Data Centre Incentive Program	Program run exclusively in PowerStream Inc. service territory; Initiative was not evaluated in 2011, assumptions as per 2009 evaluation		
EnWin Green Suites	Program run exclusively in ENWIN Utilities Ltd. service territory; Initiative was not evaluated in 2011 or 2012, assumptions as per 2010 evaluation		

ERII Sector (C&I vs. Industrial Mapping)	
Building Type	**Sector**
Agribusiness - Cattle Farm	C&I
Agribusiness - Dairy Farm	C&I
Agribusiness - Greenhouse	C&I
Agribusiness - Other	C&I
Agribusiness - Other,Mixed-Use - Office/Retail	C&I
Agribusiness - Other,Office,Retail,Warehouse	C&I
Agribusiness - Other,Office,Warehouse	C&I
Agribusiness - Poultry	C&I
Agribusiness - Poultry,Hospitality - Motel	C&I
Agribusiness - Swine	C&I
Convenience Store	C&I
Education - College / Trade School	C&I
Education - College / Trade School,Multi-Residential - Condominium	C&I
Education - College / Trade School,Multi-Residential - Rental Apartment	C&I
Education - College / Trade School,Retail	C&I
Education - Primary School	C&I
Education - Primary School,Education - Secondary School	C&I
Education - Primary School,Multi-Residential - Rental Apartment	C&I
Education - Primary School,Not-for-Profit	C&I
Education - Secondary School	C&I
Education - University	C&I
Education - University,Office	C&I
Hospital/Healthcare - Clinic	C&I
Hospital/Healthcare - Clinic,Hospital/Healthcare - Long-term Care,Hospital/Healthcare - Medical Building	C&I
Hospital/Healthcare - Clinic,Industrial	C&I
Hospital/Healthcare - Clinic,Retail	C&I
Hospital/Healthcare - Long-term Care	C&I
Hospital/Healthcare - Long-term Care,Hospital/Healthcare - Medical Building	C&I
Hospital/Healthcare - Medical Building	C&I
Hospital/Healthcare - Medical Building,Mixed-Use - Office/Retail	C&I
Hospital/Healthcare - Medical Building,Mixed-Use - Office/Retail,Office	C&I
Hospitality - Hotel	C&I
Hospitality - Hotel,Restaurant - Dining	C&I
Hospitality - Motel	C&I
Industrial	Industrial
Mixed-Use - Office/Retail	C&I
Mixed-Use - Office/Retail,Industrial	Industrial
Mixed-Use - Office/Retail,Mixed-Use - Other	C&I
Mixed-Use - Office/Retail,Mixed-Use - Other,Not-for-Profit,Warehouse	C&I
Mixed-Use - Office/Retail,Mixed-Use - Residential/Retail	C&I
Mixed-Use - Office/Retail,Office,Restaurant - Dining,Restaurant - Quick Serve,Retail,Warehouse	C&I

Mixed-Use - Office/Retail,Office,Warehouse	C&I
Mixed-Use - Office/Retail,Retail	C&I
Mixed-Use - Office/Retail,Warehouse	C&I
Mixed-Use - Office/Retail,Warehouse,Industrial	Industrial
Mixed-Use - Other	C&I
Mixed-Use - Other,Industrial	Industrial
Mixed-Use - Other,Not-for-Profit,Office	C&I
Mixed-Use - Other,Office	C&I
Mixed-Use - Other,Other: Please specify	C&I
Mixed-Use - Other,Retail,Warehouse	C&I
Mixed-Use - Other,Warehouse	C&I
Mixed-Use - Residential/Retail	C&I
Mixed-Use - Residential/Retail,Multi-Residential - Condominium	C&I
Mixed-Use - Residential/Retail,Multi-Residential - Rental Apartment	C&I
Mixed-Use - Residential/Retail,Retail	C&I
Multi-Residential - Condominium	C&I
Multi-Residential - Condominium,Multi-Residential - Rental Apartment	C&I
Multi-Residential - Condominium,Other: Please specify	C&I
Multi-Residential - Rental Apartment	C&I
Multi-Residential - Rental Apartment,Multi-Residential - Social Housing Provider,Not-for-Profit	C&I
Multi-Residential - Rental Apartment,Not-for-Profit	C&I
Multi-Residential - Rental Apartment,Warehouse	C&I
Multi-Residential - Social Housing Provider	C&I
Multi-Residential - Social Housing Provider,Industrial	C&I
Multi-Residential - Social Housing Provider,Not-for-Profit	C&I
Not-for-Profit	C&I
Not-for-Profit,Office	C&I
Not-for-Profit,Other: Please specify	C&I
Not-for-Profit,Warehouse	C&I
Office	C&I
Office,Industrial	Industrial
Office,Other: Please specify	C&I
Office,Other: Please specify,Warehouse	C&I
Office,Restaurant - Dining	C&I
Office,Restaurant - Dining,Industrial	Industrial
Office,Retail	C&I
Office,Retail,Industrial	C&I
Office,Retail,Warehouse	C&I
Office,Warehouse	C&I
Office,Warehouse,Industrial	Industrial
Other: Please specify	C&I
Other: Please specify,Industrial	Industrial
Other: Please specify,Retail	C&I
Other: Please specify,Warehouse	C&I
Restaurant - Dining	C&I
Restaurant - Dining,Retail	C&I

