COLDWATER BOARD OF PIUBLC UTILITIES

PROPOSED ENERGY OPTIMIZATION PLAN 2012 – 2013

IN ACORDANCE WITH

MICHIGAN PUBLIC UTILIITES COMMISSION

DOCKET U-16693

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MPSC Case No. U-16693

Introduction

Pursuant to the 2008 Michigan Public Act 295 (hereafter 'PA 295'), the Coldwater Board of Public Utilities (hereafter 'CBPU') is filing this energy optimization (EO) plan with the Michigan Public Service Commission (hereafter '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 CBPU Energy Optimization programs during the 2012-2013 timeframe.

Savings is reported in Megawatts Hours			**Total Savings Required**
Program Year	**% Saving**	**Sales Year**	**MWH**
2012	1%	2010	2735
2013	1%	2011	2727

The proposed CBPU Energy Optimization programs herein are modeled on the 2009 through 2011 programs enacted by CBPU and have been developed to serve all customer classes including residential low-income. The proposed CBPU 2012-2013 plan is based on allocating approximately 15% of its EO

budget to the residential low-income program; 36% to the residential class; 46% to the commercial and industrial classes; 9% to the evaluation, measurement, and verification (EM&V) function; and, 10% to program administration. Program allocations will be reviewed (and revised if necessary) on an annual basis in order to continue meeting the savings goals established under PA 295.

This filing provides for the next two years of EO programming for CBPU. The proposed program portfolio is designed to simultaneously satisfy savings and budget goals. CBPU will continue its programming after 2013 consistent with PA 295. Programs that will be offered to each rate class are listed below and are generally categorized into Low-Income Services, Residential Solutions and Business Solutions. A detailed list of proposed budget amounts and the associated kWh savings for each customer class can be found in Attachment A herein. A detailed description (including budgets) of the programs that will be offered to each rate class is included in Attachment B herein.

Proposed change in EO Program Administration

CBPU is currently a member of American Municipal Power, Inc. (hereafter 'AMP') – a non-profit organization that provides wholesale power supply and other services to 129 municipal electric utilities in seven states. CBPU proposes to transfer the administration of its EO programs from CBPU staff to Efficiency Smart (hereafter 'ES'). Efficiency Smart was established by AMP in 2010 and currently provides a program of energy efficiency services to 48 member communities throughout Ohio and Pennsylvania. Efficiency Smart is administered by the Vermont Energy Investment Corporation (hereafter 'VEIC') under contract to AMP through 2013. Efficiency Smart offers a comprehensive set of cost-effective efficiency programs servicing all major customer classes - residential, commercial and industrial. The current AMP/VEIC contract for Efficiency Smart is budgeted at approximately $27 million and has established a performance target of 75,000 MWh savings for the 2011-2013 period. A further description of AMP, the Efficiency Smart program, and VEIC's qualifications to administer energy efficiency programs is provided in Appendix C herein. In addition to the proposed administration of CBPU's energy efficiency programs by Efficiency Smart, AMP will provide for the annual EM&V of claimed savings for the entire portfolio of services offered by Efficiency Smart. AMP has retained Integral Analytics, Inc. (hereafter 'IA') to provide the EM&V services for Efficiency Smart. IA's qualifications are provided in Appendix D herein.

CBPU proposes to change the administration of its EO Program effective January 1, 2012.

Residential Low Income Services

CBPU will spend approximately 15% of the EO program budget on low- income programs. The target market for these services 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 low-income population including those CBPU customers living in single family and multi-family buildings; home owners and renters; and, to the extent possible – cover the age and geographic diversity of this population. These services seek to provide funding to upgrade the electric energy efficiency of customers living on limited incomes. CBPU will work with local agencies to leverage the agencies' funding by subsidizing the installation of certain cost-effective electric efficiency measures, thereby increasing the number of homes served through the program. These low-income services will be marketed through utility bill inserts, the media, and existing low-income community organizations and other partners.

Residential Solutions

The services below will be available (through Efficiency Smart) to all CBPU residential customers on Rates A and A-H.

