

# Traverse City Light and Power 2011 Biennial Energy Optimization Plan MPSC Case No. U-16724

## Introduction

This Biennial Energy Optimization Plan Review filing by Traverse City Light and Power (TCL&P) complies with Public Act 295 of 2008 (the Act) and the related March 17, 2011 Michigan Public Service Commission Order (MPSC Case No. U-16724). This filing serves as an application for review and revision of the 2012 program and a new plan review for the years 2013, 2014 and 2015. This Energy Optimization (EO) Plan was developed in three sections consistent with the TCL&P 2009 EO Plan filing:

- Section 1 will address each requirement under PA 295 Section 71, Subsection 3 (a-i).
- Section 2 will address the requirements under Attachment E of the MPSC Temporary Order U-15800
- Section 3 has additional information under MPSC Temporary Order U-15800

The 2012-15 programs were developed utilizing the same methodology that the MPSC approved on July 1, 2009 for the TCL&P 2009-12 EO plan.

## **SECTION 1: PA 295 SECTION 71 SUBSECTION 3 REQUIRMENTS**

***Section 71 (3) (a) The EO plan shall offer programs to each customer class including low-income customers;***

The table below shows the total incremental megawatt hour savings required by PA 295 for the TCL&P Energy Optimization programs for years 2012-2015.

<i>Savings is reported in Megawatt hours</i>			<b>Total Savings Required</b>
<b>Program Year</b>	<b>% Saving</b>	<b>Sales Year</b>	<b>MWH</b>
2012	1.00%	2011	3,189
2013	1.00%	2012	3,235
2014	1.00%	2013	3,284
2015	1.00%	2014	3,317

TCL&P developed its Energy Optimization programs to serve all customer classes, including residential low-income. The TCL&P Plan for 2012-2015 is based on allocating approximately 1% of its EO budget to low-income program, 20% to

residential, 73% to commercial and industrial, and 6% to evaluation and administration. Program allocations will be revised on an annual basis in order to continue meeting the goals under PA 295.

Programs that will be offered to each rate class are listed below and are categorized into Low-Income Services, Residential Solutions and Business Solutions. A detailed list of budget amounts and the associated kilowatt savings for each customer class can be found in Attachment A. Program descriptions with budgets and estimated participation levels of the programs that will be offered are included in Attachment B.

### ***Residential Low-income Services***

TCL&P will spend 4% of the residential program budget on low-income programs. Target market for this program continues to be residential customers whose income is estimated to be below 200% of poverty level as defined by the U.S. Department of Health and Human Services. Services will be targeted to diverse segments of the population including those living in single family and multi-family buildings, home owners and renters, and to the extent possible – age and geographic diversity. This program provides funding to upgrade the electric energy efficiency of customers living on limited incomes, thereby lowering their energy bills.

### ***Residential Solutions***

The programs below will be available for all TCL&P Residential Electric Service Rate classes.

- *Residential Services (appliance recycling, lighting, HVAC, etc)*
- *Residential Education Services*
- *Pilot/Emerging Technology Programs*

### ***Business Solutions***

The programs below will be available for all TCL&P commercial and industrial rate classes.

- *Business Services (prescriptive and custom)*
- *Business Education Services*
- *Pilot/Emerging Technology Programs*

### ***Section 71 (3) (b) The EO plan shall specify the necessary funding level;***

In order to achieve the mandatory energy savings targets, the TCL&P Energy Optimization Plan may require the estimated funding levels shown in the table below.

<i>Expenditures Percentage of Retail Sales</i>			<b>Total Spending \$</b>
<b>Program Year</b>	<b>% Spending</b>	<b>Sales Year</b>	
2012	2.0%	2010	\$484,317
2013	2.0%	2011	\$501,745
2014	2.0%	2012	\$536,276
2015	2.0%	2013	\$541,710

Note: Expenditures for 2013, 2014 & 2015 are estimates and may be revised as actual data becomes available.

**Section 71 (3) (c) Describe how EO program costs will be recovered from customers;**

At this time all costs associated with the implementation of the TCL&P Energy Optimization Plan are anticipated to be recovered through the existing rate structure. An annual budget review will be conducted to determine whether existing revenues are adequate to meet targets. If necessary implementation costs may be recovered consistent with Section 89 (2) of Public Act 295. Residential customers may be charged on a volumetric basis; primary and secondary customers may be charged on a per meter basis.

The costs for primary customers will not exceed 1.7% of total retail revenues for that customer class and for residential and secondary will not exceed 2.2% of total retail revenues for those customer classes. [PA 295 Section 89 (3)]

Anticipated TCL&P surcharges for the EO programs are listed in the table below. These surcharges will be evaluated on a periodic basis and revised as needed to ensure adequate funding of the proposed programs.

The estimated monthly charges are shown in the table below.