Restaurant - Quick Serve	C&I
Restaurant - Quick Serve,Retail	C&I
Retail	C&I
Retail,Industrial	Industrial
Retail,Warehouse	C&I
Warehouse	C&I
Warehouse,Industrial	Industrial

Consumer Program Allocation Methodology

Results can be allocated based on average of 2008 & 2009 residential throughput for each LDC (below) when additional information is not available. Source: OEB Yearbook Data 2008 & 2009

Local Distribution Company	Allocation
Algoma Power Inc.	0.2%
Atikokan Hydro Inc.	0.0%
Attawapiskat Power Corporation	0.0%
Bluewater Power Distribution Corporation	0.6%
Brant County Power Inc.	0.2%
Brantford Power Inc.	0.7%
Burlington Hydro Inc.	1.4%
Cambridge and North Dumfries Hydro Inc.	1.0%
Canadian Niagara Power Inc.	0.5%
Centre Wellington Hydro Ltd.	0.1%
Chapleau Public Utilities Corporation	0.0%
COLLUS Power Corporation	0.3%
Cooperative Hydro Embrun Inc.	0.0%
E.L.K. Energy Inc.	0.2%
Enersource Hydro Mississauga Inc.	3.9%
ENTEGRUS	0.6%
ENWIN Utilities Ltd.	1.6%
Erie Thames Powerlines Corporation	0.4%
Espanola Regional Hydro Distribution Corporation	0.1%
Essex Powerlines Corporation	0.7%
Festival Hydro Inc.	0.3%
Fort Albany Power Corporation	0.0%
Fort Frances Power Corporation	0.1%
Greater Sudbury Hydro Inc.	1.0%
Grimsby Power Inc.	0.2%
Guelph Hydro Electric Systems Inc.	0.9%
Haldimand County Hydro Inc.	0.4%
Halton Hills Hydro Inc.	0.5%
Hearst Power Distribution Company Limited	0.1%
Horizon Utilities Corporation	4.0%
Hydro 2000 Inc.	0.0%
Hydro Hawkesbury Inc.	0.1%
Hydro One Brampton Networks Inc.	2.8%
Hydro One Networks Inc.	30.0%

Hydro Ottawa Limited	5.6%
Innisfil Hydro Distribution Systems Limited	0.4%
Kashechewan Power Corporation	0.0%
Kenora Hydro Electric Corporation Ltd.	0.1%
Kingston Hydro Corporation	0.5%
Kitchener-Wilmot Hydro Inc.	1.6%
Lakefront Utilities Inc.	0.2%
Lakeland Power Distribution Ltd.	0.2%
London Hydro Inc.	2.7%
Middlesex Power Distribution Corporation	0.1%
Midland Power Utility Corporation	0.1%
Milton Hydro Distribution Inc.	0.6%
Newmarket - Tay Power Distribution Ltd.	0.7%
Niagara Peninsula Energy Inc.	1.0%
Niagara-on-the-Lake Hydro Inc.	0.2%
Norfolk Power Distribution Inc.	0.3%
North Bay Hydro Distribution Limited	0.5%
Northern Ontario Wires Inc.	0.1%
Oakville Hydro Electricity Distribution Inc.	1.5%
Orangeville Hydro Limited	0.2%
Orillia Power Distribution Corporation	0.3%
Oshawa PUC Networks Inc.	1.2%
Ottawa River Power Corporation	0.2%
Parry Sound Power Corporation	0.1%
Peterborough Distribution Incorporated	0.7%
PowerStream Inc.	6.6%
PUC Distribution Inc.	0.9%
Renfrew Hydro Inc.	0.1%
Rideau St. Lawrence Distribution Inc.	0.1%
Sioux Lookout Hydro Inc.	0.1%
St. Thomas Energy Inc.	0.3%
Thunder Bay Hydro Electricity Distribution Inc.	0.9%
Tillsonburg Hydro Inc.	0.1%
Toronto Hydro-Electric System Limited	12.8%
Veridian Connections Inc.	2.4%
Wasaga Distribution Inc.	0.2%
Waterloo North Hydro Inc.	1.0%
Welland Hydro-Electric System Corp.	0.4%
Wellington North Power Inc.	0.1%
West Coast Huron Energy Inc.	0.1%
Westario Power Inc.	0.5%
Whitby Hydro Electric Corporation	0.9%
Woodstock Hydro Services Inc.	0.3%

Reporting Glossary

Annual: the peak demand or energy savings that occur in a given year (includes resource savings from new program activity in a given year and resource savings persisting from previous years).

