Union City
2011 Biennial Energy Optimization Plan
MPSC Case No. U-16725

Introduction

This Biennial Energy Optimization Plan Review filing by the Union City complies with Public Act 295 of 2008 (the Act) and the related March 17, 2011 Michigan Public Service Commission Order MPSC Case No. U-16725. 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 Union City 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 Union City 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 Union City Energy Optimization programs for years 2012-2015.

Savings is reported in Kilowatt hours			**Total Savings Required**
Program Year	**% Saving**	**Sales Year**	**KWH**
2012	1.00%	2011	150,270
2013	1.00%	2012	156,308
2014	1.00%	2013	158,940
2015	1.00%	2014	158,940

Union City developed its Energy Optimization programs to serve all customer classes, including residential low-income. Union City Plan for 2012-2015 is based on allocating approximately 5 percent of its EO budget to low-income program, 52.3 percent to residential, 33.7 percent to commercial and industrial, 5 percent for administrative, and 4 percent to evaluation. 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 kilowatt hour savings of the programs are included in Attachment B.

Residential Low-income Services

Union City will spend five percent of the 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 continue to be available to all Union City residential customers.

_ *Efficient Lighting Program*
_ *Refrigerator/Freezer Turn-In and Recycling Program*
_ *High-Efficiency Appliances and Electronics Program*
_ *High-Efficiency HVAC Equipment*
_ *Residential Education Services*

For future reporting purposes, the Residential programs will be combined into two categories: 1) Residential Services and 2) Education Services.

Business Solutions

The programs below will continue to be available to all Union City commercial and industrial customers.

_ *Commercial and Industrial Prescriptive Incentive Program*
_ Business *Education Services*

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

In order to achieve the mandatory energy savings targets, Union City Energy Optimization Plan will not exceed the estimated funding levels shown in the table below.

Expenditures Percentage of Retail Sales			**Total Spending $**
Program Year	**% Spending**	**Sales Year**	
2012	2.0%	2010	$35,571
2013	2.0%	2011	$37,673
2014	2.0%	2012	$38,050
2015	2.0%	2013	$38,050

Section 71 (3) (c) Describe how EO program costs will be recovered from customers;
All costs associated with the implementation of the Union City Energy Optimization Plan will be recovered consistent with Section 89 (2) of Public Act 295. Residential, secondary and primary customers will 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)]

Union City 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.

Levelized Surcharges		**2012-15**
Residential	Per kWh	$0.000895
Commercial	Per meter	$4.52
Primary	Per meter	NA

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 Union City Program Portfolio was prepared by staff 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 Union City 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 Union City 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. The values are from those approved by the MPSC on July 1, 2009 for Union City Energy Optimization Plan, MPSC Case No. U-15885.

Portfolio Category	Program	USRCT Results	CCE Results
	Low Income	N/A	N/A
Residential	Efficient Lighting	6.7	$0.01
	Refrigerator/Freezer Recycling	3	$0.03
	Efficient Appliances/Electronics	2.4	$0.07
	Efficient HVAC Equipment	3.2	$0.05
	Educational Services	2	$0.04
Business	Prescriptive Incentive Program	4.5	$0.02
	Educational Services	2	$0.04
Projected Annual Totals		**3.9**	**$0.03**

*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 Union City Energy Optimization Plan will continue to be the responsibility of Union City personnel with implementation contractors selected in 2012-2015 as needed. Union City will make use of experienced Union City in-house personnel who will assure quality and compliance.

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

Union City 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 Union City 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 Union City 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.

Due to budget constraints, the Union City will utilize the same benefit-cost test results from the 2009-12 EO Plan that was approved on July 1, 2009. 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 Union City 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. The values are from those approved by the MPSC on July 1, 2009 for the Union City Energy Optimization Plan, MPSC Case No. U-15885.

Portfolio Category	Program	Utility System Resource Cost Test	Total Resource Cost Test	Participant Test	Rate Impact Measure
	Low Income	N/A	N/A	N/A	N/A
Residential	Efficient Lighting	6.7	4.6	4.7	0.9
	Refrigerator/Freezer Recycling	3.0	3.2	No Cost	0.8
	Efficient Appliances/Electronics	2.4	1.4	1.3	1.1
	Efficient HVAC Equipment	3.2	1.6	1.7	1.1
	Educational Services	2.0	2.0	No Cost	0.7
Business	Prescriptive Incentive Program	4.5	2.2	9.1	1.2
	Educational Services	2.0	2.0	No Cost	0.7
Projected Annual Totals		**3.9**	**2.5**	**2.0**	**.9**

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. Union City will reserve 20% of overall budget (by customer class) which will ensure program flexibility and allow for reallocation of 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.

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. Union City programs are designed to include an education component for both the Residential and Business customers.

e) Union City 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) Union City has set aside no more than 4% 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 Union City's 2011 Biennial Energy Optimization Plan for 2012-2015 was communicated to all customers through its website. All public comments received on the Biennial Energy Optimization Plan will either accompany this plan or be submitted to the MPSC prior to October 31, 2011.

Michigan Saves Program;
Union City 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.

Coordination of Energy Optimization Programs;
Union City 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.