- *Efficient Lighting*
- *Refrigerator/Freezer Turn-In and Recycling*
- *High-Efficiency Appliances and Electronics*
- *High-Efficiency HVAC Equipment*
- *Electric Water Heater Savings Kits*
- *Residential Education Services*
- *Pilot/Emerging Technology*

Business Solutions

The services listed below will be available (through Efficiency Smart) to all CBPU commercial and industrial customers billed on Rates B, C, D and D-2.

- *Commercial and Industrial Prescriptive Incentive*
- *Commercial and Industrial Custom Incentive*
- *Commercial and Industrial Education*
- *Pilot/Emerging Technology*

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

In order to achieve the mandatory energy savings targets, CBPU'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.

Expenditures as a Percentage of Retail Sales			**Total Spending**
Program Year	**% Spending**	**Sales Year**	**$**
2012	2%	2010	537,000
2013	2%	2011	536,000

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

All costs associated with the implementation of CBPU's Energy Optimization Plan will be recovered consistent with Section 89 (2) of Public Act 295. Residential customers will be charged on a volumetric basis; primary and secondary customers will be charged on a per meter basis. Unmetered Street lighting and Outdoor Lighting customers will be charged on a per lighting unit basis.

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

The program costs for the low-income residential program have been allocated to all customer classes based on the weighting of the customer class's respective program costs to the total EO program costs. Any customers who choose to perform a self-directed program will still be charged a share of the low- income program costs.

CBPU plans to assess monthly levelized surcharges to recover the cost of the proposed 2012-13 Energy Optimization services. Levelizing the proposed EO surcharge rates provides customers consistent rates over the 2012-13 period. It should be noted that 2009 EO rates would have been higher than the levelized surcharge rates employed for 2009 due to the condensed recovery period offered in 2009. Without levelizing rates, CBPU customers would have experienced a decrease in the EO surcharge rate in 2010 with sharp increases in the surcharge rates in subsequent years. For residential customers, levelized surcharge rates were calculated by dividing the total two-year residential service costs for 2012-13 (i.e., including a share of low-income and administrative costs) by the projected residential kWh for the same period. Levelized secondary and primary surcharge rates were calculated by dividing each respective customer groups' two year service costs (i.e., including a share of low-income and administrative costs) by the projected number of billable meters. The resulting surcharge rates are summarized in the table below.

Levelized Surcharges		2012-2013
Residential	Per kWh	$0.00252
Secondary 1	Per meter	$3.76
Secondary 2	Per meter	$27.44
Primary 1	Per meter	$200.60
Primary 2	Per meter	$613.63
Unmetered Lighting	Per fixture	$0.27

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;

Surcharge rates 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 proposed 2012-13 CBPU EO Portfolio was prepared by VEIC to incorporate goals, budgets, and services that have the potential to achieve the targets identified in PA 295. The services described in this plan were modeled based on typical measure characteristics used in similar "best practice" efficiency 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 proposed 2012-13 CBPU 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 proposed 2012-13 CBPU EO services were designed to meet the cost effectiveness tests as required under PA 295 Sec. 73 (2). The two primary tests that were used to determine if the services are reasonable and prudent are the Utility System Resource Cost Test and the Cost of Conserved Energy.

The definitions (i.e., according to the California Standard Practices Manual) for each of these tests are as follows.

Utility System Resource Cost Test (UCT)

The UCT 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 UCT 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 UCT 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 CCE 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 CCE 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 proposed service with the UCT results and the estimated CCE is shown below.

Portfolio Category	Service	UCT Results	CCE Results*
	Low Income	N/A	N/A
Residential	Efficient Lighting	4.5	$0.01
	Refrigerator/Freezer Recycling	4.7	$0.01
	Efficient Appliances/Electronics	2.1	$0.03
	Efficient HVAC Equipment	2.4	$0.02
	Electric Water Heating Kits	1.9	$0.03
	Education Services	3.9	$0.02
	Pilot/Emerging Technologies	4.7	$0.01
Business			
	Prescriptive Incentive	6.3	$0.01
	Custom Incentive	5.8	$0.01
	Education	3.9	$0.02
	Pilot/Emerging Technologies	4.7	$0.01
Projected Annual Totals		4.6	$0.01

*The reported 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 proposed 2012-13 CBPU EO Plan will be the responsibility of VEIC as the implementation contractor for Efficiency Smart. .