Cumulative Energy Savings: represents the sum of the annual energy savings that accrue over a defined period (in the context of this report the defined period is 2011 - 2014). This concept does not apply to peak demand savings.

End-User Level: resource savings in this report are measured at the customer level as opposed to the generator level (the difference being line losses).

Free-ridership: the percentage of participants who would have implemented the program measure or practice in the absence of the program.

Incremental: the new resource savings attributable to activity procured in a particular reporting period based on when the savings are considered to 'start' (please see table 5).

Initiative: a Conservation & Demand Management offering focusing on a particular opportunity or customer end-use (i.e. Retrofit, Fridge & Freezer Pickup).

Net-to-Gross Ratio: The ratio of net savings to gross savings, which takes into account factors such as free-ridership and spillover

Net Energy Savings (MWh): energy savings attributable to conservation and demand management activities net of free-riders, etc.

Net Peak Demand Savings (MW): peak demand savings attributable to conservation and demand management activities net of free-riders, etc.

Program: a group of initiatives that target a particular market sector (i.e. Consumer, Industrial).

Realization Rate: A comparison of observed or measured (evaluated) information to original reported savings which is used to adjust the gross savings estimates.

Settlement Account: the grouping of demand response facilities (contributors) into one contractual agreement

Spillover: Reductions in energy consumption and/or demand caused by the presence of the energy efficiency program, beyond the program-related gross savings of the participants. There can be participant and/or non-participant spillover.

Unit: for a specific initiative the relevant type of activity acquired in the market place (i.e. appliances picked up, projects completed, coupons redeemed).

ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS

The following tables provide a summary of the kWh, kW, customer counts and connections by rate classification for the historical, Bridge and Test Years. For the 2014BY and the 2015TY, average customer counts were utilized through the application.

The total system weather normalized kWh for the historical years include the following calculations:

- ERA adopted the most recent 10 year monthly degree day average as the weather normal.
- 10 year trend HDD and CDD
- 20 year trend HDD and CDD
- Employment outlook for 2014 and 2015 from four Canadian Chartered Banks

The full analysis, including the regression results and the regression models are provided in the ERA report provided as Appendix 1 to this exhibit.

HISTORICAL AND FORECASTED CUSTOMER INFORMATION

STEI is forecasting energy consumption for the 2015 Test year, adjusted for CDM, is 282,470,283 kWh's or 5.5% less than the 2011 COS Board Approved amount of 299,029,379 kWh's. As shown in Table 3-8, the reduction is attributed to the GS<50 kW customer class which has experienced a 25% reduction in the number of customers from the 2011 COS Board Approved load forecast.

Table 3-8

METERED KILOWATT-HOURS (kWh)

Customer Class Name	2009 Actual	2010 Actual	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2014 Normalized	2015 Normalized	Change 2015 vs 2011
Residential	115,687,491	120,380,395	122,791,452	118,988,254	117,522,946	117,935,024	121,125,915	121,139,467	2,151,213
GS < 50 kW	37,389,046	36,738,061	40,328,648	36,524,408	36,261,185	38,822,521	40,662,591	40,919,528	4,395,120
GS > 50	**116,185,726**	**122,355,933**	**132,743,408**	**136,380,632**	**134,205,543**	**119,449,425**	**118,091,878**	**117,249,967**	**(19,130,665)**
Sentinel Lighting	56,664	61,318	56,665	61,199	62,373	23,170	23,170	22,987	(38,212)
Street Lighting	3,047,942	3,067,025	3,109,206	3,083,850	3,119,827	3,124,392	3,143,802	3,138,334	54,484
TOTAL	**272,366,869**	**282,602,732**	**299,029,379**	**295,038,343**	**291,171,874**	**279,354,532**	**283,047,356**	**282,470,283**	**(12,568,060)**

METERED KILOWATT (kW)

Customer Class Name	2009 Actual	2010 Actual	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	-	-	-	-	-	-	-	-	-
GS < 50 kW	-	-	-	-	-	-	-	-	-
GS > 50	**345,197**	**346,769**	**348,528**	**340,694**	**359,117**	**306,115**	**301,191**	**299,044**	**(41,650)**
Sentinel Lighting	158	170	157	170	174	177	177	176	6
Street Lighting	8,433	8,487	8,603	8,532	8,607	8,646	8,700	8,685	153
TOTAL	**353,788**	**355,426**	**357,288**	**349,396**	**367,898**	**314,938**	**310,068**	**307,905**	**(41,491)**

CUSTOMERS (CONNECTIONS)

Customer Class Name	2009 Actual	2010 Actual	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	14,261	14,435	14,562	14,576	14,692	14,828	14,973	15,120	544
GS < 50 kW	1,548	1,602	1,676	1,664	1,662	1,720	1,728	1,737	73
GS > 50	**188**	**191**	**192**	**192**	**194**	**142**	**143**	**144**	**(48)**
Sentinel Lighting	47	50	50	51	51	52	52	52	1
Street Lighting	4,741	4,769	4,834	4,791	4,829	4,858	4,888	4,918	127
TOTAL	**20,785**	**21,047**	**21,314**	**21,274**	**21,428**	**21,600**	**21,784**	**21,971**	**697**

Table 3-9 shows the weather normalized and adjusted customer data for the closing of a GS>50kW customer whose load represented approximately 10% of the class total. Therefore, for the purpose of forecasting, the historical amounts have been restated and used to estimate the regression equation. Since May 2013, the consumption at the site has average about 135,000 kWh/month and 360 kW. This amount has been added back to the class in the forecast period to account for the basic upkeep of the site. Table 3-8 below shows the weather normalized customer data from 2009 – 2015.

