

City of Marshall Optimization Plan MPSC Case No. U-(15871)

Introduction

Pursuant to 2008 Public Act 295 (PA 295), the City of Marshall is filing this energy optimization (EO) plan with the Michigan Public Service Commission (MPSC). PA 295 requires each electric energy provider in Michigan to implement an energy optimization plan that reduces electric energy consumption. This EO Plan was developed in three sections:

- 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 will furnish additional information under MPSC Temporary Order U-15800

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 incremental savings in megawatt hours required for the City of Marshall Energy Optimization programs.

<i>Savings is reported in Megawatt hours</i>			Total Savings Required MWH
Program Year	% Saving	Sales Year	
<i>2008-2009</i>	0.30%	2007	357.7
<i>2010</i>	0.50%	2009	579.1
<i>2011</i>	0.75%	2010	860.5
<i>2012</i>	1.0%	2011	1,152.3

The City of Marshall Energy Optimization programs were developed to serve all customer classes including residential low income. The City of Marshall 2009 plan is based on allocating approximately 3% of its EO budget to low income program, 15% to residential, 77% to commercial and industrial, and 5% to evaluation and

administration. Program allocations will be revised on an annual basis in order to continue meeting the goals under PA 295.

Shown in this filing are the first four years of EO programming for City of Marshall plan. The program portfolio is designed to simultaneously satisfy savings and budget goals. The City of Marshall will continue its programming after 2012 consistent with 2008 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. A detailed description, with budgets, of the programs that will be offered to each rate class is included in Attachment B.

Residential Low Income Services

The City of Marshall will spend 3% of the program budget on low income programs. Target market for this program is 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. The City of Marshall will work with the local weatherization or faith based agencies to leverage their funding by subsidizing the installation of cost-effective electric measures, thereby increasing the number of homes served through the program. The program will be marketed through utility bill inserts, the media and existing low-income community organizations and other partners.

Residential Solutions

The programs below will be available to all City of Marshall residential customers.

- *Efficient Lighting Program*
- *Residential Education Services*

Business Solutions

The programs below will be available to all City of Marshall commercial and industrial customers billed on all secondary and primary rates.

- *Commercial and Industrial Prescriptive Incentive Program*
- *Commercial and Industrial Custom Incentive Program*
- *Business Education Services*

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

In order to achieve the mandatory energy savings targets, the City of Marshall's Energy Optimization Plan will require the maximum spending as allowed in Section 89 (7) of Public Act 295. The estimated funding levels are shown in the table below.

<i>Expenditures Percentage of Retail Sales</i>			Total Spending
Program Year	% Spending	Sales Year	\$
2009	0.75%	2007	\$53,134
2010	1.00%	2008	\$80,949
2011	1.50%	2009	\$128,007
2012	2.0%	2010	\$172,257

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

All costs associated with the implementation of the City of Marshall's Energy Optimization Plan will be recovered consistent with Section 89 (2) of Public Act 295. At this time, the City of Marshall will not be implementing surcharges but will fund the program through current rates.

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

The City of Marshall's Program Portfolio was prepared by Summit Blue and Wisconsin Energy Conservation Corporation (WECC) 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 City of Marshall's Energy Optimization Plan will 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 City of Marshall's 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 (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. The benefits for the Utility System Resource Cost Test are the avoided supply costs of energy and demand, the reduction in transmission, distribution, generation, and capacity valued at marginal costs for the periods when there is a load reduction. The costs for the Utility System Resource Cost Test are the program costs incurred by the utility, the incentives paid to the customers, and the increased supply costs for the periods in which load is increased.

Cost of Conserved Energy (CCE)

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 measures installed. The key benefit of calculating the Cost of Conserved Energy is to compare energy efficiency programs to energy supply options. This

calculation places energy efficiency cost estimates at a level comparable to that for supply-side options.

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

Portfolio Category	Program	UCT Results	CCE Results*
	Low Income	N/A	N/A
Residential	Efficient Lighting	6.7	\$0.013
	Education Services	2.3	\$0.034
	Prescriptive Incentive Program	4.8	\$0.023
	Custom Incentive Program	7.9	\$0.014
	Education Services	2.3	\$0.034
Projected Annual Totals		5.1	\$0.020

*The Cost of Conserved Energy is the 10 year levelized \$/kWh.

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

The overall administration of the City of Marshall's Energy Optimization Plan will be the responsibility of City of Marshall's personnel.

The roles and responsibilities of the implementation contractors will be as follows:

- a) Contract financial planning and budgeting,
- b) Proposing and providing delivery plans, implementation schedules/timelines, and milestones for each program,
- c) Data tracking/reporting,
- d) Trade ally recruitment, enrollment, training, technical seminars, workshops, and application completion support,
- e) Strategy and implementation planning/updates with (initials or name of utility) energy programs staff,
- f) Communicate and coordinate marketing efforts with (initials or name of utility) Marketing team,

- g) Call center – coordinate customer interactions with (initials or name of utility) call center staff, contractor to set up single telephone number to manage customer/trade ally questions/concerns,
- h) Provide incentive processing services,
- i) Implement a system for quality control and verification to ensure rebates paid out are for actual measures installed at the appropriate efficiency levels,
- j) Monitor customer satisfaction and implement a system for tracking complaints and satisfactory resolutions,
- k) Assist (initials or name of utility) with Michigan Public Service Commission data requests and explanations including participation (as requested) with any stakeholder meetings,
- l) Coordination with (initials or name of utility) Evaluation, Measurement and Verification (EM&V) contractor.