The roles and responsibilities of the implementation contractor 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 CBPU energy programs staff;

f) Communicate and coordinate marketing efforts with the CBPU Marketing team;

g) Call center – coordinate customer interactions with the CBPU call center staff; implementation contractor to set-up a 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 CBPU with MPSC data requests and explanations including participation (as requested) with any stakeholder meetings; and,

l) Coordination with AMP's Evaluation, Measurement and Verification (EM&V) contractor.

CBPU will also make use of its experienced CBPU in-house personnel who will assure quality and compliance by providing oversight, guidance and direction to VEIC. CBPU's in-house personnel will also work with VEIC's technical staff and its data tracking systems to deliver the proposed services effectively. This proposed 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;

AMP has conducted a national search for qualified entities to provide EM&V services for its Efficiency Smart program. It has selected Integral Analytics as the independent third-party for the annual evaluation of Efficiency Smart (i.e., including the proposed 2012-13 CBPU EO portfolio). The EM&V contractor will be responsible for verifying the incremental gross energy savings from each proposed EO service 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

The proposed 2012 – 13 CBPU EO Portfolio outlines goals, budgets and services that are designed to achieve the 2-year energy conservation targets identified in Michigan Public Act 295 (PA 295). The services in this proposed plan were modeled based on typical measure characteristics utilized in similar "best practice" programs across the country, along with specific savings estimates from the new Michigan Deemed Savings Database. The proposed services were modeled using a cost/benefit analysis tool that provides results from several stakeholder perspectives. Specifically, the proposed services 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 services that is cost effective from a UCT perspective;
- To develop program designs that can achieve the required energy savings goals within the specified budget caps identified in PA 295; and,
- To recommend potential opportunities to leverage EO funding with other state, regional, and national efforts.

The proposed 2012-13 CBPU EO portfolio implementation strategy is to utilize existing market channels as the most efficient means to drive resource acquisition efforts while maximizing sustainable market transformation effects. The service providers for the proposed CBPU EO portfolio will 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.

A spreadsheet model was used to conduct the benefit-cost analysis, using CBPU'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 UCT, as well as, the CCE.

MPSC Attachment E Section 1 (e) Plan Requirements;

Other cost-effective tests were utilized to determine cost effectiveness of the proposed 2012-13 CBPU services and the definitions of those tests (i.e., according to the California Standard Practices Manual) are:

Total Resource Cost Test (TRC)

The TRC 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 TRC 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 PCT 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 RIM 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 proposed service is shown below:

Portfolio Category	Service	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	4.5	2.5	3.1	0.7
	Refrigerator/Freezer Recycling	4.7	3.7	9.1	0.7
	Efficient Appliances/Electronics	2.1	0.7	0.6	0.6
	Efficient HVAC Equipment	2.4	0.8	0.7	0.7
	Electric Water Heating Kits	1.9	1.9	2.1	0.6
	Education	3.9	3.9	No Cost	0.6
	Pilot/Emerging Technologies	4.7	4.7	No Cost	0.7
Business					
	Prescriptive Incentive	6.3	1.3	1.2	0.7
	Custom Incentive	5.8	4.0	5.7	0.6
	Education	3.9	3.9	No Cost	0.6
	Pilot/Emerging Technologies	4.7	4.7	No Cost	0.6
Projected Annual Totals		5.0	2.4	3.0	0.6

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

b) The EO portfolio summary (MPSC Table 2) can be found in Attachment A herein and a summary of each proposed service (MPSC Table 1) is shown in Attachment B herein. Savings estimates for all measures are based on the Michigan Deemed Savings Database.

c) Three percent of the proposed EO portfolio budget will be utilized for pilot programs, future energy optimization program development, 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) Two percent of the proposed EO portfolio budget will be used on education programs. These budget expenditures will be used to communicate with 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. Proposed CBPU services are designed to include an education component for both the Residential and Business customers.

e) The proposed 2012-13 CBPU EO 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) CBPU has set aside nine percent of the proposed EO portfolio budget for EM&V activities to determine actual portfolio energy savings.

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

CBPU had no customers previously filing self-directed plans.

SECTION 3: ADDITIONAL INFORMATION

Comment Proceedings;

CBPU will provide an opportunity for public comments on the Energy Optimization Plan during a Public Meeting on October 18, 2011 at 5 PM. Any relevant comments received at this Public Meeting will be will be submitted to the MPSC prior to October 21, 2011.