Table 3-9

WEATHER NORMALIZED CUSTOMER DATA

METERED KILOWATT-HOURS (kWh)

Customer Class Name	2009 Actual	2010 Actual	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2014 Normalized	2015 Normalized	Change 2015 vs 2011
Residential	116,011,804	117,074,732	122,791,452	118,762,394	119,691,873	120,233,411	121,125,915	121,139,467	2,377,073
GS < 50 kW	37,473,899	36,713,870	40,328,648	36,839,589	36,185,135	38,822,521	40,662,591	41,245,470	4,405,881
GS > 50	**118,022,912**	**122,586,355**	**132,743,408**	**122,672,197**	**122,839,457**	**119,499,425**	**118,091,878**	**118,183,915**	**(4,488,282)**
Sentinel Lighting									-
Street Lighting									-
TOTAL	271,508,615	276,374,957	295,863,508	278,274,180	278,716,465	278,555,357	279,880,384	280,568,852	2,294,672

METERED KILOWATT (kW)

Customer Class Name	2009 Actual	2010 Actual	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	-	-	-	-	-	-	-	-	-
GS < 50 kW	-	-	-	-	-	-	-	-	-
GS > 50	**321,888**	**320,021**	**348,528**	**315,112**	**317,188**	**304,653**	**301,191**	**301,426**	**(13,686)**
Sentinel Lighting	158	170	157	170	174	177	177	177	7
Street Lighting	8,433	8,487	8,603	8,532	8,607	8,646	8,700	8,754	222
TOTAL	330,479	328,678	357,288	323,814	325,969	313,476	310,068	310,357	(13,457)

CUSTOMERS (CONNECTIONS)

Customer Class Name	2009 Actual	2010 Actual	2011 Approved	2011 Actual	2012 Actual	2013 Actual	2014 Estimated	2015 Normalized	Change 2015 vs 2011
Residential	14,261	14,435	14,562	14,576	14,692	14,828	14,973	15,120	544
GS < 50 kW	1,548	1,602	1,676	1,664	1,662	1,720	1,728	1,737	73
GS > 50	**188**	**191**	**192**	**192**	**194**	**142**	**143**	**144**	**(48)**
Sentinel Lighting	47	50	50	51	51	52	52	52	1
Street Lighting	4,741	4,769	4,834	4,791	4,829	4,858	4,888	4,918	127
TOTAL	20,785	21,047	21,314	21,274	21,428	21,600	21,784	21,971	697

VARIANCE ANALYSIS

Customer and Connections

STEI is forecasting an increase in total customers, excluding street lighting and sentinel lighting, of 569 in the 2015TY over the 2011 actual customer number. The increase is primarily in the residential class, the GS > 50 kW class reduction in 2013 is primarily related to reclassification of accounts to GS < 50 kW class. STEI did experience the loss of a significant GS > 50 kW customer.

Average Annual Consumption

The following table 3-10 provides the average consumption per customer/connection for five historical years, the 2011 Board Approved cost of service year, and the forecasted average consumption per customer/connection for the 2014BY and the 2015TY. Table 3-10 below shows the average customer kWh consumption from 2009 to 2015.

Table 3-10

AVERAGE CUSTOMER kWh CONSUMPTION

Customer Class Name	2009 Actual	2010 Actual	2011 Board Approved	2011 Actual	2012 Actual	2013 Actual	2014 BY	2015 TY	Change 2015TY vs 2011 Actual
Residential	8,112	8,339	8,432	8,163	7,999	7,954	8,090	8,012	(151)
GS < 50 kW	24,153	22,933	24,062	21,950	21,818	22,571	23,532	23,558	1,608
GS > 50	618,009	640,607	691,372	710,316	691,781	841,193	825,817	814,236	103,920
Sentinel Lighting	121	1,226	1,133	1,200	1,223	446	446	442	(758)
Street Lighting	643	643	643	644	646	643	643	638	(6)

The following Table 3-11 provides the weather normalized average consumption for the residential, GS < 50 kW and GS > 50 kW classes.