The City of Marshall will make use of experienced City of Marshall in-house personnel who will assure quality and compliance by providing oversight, guidance and direction to the outside implementation contractors. It 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;

The City of Marshall will be contracting with an independent third-party for the expert evaluation of the EO programs on an annual basis. This contractor will be responsible for verifying the incremental gross energy savings from each EO program and will be responsible for an annual report of such findings.

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

In February of 2009, City of Marshall in cooperation with Michigan Municipal Electric Association (MMEA) contracted with Summit Blue and Wisconsin Energy

Conservation Corporation (WECC) to prepare a portfolio of reliable and cost effective energy efficiency programs for implementation starting in 2009.

The City of Marshall's 2009 – 2012 Energy Optimization Program Portfolio outlines goals, budgets and programs that are designed to achieve the 4-year energy conservation targets identified in Michigan legislation Public Act 295 (PA 295). The programs 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. The programs were modeled using a cost/benefit analysis tool that provides results from several stakeholder perspectives. 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 is 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 outline a program ramp-up schedule that allows for a rapid start up of quality programs with high savings potential;
- To recommend potential opportunities to leverage program funding with other state, regional, and national efforts.

The City of Marshall's Energy Optimization plan implementation strategy is to utilize existing market channels as the most efficient means to drive resource acquisition efforts while maximizing program spillover and sustainable market transformation effects. The programs in the portfolio work closely with market providers in the utility's service territory to educate them on the benefits of selling high efficiency products and services and to assist them in marketing those benefits to their customers. This approach has been proven to induce positive spillover impacts.

The programs are designed to minimize free-ridership by motivating trade allies and customers to (1) pursue projects that they would otherwise not have implemented, 2) pursue these projects sooner than they otherwise would have, or 3) implement equipment/measures at a higher efficiency level than they otherwise would have.

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.

Savings estimates for all measures are based on information in the Michigan Deemed Savings Database, including both weather-sensitive and non weather-sensitive measures. The eQuest model was used to assist in developing the baseline market profiles. The Summit Blue DSM Resource Assessment Model was used to estimate achievable potential for the utility's service area.

A spreadsheet model was used to conduct the benefit-cost analysis, using the (initials or name of utility)'s 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 City of Marshall's programs and the definitions of those tests according to the California Standard Practices Manual are:

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 represents the combination of the effects of a program on both the customers participating and those not participating in a program. The benefits calculated in the Total Resource Cost Test are the avoided supply costs, the reduction in transmission, distribution, generation, and capacity costs valued at marginal cost for the periods when there is a load reduction. The costs in this test are the program costs paid by both the utility and the participants. Thus all equipment costs, installation, operation and maintenance, and administration costs, no matter who pays for them, are included in this test. 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 benefits of participation in a demand-side program include the reduction in the customer's utility bill and any incentive paid by the utility. The costs to a customer of program participation are all out-of-pocket expenses incurred as a result of participating in a program, plus any increases in the customer's utility bill.

The Ratepayer Impact Measure Test (RIM)

The Ratepayer Impact Measure (RIM) test measures what happens to customer bills or 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 bills or rate levels. The benefits calculated in the RIM test are the savings from avoided supply costs. The costs for this test are the program costs incurred by the utility; the incentives paid to the participant, and decreased revenues for any periods in which load have been decreased.

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
	Low Income	N/A	N/A	N/A	N/A
Residential	Efficient Lighting	6.7	4.6	4.6	0.7
	Education Services	2.3	2.3	No Cost	0.7
	Prescriptive Incentive Program	4.8	2.1	2.1	1.2
	Custom Incentive Program	7.9	3.1	3.3	1.3
	Education Services	2.3	2.3	No cost	0.7
Projected Annual Totals		5.1	2.5	2.7	1.1

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. The City of Marshall will reserve twenty percent 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.

c) 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. City of

Marshall's programs are designed to include an education component for both the Residential and Business customers.

e) The City of Marshall's 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) The City of Marshall has set aside no more than eight percent of program budget for program evaluation, measurement and verification activities to determine actual program energy savings.

MPSC Attachment E Section 4 Self-Directed Energy Optimization Plan for Electric Customers;

The City of Marshall does not have any customers which would qualify for the Self-Directed Energy Optimization Plan.

SECTION 3: ADDITIONAL INFORMATION

Comment Proceedings;

The City of Marshall will provide an opportunity for public comments on the Energy Optimization Plan. A Public Hearing was held on Monday, March 30, 2009 at 7:00 PM at the Marshall City Hall. Written comments were received until noon on Tuesday, March 31, 2009. Minutes of the public hearing and written comments are attached to this filing. Public comments that are not submitted with the Energy Optimization filing will be submitted to the MPSC prior to June 2, 2009

Coordination of Energy Optimization Programs;

The City of Marshall has and will continue to meet with other utilities and agencies regarding the coordination of programs.