Recovery of Costs from Customers;

CBPU does recognize the difference in usage patterns and load characteristics of the secondary and primary customer base, and has developed separate surcharges in response to those differences.

Coordination of Energy Optimization Programs;

CBPU will continue to meet with other utilities and agencies regarding the coordination of programs.

Coldwater's Energy Optimization Program Portfolio Table 1

Portfolio Category	Program Portfolio	USRCT Results	CCE Results	2012 Gross First Year kWh Savings	2012 Program Budget	2013 Gross First Year kWh Savings	2013 Program Budget
Residential	Low Income Services	NA	NA	70,000	$ 78,400	70,000	$ 78,400
	Efficient Lighting	4.5	$0.01	300,000	$ 38,300	300,000	$ 38,300
	Refrigerator/Freezer Turn-In & Recycling	4.7	$0.01	202,000	$ 24,100	202,000	$ 24,100
	Efficient Appliances	2.1	$0.03	42,000	$ 24,100	42,000	$ 24,100
	HVAC Equipment	2.4	$0.03	14,000	$ 6,600	14,000	$ 6,600
	Electric Water Heating Kits	1.9	$0.03	10,000	$ 5,400	10,000	$ 5,400
	Educational Services	3.9	$0.02	30,000	$ 6,300	30,000	$ 6,300
	Pilot/Emerging Technology	4.7	$0.01	45,000	$ 7,800	45,000	$ 7,800
	Subtotal - Residential Solutions	***3.3***	***$0.02***	***713,000***	***$ 191,000***	***713,000***	***$ 191,000***
Commercial & Industrial	Prescriptive Incentive	6.3	$0.01	500,000	$ 60,700	500,000	$ 60,700
	Custom Incentive	5.8	$0.01	1,441,500	$ 169,600	1,441,500	$ 169,600
	Educational Services	3.9	$0.02	30,000	$ 6,100	30,000	$ 6,100
	Pilot/Emerging Technology	4.7	$0.01	45,000	$ 7,800	45,000	$ 7,800
	Subtotal - Business Solutions	***5.2***	***$0.01***	***2,016,500***	***$ 244,200***	***2,016,500***	***$ 244,200***
	Total Program Portfolio	***4.6***	***$0.01***	***2,729,500***	***$ 435,200***	***2,729,500***	***$ 435,200***
Portfolio-Level Costs	Utility Program Administration				$ 51,900		$ 51,900
	Evaluation (EM&V)				$ 49,700		$ 49,700
	Subtotal - Utility Admin/Evaluation				$ 101,600		$ 101,600
Projected Annual Totals				**2,729,500**	**$ 536,800**	**2,729,500**	**$ 536,800**

Coldwater's Proposed Energy Optimization Services – Table 2

Residential Services

Program Element	**Services for Residential Customers with Limited Incomes**
Objective	• Provide recommendations, financial assistance and education to customers with limited income to assist them in reducing their electric energy use and managing their utility costs. • Coordinate low-income services with other utilities and with local weatherization providers in order to provide comprehensive assistance at lower administrative costs.
Target Market	Residential customers whose income is estimated to be below 200% of poverty level. 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 – cover the age and ethnic diversity of this population.
Program Duration	Services for customers with limited income will be an ongoing element of the EO portfolio in 2012 and 2013
Program Description	A basic energy audit of the qualified applicant's home is performed, energy saving measures are then chosen and installed in their home. Participants benefit from the free installation of an energy saving kits which may include door weather stripping, compact fluorescent lights (CFL's), low-flow showerheads, faucet aerators, pipe insulation, water heater insulation and the free installation of a programmable thermostat. Additionally, participants may be eligible for refrigerator replacement assistance, replacing their old inefficient refrigerator with a new Energy Star model
Eligible Measures	Cost effective electric measures that will be permissible for this program include CFL's, refrigerator replacement, furnaces with high-efficiency motors, and weatherization measures that can reduce central air-conditioning use.
Implementation Strategy	*Coordination* with Trade Ally Contractor and Associate members to perform the installation of cost- effective electric measures
Marketing Strategy	Marketing will be closely coordinated with local agencies and the utility's implementation contractor. Key elements of the marketing strategy include: • Targeted outreach through local agencies • Posters in municipal buildings and at local community events
EM&V Requirements	Evaluation activity will focus on the verification of installation and estimates of deemed savings.
Estimated Participation	The service will serve approximately 60 households a year.