Table 3-11

WEATHER NORMALIZED AVERAGE CUSTOMER kWh CONSUMPTION

Customer Class Name	2009 Actual	2010 Actual	2011 Board Approved	2011 Actual	2012 Actual	2013 Actual	2014 BY	2015 TY	Change 2015TY vs 2011 Actual
Residential	8,135	8,110	8,432	8,148	8,147	8,109	8,090	8,012	(136)
GS < 50 kW	24,208	22,918	24,062	22,139	21,772	22,571	23,532	23,745	1,606
GS > 50	627,781	641,813	691,372	638,918	633,193	841,545	825,817	820,722	181,804

Residential average consumption for the 2015TY of 8,012 kWh's is 136 kWh or 1.7% less than the 2011 average of 8,148. Residential average consumption has been trending downwards since 2012. Conversely, the GS > 50 kW consumption for the 2015TY of 23,754 kWh's is 1,606 or 7.3% higher than the 2011 average of 22,139. The increase is evident in 2013 when STEI reclassified a number of GS > 50 kW customer to GS < 50 kW customer class.

2011 Board Approved vs 2011 Actual

As shown in the Table 3-12, the historical actual billed consumption of 295,038,343 kWh's is 3,991,036 or 1.3% less than the 2011 Board Approved. The residential and GS < 50 class actual consumption was approximately 7,607,000 kWh's less than approved whereas the GS < 50 class increased by approximately 3,637,000 kWh's.

The weather normalized consumption of 281,419,229 is 17,101,150 or 5.9% less than the Board Approved. The normalized consumption is impacted by two items:

1. STEI did not have normalized kWh's for Street light or Sentinel Light consumption in its 2011 submission and has used actual in the normalized totals

2. Restatement of the closure of a GS > 50 kW customer who represented 10% of the class consumption.

Table 3-12

Year 2010	Consumption	Variance from Board Approved
Board Approved	299,029,379	
Actual	295,038,343	-1.3%
Normalized	281,419,229	-5.9%

Weather Normalized Consumption 2012 to 2015

Table 3-13 provides the year over year variance in historical weather normalized billed volumes for the 2011, 2012 and 2013 Actuals, 2014BY and 2015TY. For the purpose of forecasting and to provide more accurate comparative information, in 2009 ERA excluded the consumption related to the GS > 50 kW customer closure. This customer has been consuming on average 135,000 kWh's per month Since May 2013, this amount has been added back to the forecast.

Table 3-13

Year 2009 - 2015	Consumption Normalized	Variance from Previous Year
2009	274,613,221	
2010	279,503,300	1.8%
2011	281,419,229	0.7%
2012	281,898,665	0.2%
2013	281,702,919	-0.1%
2014BY	283,047,356	0.5%
2015TY	283,730,173	0.2%

Based upon the normalized consumption table, STEI is forecasting very little change and proposes that there is little change expected in consumption for the 2014 BY and 2015 TY.

OPERATING REVENUE VARIANCE ANALYSIS

Summary of Throughput Distribution Revenue Variances

STEI's historical distribution revenue is calculated in accordance with section 2.1.5.4 of the Board's Electricity Reporting and Record Keeping Requirements. Distribution revenue for the 2014BY is calculated based upon forecasted billing quantities and current rates. Distribution revenue for the 2015TY is calculated based upon forecasted billing quantities and proposed rates. A summary of historical revenue by rate class is provided in the following table.

Rate Adjustments

The Board approved STEI's standalone application for the recovery of costs related to smart meter deployment, EB-2012-0348 through a Smart Meter Incremental Revenue Requirement ("SMIRR") rate rider effective January 1, 2013. Prior to the approval of the SMIRR both the revenues and the costs associated with STEI's smart meter deployment were recorded in regulatory deferral accounts. STEI recognized the transfer of smart meter activities in December 2012.

For comparative purposes STEI has shown the per cent variance to the prior year including and excluding the revenues from the smart meter rate riders.

Table 3-14

DISTRIBUTION REVENUE SUMMARY

	2011 Board Approved	2011 Actual	2012 Actual	2013 Actual	2014 BY	2015 TY
Distribution Revenue, (exlcuding smart meter rate riders)	6,168,684	5,913,920	6,176,257	6,143,019	6,713,222	7,466,698
$ Variance		(254,764)	262,337	(33,238)	570,203	753,476
% Variance		-4.1%	4.4%	-0.5%	9.3%	11.2%
Smart meter rate riders	-	-	**846,258**	**654,203**	-	
Distribution including rate riders	**6,168,684**	**5,913,920**	**7,022,515**	**6,797,222**	**6,713,222**	**7,466,698**
$ Variance		(254,764)	1,108,595	(225,293)	(84,000)	753,476
% Variance		-4.1%	18.7%	-3.2%	-1.2%	11.2%

The 2014BY distribution revenues have not been reduced by the anticipated smart meter revenues in order to provide a consistent comparison to the 2015TY.

Historical Throughput Distribution Revenue Variances

The Board establishes distribution rates through periodic cost of service reviews and annual incentive regulation mechanism ("IRM") adjustments. On June 28, 2011 the Board issued its Decision and Order approving STEI's 2011TY Distribution revenue requirement of $6,168,684 EB-2010-0141. Since then, STEI has applied for and received approval for annual mechanistic rate adjustments. The Board approved STEI's stand-alone application for recovery of its costs related to smart meter deployment for rates effective January 1, 2013.