<b>Levelized Surcharges</b>		<b>2012-15</b>
Residential	Per kWh	0
Secondary 1	Per meter	0
Secondary 2	Per meter	0
Primary	Per meter	0

**Section 71 (3)(d) Ensure, to the extent feasible, that charges collected from a particular customer rate class are spent on EO programs for that rate class;**

Charges for each customer class were developed based on the approximate percentage of programs budget allocations that will be offered for that customer class to the extent feasible.

***Section 71 (3) (e) Demonstrate that proposed EO funding is sufficient to ensure achievement of EO savings standards;***

The TCL&P Program Portfolio was prepared by Janet Brandt from Morgan Marketing Partners to outline goals, budgets, and programs that have the potential to achieve the targets identified in PA 295. The programs described in this plan were modeled based on typical measure characteristics used in similar “best practice” programs across the country, along with specific savings estimates from the new Michigan Deemed Savings Database.

***Section 71 (3)(f) Specify whether electric energy savings will be based on weather normalized sales or the average megawatt hours of electricity sold by the provider annually during the previous 3 years to retail customers;***

The incremental energy savings for the TCL&P Energy Optimization Plan will continue to be calculated utilizing the average number of megawatt hours of electricity sold annually during the previous three years to retail customers.

***Section 71 (3) (g) Demonstrate that the providers EO programs, excluding low-income programs, are collectively cost-effective;***

The TCL&P programs were designed to meet the cost-effective tests as required under PA 295 Sec. 73 (2). The two primary tests that were used to determine if the programs are reasonable and prudent are the Utility System Resource Cost Test and the Cost of Conserved Energy. The definitions according to the California Standard Practices Manual for each of these tests are as follows:

**Utility System Resource Cost Test**

The Utility System Resource Cost Test measures the net costs of an energy efficiency program as a resource option based on the costs incurred by the utility (including incentive costs) and excluding any net costs incurred by the participant.

**Cost of Conserved Energy**

The Cost of Conserved Energy is the average lifecycle cost of an efficiency measure or program expressed in cents per kWh saved over the life of the installed measures.

A table of each program with the Utility Cost Test results and the estimated Cost of Conserved Energy is shown below.

<b>Portfolio Category</b>	<b>Program</b>	<b>UCT Results</b>	<b>CCE Results*</b>
	Low-income	N/A	N/A
<b>Residential</b>	Residential Services	2.6	\$.02
	Education Services	4.3	\$.01
	Pilot/Emerging Technologies	4.3	\$.01
<b>Business</b>	Business Services	4.3	\$.01
	Education Services	4.3	\$.01
	Pilot/Emerging Technologies	4.3	\$.01
<b>Projected Annual Totals</b>		<b>3.9</b>	<b>\$.01</b>

\*The CCE is the present value of the program costs divided by the lifetime savings (\$/kWh).

***Section 71 (3) (h) Provide for practical and effective administration of the EO programs;***

The overall administration of the TCL&P Energy Optimization Plan will continue to be the responsibility of TCL&P personnel with implementation contractors selected in 2012-2015 as needed. TCL&P will make use of experienced in-house personnel who will assure quality and compliance by providing oversight, guidance and direction to the outside implementation contractors. TCL&P personnel will also work with the implementation contractors who have qualified and experienced staff with the technical capabilities and data tracking systems necessary to deliver the programs effectively. This combination will assure effective and efficient program administration.

***Section 71 (3) (i) include a process for obtaining independent expert evaluation of the actual EO savings;***

TCL&P contracted with KEMA Inc. as the independent third-party for the expert evaluation of the EO programs for 2009 through 2011. This contractor was responsible for verifying the incremental gross energy savings from each EO program and providing an annual report of such findings. An evaluation contractor will be selected to provide these same services for the 2012-2015 programs.

## **SECTION 2: REQUIREMENTS UNDER ATTACHMENT E of MPSC Temporary Order U-15800**

### ***MPSC Attachment E Section 3 (a) Plan Elements;***

#### ***Energy Optimization Plan Development Methodology***

The TCL&P 2012–2015 Energy Optimization Program Portfolio outlines goals, budgets and programs that are designed to achieve the energy conservation targets identified in Michigan legislation Public Act 295 (PA 295). The programs in this plan were based on typical measure characteristics used in similar “best practice” programs across the country, along with specific savings estimates from the new Michigan Deemed Savings Database.

The programs were developed utilizing the same methodology that was used in the 2009-2012 TCL&P plan that were approved by the MPSC on July 1, 2009. Specifically, the programs were selected based on the following objectives:

- To provide electric energy savings for residential and commercial/industrial customers through a portfolio of proven “best practice” energy efficiency programs that are cost-effective from a Utility System Resource Cost perspective;
- To develop program designs that can achieve the required energy savings goals within the specified budget caps identified in PA 295;
- To recommend potential opportunities to leverage program funding with other state, regional, and national efforts.
- Incentives are only offered on measures that exceed current codes and standards and are often “tiered” to encourage customers to implement the highest level of efficiency available.