Estimated Budget	Annual Budgets	
	2012	2013
	$78,400	$78,400
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	70,000	70,000

Residential Services

Program Element	**Residential Efficient Lighting Service**
Objective	Produce long-term annual energy savings in the residential sector by increasing the market share of high-efficiency lighting products sold through retail sales channels.
Target Market	All residential customers purchasing bulbs and fixtures through local retail sales channels. Residential rental property owners and customers living in rental properties are also eligible.
Program Duration	The service will be an ongoing element of the program portfolio.
Program Description	The Residential Lighting Service will be closely coordinated with other statewide utility initiatives in order to ensure that residential customers across the State have consistent opportunities and motivation to purchase high efficiency lighting products at local retailers. Customer incentives facilitate the increased purchase of high-efficiency products while in-store support makes provider participation easier.
Eligible Measures	Efficient lighting products will include CFLs, Specialty CFLs including flood lights, recessed cans, dimmable, 3-way products, LEDs, and other products
Implementation Strategy	• ***Planning coordination*** **with other utilities:** The utility's implementation contractor will work closely with other appropriate Michigan utilities to coordinate incentive levels, marketing materials, and market provider outreach. • ***Manufacturer/retailer recruitment for deep discounts***: The utility's implementation contractor will work closely with other Michigan utilities to solicit manufacturer/retailer participation for the deep discounts on products for the program. • ***Retailer recruitment, education and outreach***: The utility's implementation contractor will recruit local retailers for participation in the coupon components of the program. • ***Incentive processing***: The utility's implementation contractor will manage prompt processing of retailer/customer incentive payments. ***Bulb recycling***: The utility's implementation contractor will work with retailers to deploy recycling bins for bulb collection. Retailers will be given training on proper sealing, labeling, and transportation for the bins.

Marketing Strategy	The service will primarily be marketed through displays and materials at participating retailers. Materials will employ a strong consumer education component emphasizing the benefits of high-efficiency lighting products (e.g., lifetime dollar savings, energy savings, longer life, safety, appropriate light quality, etc.) Marketing materials will leverage the ENERGY STAR brand, which enjoys a high level of consumer recognition and favorable associations. Key elements of the marketing strategy include: • Point-of-purchase displays • Cooperative advertising with retailers
EM&V Requirements	Deemed savings values were based on documented values from the Michigan Statewide Deemed Savings Database (as identified by MPSC Order U-15800.) Evaluation activity will focus on verification of installation and estimates of deemed savings.

Estimated Budget	Annual Budgets	
	2012	2013
	$38,300	$38,300
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	300,000	300,000

Residential Services

Program Element	**Residential Refrigerator/Freezer Turn-In and Recycling Service**
Objective	Produce long-term annual energy savings in the residential sector by removing operable, inefficient refrigerators and freezers from the power grid and recycling them in an environmentally safe manner.
Target Market	Residential customers who are currently operating older, inefficient refrigerators and/or freezers as secondary units.
Program Duration	The service will be an ongoing element of the EO portfolio.
Program Description	The average household replaces a refrigerator every ten years. However, many of the refrigerators being replaced are still functioning, so they often become backup appliances – in basements and garages – or sold in a used-appliance market. The Turn-In service will be established to target those "second" refrigerators and freezers, providing the dual benefit of cutting energy consumption and keeping the appliances out of the used-market.
Eligible Measures	The service will recycle qualified second refrigerators and freezers. Deemed savings values were based on documented values from the Michigan Statewide Deemed Savings Database (as identified by MPSC Order U-15800.) The utility will revise eligible measures as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience.
Implementation Strategy	• ***Planning coordination* with other utilities:** The utility's implementation contractor will work closely with other appropriate Michigan utilities to coordinate incentive levels, eligibility requirements, marketing materials, and selection of a recycling contractor. • ***Turn-key appliance pick-up/recycling:*** The utility's implementation contractor will select a qualified recycling service subcontractor to provide comprehensive, turn-key implementation services from eligibility verification and scheduling of pick-ups to proper disposal and recycling of turned-in appliances. • ***Incentive coordination and processing***: The utility's implementation contractor will coordinate prompt processing of incentive payments.
Marketing Strategy	All marketing materials will carry a strong consumer education message emphasizing the cost of operating older, inefficient appliances, the benefits of early replacement with ENERGY STAR qualified models, and the importance of proper disposal and recycling of older units. Marketing materials will leverage the ENERGY STAR brand, which