Distribution Revenue by Rate Class

Distribution revenue by rate classification for the historical, Bridge and Test years is provided in the following table 3-15:

Table 3-15

DISTRIBUTION REVENUE SUMMARY

	2011 Board Approved	2011 Actual	2012 Actual	2013 Actual	2014 BY	2015 TY
Distribution						
Residential	3,972,194	3,844,816	4,713,802	4,366,523	4,396,743	4,890,222
GS < 50	934,306	856,824	968,405	1,119,646	1,078,065	1,199,589
GS > 50	1,162,208	1,171,496	1,191,038	1,113,310	1,032,052	1,148,442
Street light	97,014	38,630	145,380	193,017	201,534	224,263
Sentinel light	2,962	2,154	3,891	4,725	4,828	4,182
	6,168,684	**5,913,920**	**7,022,515**	**6,797,222**	**6,713,222**	**7,466,698**
Other Distribution Revenue						
Specific Service Charges	538,827	530,674	312,726	272,405	244,000	243,994
Late Payment Charges	138,817	122,874	118,049	130,857	120,000	120,000
Other Distribution Revenue	71,483	80,918	85,799	84,079	79,998	67,401
Other Income and Deductions	74,672	255,431	280,850	511,274	144,737	64,649
	823,799	**989,897**	**797,424**	**998,615**	**588,735**	**496,044**
Total Operating Revenues	**6,992,483**	**6,903,817**	**7,819,939**	**7,795,837**	**7,301,957**	**7,962,742**

2011 Board Approved vs 2011 Actual

STEI's 2011 actual revenues of $5,913,920 were $254,764 or 4.1% lower than 2011 Board approved distribution revenue amount of $6,168,684. The Board approved a revenue increase of $350,001 effective May 1, however, implementation date was August 1, 2011 which resulted in a revenue shortfall of approximately $204,000, additionally, 2011 actual consumption was less than the Board Approved.

2011 Actual vs 2012 Actual

STEI's 2012 actual revenues of $7,022,515 were $1,108,595 or 18.7% greater than the 2011 actual amount of $5,913,920.

2012 distribution revenues, excluding SMFA, of $6,176,257 were $262,337 or 4.4% greater than the 2011 actual amount of $5,913,920. The increase is attributed the 2011 Board Approved $350,001 revenue increase that was realized in 2012 of approximately $204,000 and increased LRAM recovery of approximately $125,000 which were reduced by a negative Deferred PIL account 1562 decision in which STEI had to refund $278,000. Approximately $182,000 was refunded to customers in 2012 which reduced distribution revenues.

In 2012 STEI adjusted to revenue-to-cost ratios in accordance with the Boards decision EB-2010-0141.

Smart meter revenue of $846,258 represents the amount of the smart meter funding adder.

2012 Actual vs 2013 Actual

STEI's 2013 actual revenues of $6,797,222 were $225,293 or 3.2% less than the 2012 actual amount of $7,022,515.

2013 distribution revenues, excluding SMIRR and SMDR, of $6,143,019 were $33,238 or 0.5% less than the 2012 actual amount of $6,176,257. The decrease is attributed to reduced rate riders of approximately $65,000. STEI also experienced reduced volumetric revenues of approximately $51,000 based upon lower consumption in 2013 of 4% and the closure of a significant GS>50kW customer. The 2013 PIL refund of $87,000 was $95,000 less than the 2012 refund resulting in a positive variance.

In 2013 STEI adjusted the revenue-to-cost ratios to be consistent with the Board decision EB-2010-0141.

Smart meter revenue of $654,203 is $192,055 less than the smart meter funding adder transfer in 2012. The $654,203 represents approved SMIRR and SMDR recoveries.

2013 Actual vs 2014 Bridge Year

STEI's 2014BY distribution revenue forecast of $6,713,222 is $84,000 or 1.2% less than the 2013 actual amount of $6,797,222.

2014BY distribution revenues, excluding smart meter rate riders of $532,901, of $6,203,874 are $60,885 or 1.0% greater than the 2013 actual amount of $6,143,019. The increased revenues is attributed to 2014 IRM application EB-2013-0171 in which STEI received a rate increase of 1.4% for 8 months of the year, May 1, 2014 to December 31, 2014, which equates to 0.93% or approximately $57,000. The remainder if the increase is attributed to the changes related to the 2014 and 2013LRAM recoveries combined with the 2013 PIL refund.

Revenue at Proposed Rates

The following Table 3-16 provides the distribution revenue at existing and proposed rates.