The DSMore model was used to conduct the benefit-cost analysis, using TCL&P projected avoided costs. The model calculates benefit-cost results for each of the major and nationally-defined perspectives: Participant Test, Rate Impact Test, Total Resource Cost Test, and the Utility System Resource Cost Test, as well as the Cost of Conserved Energy.

### ***MPSC Attachment E Section 1 (e) Plan Requirements;***

Other cost-effective tests were utilized to determine cost effectiveness of the TCL&P programs. Brief definitions of those tests according to the California Standard Practices Manual are:

**Utility System Resource Cost Test (UCT)**- The Utility System Resource Cost Test measures the net costs of an energy efficiency program as a resource option based on the costs incurred by the utility (including incentive costs) and excluding any net costs incurred by the participant.

**Total Resource Cost Test (TRC)**-The Total Resource Cost Test measures the net costs of an energy efficiency program as a resource option based on the total costs of the program, including both the participants' and the utility's costs. This test incorporates both the utility's costs and the customers costs associated with purchasing and installing an energy efficiency measure. For DSM programs, those that pass the TRC test with a ratio of greater than 1 is viewed as beneficial to the utility and its customers because the savings in electric costs outweigh the DSM costs.

**Participant Test (PCT)**-The Participants Test is the measure of the quantifiable benefits and costs to the customer due to participation in a program.

**The Ratepayer Impact Measure Test (RIM)**-The Ratepayer Impact Measure (RIM) test measures what happens to customer rates due to changes in utility revenues and operating costs caused by the program. This test indicates the direction and magnitude of the expected change in customer rate level for both participating and non-participating customers.

A table with the multiple cost-effectiveness tests required for each program is shown below.

Portfolio Category	Program	Utility System Resource Cost Test	Total Resource Cost Test	Participant Test	Rate Impact Measure
<b>Residential</b>	Low-income	N/A	N/A	N/A	N/A
	Residential Services	2.6	1.6	2.4	0.7
	Educational Services	4.3	4.3	No Cost	0.7
	Pilot Programs	4.3	4.3	No Cost	0.7
	Residential Portfolio	3.0	2.0	3.1	0.7
<b>Business</b>	Business Services	4.3	1.9	2.2	0.7
	Educational Services	4.3	4.3	No Cost	0.6
	Pilot/Emerging Technology	4.3	4.3	No Cost	0.6
	Business Portfolio	4.3	1.9	2.4	0.7
<b>Total Portfolio (with administrative \$)</b>		<b>3.9</b>	<b>1.9</b>	<b>2.4</b>	<b>0.7</b>

***MPSC Attachment E Section 3 (b-f) Plan Elements;***

- b)** The EO portfolio summary (MPSC Table 2) can be found in Attachment A and a summary of each program (MPSC Table 1) is shown in Attachment B. Savings estimates for all measures are based on the Michigan Deemed Savings Database. To ensure program flexibility, diversity, and maximum customer participation TCL&P will reallocate funding to other programs that are more cost-effective or where technology or market participation impacts require additional resources, but will respect spending criteria among customer classes. Throughout this filing period programs may be added, deleted or changed as necessary in meet the established goals. Any program changes will meet the requirements of PA 295.
- c)** Five percent of budget will be utilized for pilot programs, future energy optimization program development, special projects or to assess emerging technologies. The budgets for pilot programs will also be deemed to generate a proportional amount of required energy savings for each program year where the money is spent.
- d)** Three percent of the EO budget will be used on education programs. These budget expenditures will communicate and educate customers on the benefits of energy efficiency, conservation and load management. Budget funds for education will be deemed to generate a proportional amount of the required energy savings for each program year in which the money is spent. TCL&P programs are designed to include an education component for both the Residential and Business customers.
- e)** The TCL&P Plan includes a residential low-income program and costs for this program will be recovered from each customer rate class in proportion to that rate class' funding of all programs.
- f)** TCL&P has set aside no more than 6% of program budget for program evaluation, measurement and verification activities to determine actual program energy savings.

**SECTION 3: ADDITIONAL INFORMATION**

***Comment Proceedings;***

An opportunity to convey public comments for the TCL&P 2011 Biennial Energy Optimization Plan for 2012-2015 will be communicated to all customers through the TCL&P website, legally posted notices, and regularly scheduled board meetings. All public comments received on the Biennial Energy Optimization Plan will be submitted to the MPSC prior to September 30, 2011.



***Michigan Saves Program;***

TCL&P supports the financing programs that are offered under the Michigan Saves Program that help customers invest in high-efficiency equipment and improvements to their homes and businesses.

***Recovery of Costs from Customers;***

TCL&P does recognize the difference in usage patterns and load characteristics of the secondary customer base and if necessary, will develop two separate charges in response to those differences.

***Coordination of Energy Optimization Programs;***

TCL&P has been and will continue to participate in the EO Collaborative monthly meetings organized by the MPSC through its membership with MMEA. These meetings allow for the evaluation of program development and delivery options that may improve program administration and delivery efficiencies.