	enjoys a high level of consumer recognition and favorable associations. Key elements of the marketing strategy include: • Website links to EPA's new "ENERGY STAR Recycle My Old Fridge Campaign" at www.recyclemyoldfridge.com. Includes calculators to estimate savings. • Point-of-purchase displays • Cooperative advertising with retailers • Posters in municipal buildings
EM&V Requirements	Evaluation activity will focus on verification of installation and estimates of deemed savings.

Estimated Budget	Annual Budgets	
	2012	2013
	$24,100	$24,100
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	202,000	202,000

Residential Services

Program Element	**Residential High-Efficiency Appliances and Electronics**
Objective	Produce long-term annual energy savings in the residential sector by promoting high-efficiency appliances and electronics. Initially, the program will promote high-efficiency refrigerators and clothes washers
Target Market	Residential customers purchasing new refrigerators and clothes washers. Residential rental property owners are also eligible.
Program Duration	This will be an ongoing element of the EO portfolio.
Program Description	This service will provide incentives to customers to encourage them to replace their older, inefficient refrigerators and clothes washers with high-efficiency ENERGY STAR qualified units. The service will partner with a local retailer to sponsor events at which customers receive a rebate toward the purchase of a new ENERGY STAR appliance The service will also provide incentives for clothes washers that meet the highest efficiency standards (CEE Levels 2 & 3). This initiative will explore coordination with the local natural gas utility so that the electric utility pays a portion of the incentive based on the estimated % of customers with electric water heating and the natural gas utility pays a portion of the incentive based on the estimated % of customers with gas water heating. In future years, the service may target other cost-effective appliance options for high-efficiency savings.
Eligible Measures	The measures include efficient refrigerators and clothes washers. Deemed savings values were based on documented values from the Michigan Statewide Deemed Savings Database (as identified by MPSC Order U-15800.) The utility will revise eligible measures as needed in accordance with current market conditions, technology development, EM&V results, and implementation experience.

Implementation Strategy	• ***Planning coordination* with other utilities:** The utility's implementation contractor will work closely with other appropriate Michigan utilities to coordinate incentive levels, eligibility requirements, marketing materials, and retailer outreach. • ***Retailer recruitment, education and outreach.*** The utility's implementation contractor will utilize a field representative to facilitate the recruitment of a host retailer(s) including determining the volume of units by retailer to meet the program's unit goal. • ***Incentive coordination and processing***: The utility's implementation contractor will coordinate the delivery of rebate coupons and materials to participating retailers and will manage prompt processing of incentive payments.
Marketing Strategy	All marketing materials will carry a strong consumer education message emphasizing the cost of operating older, inefficient appliances and the benefits of early replacement with ENERGY STAR qualified models (lifetime dollar savings, energy savings, lower noise, etc.). Marketing materials will leverage the ENERGY STAR brand, which enjoys a high level of consumer recognition and favorable associations. Key elements of the marketing strategy include: • Point-of-purchase displays • Cooperative advertising with retailers • Posters and Outside banner for events
EM&V Requirements	Evaluation activity will focus on verification of installation and estimates of deemed savings.