Table 3-16

Revenue at Existing and Proposed Rates

Rate Class	2015 Current Rates	2015 Proposed Rates
Distribution		
Residential	4,396,743	4,890,222
GS < 50	1,078,065	1,199,589
GS > 50	1,032,052	1,148,442
Street light	201,534	224,263
Sentinel light	4,828	4,182
	6,713,222	**7,466,698**

Weather Normalized Distribution Revenue by Rate Class

ERA estimated weather normalized kWh by rate class using the regression equation produced by the Load Forecast Model and substituting actual HDD and CDD with weather the normal HDD and CDD values used in the forecast. As indicated earlier ERA, using the current data available, was able to produce a multiple regression equation for each of the Residential, GS < and > 50 kW customers. Additionally, as STEI lost a significant GS > 50 kW customer, ERA excluded this customer's consumption for the regression analysis.

Based upon the data available to STEI, weather normalized revenue comparisons are provided in Table 3-17 for the 2011, 2012 and 2013 actual as the 2014BY and 2015TY revenues are based upon normalized forecasts. As STEI does not have normalized consumption for the Street Light and Sentinel Light customer classes, only the Residential and GS < and > 50 kW customer revenues have been normalized. As the GS > 50 kW class has been restated the percentage change in normalized kW's has been used as a gross variable revenue adjustment for that class.

Table 3-17

2011

Rate Class	Actual	Normalized	Variance
Residential	3,844,816	3,841,155	0.10%
GS < 50	856,824	861,457	-0.54%
GS > 50	1,171,434	1,170,489	0.08%
Street light	62	62	0.00%
Sentinel light	38,630	38,630	0.00%
Total	**5,911,766**	**5,911,793**	**0.00%**

2012

Rate Class	Actual	Normalized	Variance
Residential	4,713,802	4,748,396	-0.73%
GS < 50	968,405	967,284	0.12%
GS > 50	1,191,038	1,177,244	1.16%
Street light	145,380	145,380	0.00%
Sentinel light	3,891	3,891	0.00%
Total	**7,022,515**	**7,042,194**	**-0.28%**

2013

Rate Class	Actual	Normalized	Variance
Residential	4,366,523	4,403,013	-0.84%
GS < 50	1,119,646	1,117,367	0.20%
GS > 50	1,113,310	1,108,948	0.39%
Street light	193,017	193,017	0.00%
Sentinel light	4,725	4,725	0.00%
Total	**6,797,222**	**6,827,070**	**-0.44%**

Transformer Allowance

STEI currently provides a Transformer Ownership Allowance Credit of 0.60 $/kW to General Service > 50 kW customers that own their own on-site transformer facilities. STEI is proposing to maintain this rate for the 2014 Test Year for eligible customers in the General Service > 50 kW rate classification.

OTHER REVENUE

Other distribution revenue is any revenue that is distribution in nature but that is sourced from means other than distribution rates and does not include interest on deferral and variance accounts.

The other revenues for the 2015TY are forecasted to be $439,044. The details of the other revenues are in OEB Appendix 2-H.

Overall, other revenue has decreased from 2011 actual amount of $918,526 based on the following factors:

- Rent reduction $283,000, with restructuring STEI no longer charges building income rental to AESI,
- Revenue from non rate-regulated operations has decreased by $19,000 as the 2014 amount reflects the water and sewer billing revenues per the 2014 SLA,
- Miscellaneous non-operating income has decreased by $41,000. This amount has primarily been recovery of scrap material, STEI has been consciously reducing it's scrap inventory and material throughout the 2011 to 2013 period and does not anticipate recoveries in the 2015TY,
- SSS fee has been reduced by approximately $10,000 to reflect a change in billing Street Lights from a per connection fee to a per customer fee,
- Cost associated with the recovery of other revenues has increased by $99,000 over the 2011 actual amount.

With regard to the 2012 restructuring STEI is providing water and sewer billing and collecting services to the City of St. Thomas per a 2014 Service Level Agreement based upon a 2013 PricewaterhouseCoopers study. Although not evident in this Other Revenue section, STEI's collection charges have increase by $78,000 over the 2011 actual and $187,000 over the 2011

Board Approved collection charges, some of which is attributed to collection activities associated with water and sewer accounts thereby reducing the total billing and collection costs.

ACCOUNT DESCRIPTIONS

Account 4080 SSS Administration Charges

STEI charges the Board approved rate 0.25 cents per month for customers on standard service supply. The 2015TY estimate is based on the projected number of customers on Standard Supply Service. The 2015 amount reflects a change from charging the fee on a per connection fee for Street Lights to a per customer basis.

Account 4082 Retail Services Revenue

STEI charges the Board Approved rates for retail service revenue.

Account 4084 Service Transaction Requests

STEI charges the Board Approved STR rate.

Account 4210 Rent from Electric Property

This is a specific charge of $22.35 per pole for access to STEI's power poles by other organizations, such as affiliates, telecommunications and cable companies.

Account 4220 Other Electric Revenues

In September 1997 the former ST. Thomas PUC entered into an agreement with Ontario Hydro to supply facilities – Formet Industries. Under the restructuring, STEI is recording revenue per this agreement.

Account 4225 Late Payment Charges

STEI proposes to continue to charge 1.5 per cent per month or 19.56 per cent annually for late payments. This amount is applied to all accounts that are not paid by the due date. Bills are due and payable sixteen days from the mailing date, plus grace days to allow for mailing and payment processing delays. The late payment charges are based on outstanding total bill balance.

Account 4235 Specific Service Charges

STEI charges specific charges based on the Board approved its Tariff of Rates and Charges.

Account 4375 Revenues from Non Rate-Regulated Utility Operations

This account reflects the water and sewer billing and collecting revenues from the City of St. Thomas as well as affiliate revenues. For the 2015TY water and sewer revenues are $294,000 and affiliate support, primarily labour and vehicle is $30,000.

Account 4390 Miscellaneous Non-Operating Income

This account reflects sales of scrap material and miscellaneous items.

Table 3-17 below shows the Other Revenue for STEI.

Table 3-17

Appendix 2-H
Other Operating Revenue

USoA #	USoA Description	2011 Approved	2011 Actual	2011 Actual	2012 Actual	2013 Actual[2]	Bridge Year[3] 2014	Bridge Year[3] 2014	Test Year 2015
	Reporting Basis	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
4080	Standard Supply Service	$ 33,130	$ 48,039	$ 48,039	$ 57,834	$ 58,337		$ 50,000	$ 37,410
4082	Retail Services Revenues	$ 37,386	$ 31,980	$ 31,980	$ 27,269	$ 25,111		$ 29,252	$ 29,245
4084	STR Processing	$ 967	$ 898	$ 898	$ 696	$ 631		$ 746	$ 746
4210	Rent from Electric Property	$ 305,058	$ 312,994	$ 312,994	$ 77,313	$ 34,074		$ 30,000	$ 29,994
4220	Other Electric Revenues	$ 69,935	$ 69,935	$ 69,935	$ 70,135	$ 69,935		$ 65,000	$ 65,000
4225	Late Payment Charges	$ 138,817	$ 122,874	$ 122,874	$ 118,049	$ 130,857		$ 120,000	$ 120,000
4235	Specific Service Charges	$ 163,834	$ 147,745	$ 147,745	$ 165,278	$ 168,396		$ 149,000	$ 149,000
4355	Gain on Disposal		$ -	$ -					
4375	Revenues from Non Rate-Regulated Utility Operations	$ 58,374	$ 343,085	$ 343,085	$ 1,064,456	$ 1,458,239		$ 342,000	$ 324,000
4390	Miscellaneous Non-Operating Income	$ 41,000	$ 41,000	$ 41,000	$ 71,848	$ 129,922		$ 60,000	$ -
Specific Service Charges		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Late Payment Charges		$ 33,130	$ 48,039	$ 48,039	$ 57,834	$ 58,337	$ -	$ 50,000	$ 37,410
Other Operating Revenues		$ 815,371	$ 1,070,512	$ 1,070,512	$ 1,595,044	$ 2,017,165	$ -	$ 795,998	$ 717,985
Other Income or Deductions		-$ 39,559	-$ 200,025	-$ 200,025	-$ 938,566	-$ 1,124,370		-$ 292,256	-$ 299,351
Total		$ 808,942	$ 918,526	$ 918,526	$ 714,312	$ 951,132	$ -	$ 553,742	$ 456,044

YEAR OVER YEAR VARIANCE ANALYSIS OF OTHER REVENUES:

2011 Board Approved vs 2011 Actual

The 2011 actual other revenues of $918,526 were $109,584 greater than the 2011 Board Approved amount of $808,942. The increase is attributed to increased revenues from non-rate regulated operations in the amount of $124,000, which is entirely related to CDM revenues and expenses.

2011 Actual vs 2012 Actual

The 2012 actual other revenues of $714,312 were $204,214 less than the 2011 actual amount of $918,526. The reduction is primarily related to the reduced building rent of $283,000. As

STEI was a fully operational and staffed utility effective January 1, 2012, there was no rental income from its affiliate AESI.

2012 Actual vs 2013 Actual

The 2013 actual other revenues of $951,132 were $236,820 greater than the 2012 amount of $714,312. The increase is mainly attributed to approximately $130,000 thousand of recoverable revenue for work performed in 2011 that was previously recorded as AESI revenues. These include $67,000 of Conservation and Demand Management funding for the 2010 Electricity Retrofit Incentive Program (ERIP), $63,000 for the recovery of HST and debt retirement charges related to bad debt write-offs for the years 2009 to 2012 and $65,000 thousand of scrap inventory sales.

2013 Actual vs 2014BY

The 2014BY other revenues of $553,742 are $397,390 less than the 2013 actual amount of $951,132. The decrease is mainly attributed to the one-time items recovered in 2013 that amounted to $260,000 and STEI has not budgeted for recoverable third party work in 2014.

2014BY vs 2015TY

The 2015 TY other revenues of $456,044 are $97,698 less than the 2014BY amount of $553,742. The decrease is mainly attributed to the fact that STEI is not anticipating $60,000 in continued scrap material recoveries and that the SSS fees have been reduce by $12,590 to reflect the change from a per connection basis to a per customer.