Estimated Budget	Annual Budgets	
	2012	2013
	$24,100	$24,100
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	42,000	42,000

Residential Services

Program Element	Residential High-Efficiency HVAC Equipment
Objective	Produce long-term annual energy savings in the residential sector by promoting the purchase and installation of high-efficiency heating and cooling equipment.
Target Market	Residential customers installing new central AC units and/or furnaces.
Program Duration	This will be an ongoing element of the EO portfolio.
Program Description	The High-Efficiency Equipment service will promote heating and cooling technologies that can reduce electric energy use. Initially the program will focus on the promotion of high-efficiency central air-conditioning and premium efficiency furnaces that have high-efficiency motors (i.e., electrically commutated motors or ECMs). ECMs can save electric energy during the heating and cooling seasons. Although federal efficiency standards for central air-conditioning have increased, there are still opportunities to promote units that exceed the current standards and thus achieve additional energy savings. The program will provide incentives for high-efficiency central air-conditioners when installed along with an ECM furnace. Since the primary type of heating system in the utility's service area is natural gas forced air, this program hopes to closely coordinate with the local natural gas provider so that incentives can be coordinated on units that have ECMs. As the program matures, additional emphasis may be placed on quality installation and appropriate sizing to further enhance energy savings.
Eligible Measures	Deemed savings values were based on documented values from the Michigan Statewide Deemed Savings Database (as identified by MPSC Order U-15800.) The utility will revise eligible measures as needed in accordance with current market conditions, technology development, EM&V results, and implementation experience.

Implementation Strategy	• ***Planning coordination* with other utilities:** The utility's implementation contractor will work closely with other appropriate Michigan utilities to coordinate incentive levels, eligibility requirements, marketing materials, and contractor outreach. • ***Contractor recruitment, education and outreach.*** The utility's implementation contractor will utilize a field representative to facilitate the recruitment of local HVAC contractors to participate in the program. • ***Application processing***: The utility's implementation contractor will coordinate processing of all rebate applications.
Marketing Strategy	The HVAC Equipment service will be primarily marketed through local contractors, the most direct influencers of customer purchase decisions. Contractors will receive educational materials to share with their customers as well as access to cooperative advertising dollars. Marketing materials will be coordinated with the local natural gas provider.
EM&V Requirements	Evaluation activity will focus on verification of installation and estimates of deemed savings.

Estimated Budget	Annual Budgets	
	2012	2013
	$6,600	$6,600
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	14,000	14,000

Residential Services

Program Element	***Residential Electric Water Heater Savings Kits***
Objective	Produce immediate annual energy savings for customers with electric water heaters through the distribution of energy saving kits that include CFL's and low-flow, water-saving devices.
Target Market	Residential customers with electric water heating (both home owners and renters.)
Program Duration	This will be an ongoing element of the EO portfolio.
Program Description	For those customers with electric water heating, significant energy savings can be achieved by the installation of low-cost measures that reduce the amount of hot water used. Electric Water Heater Savings Kits will be distributed to customers, along with information about the energy savings associated with these devices. The Kit includes low-flow showerheads, and faucet aerators, along with pipe wrap and a package of CFLs. The Kits will be provided free to all electric water heating customers.
Eligible Measures	Deemed savings values were based on documented values from the Michigan Statewide Deemed Savings Database (as identified by MPSC Order U-15800.) The utility will revise eligible measures as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience.
Implementation Strategy EM&V Requirements	• ***Targeted outreach to customers with electric water heating.*** The service will be promoted to customers with electric water heating through bill inserts and/or direct mail. • ***Kit fulfillment and processing.*** Interested customers can fill out an application form, indicating the number of showerheads and aerators needed. Customized kits will be mailed to customers within 3-4 weeks. Kits will include information about proper installation and energy savings.
Marketing Strategy	The service will be marketed through bill inserts. If electric water heating customers are identified on the utility system because of special rate programs, direct mail will be used to promote the kits directly to those households.

Estimated Budget	Annual Budgets	
	2012	2013
	$5,400	$5,400
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	10,000	10,000

Residential Services

Program Element	**Residential Education**
Objective	• To develop broad consumer awareness of the benefits of energy conservation and efficiency. • To provide educational materials and services that motivate customers to participate in the utility's energy optimization portfolio and to motivate behavior change that can further reduce energy consumption.
Target Market	All residential customers
Program Duration	This will be an ongoing element of the EO portfolio.
Program Description	In addition to the Residential Solutions services, the utility plans to implement educational outreach initiatives to build and expand consumer awareness of energy efficiency and energy conservation opportunities.
Eligible Measures	Not applicable for this service.
Implementation Strategy	The following types of initiatives will be considered for implementation: • Develop, produce, and distribute energy efficiency tips and information about the energy efficiency portfolio through bill inserts and newsletters. • Work with local Chamber of Commerce, Mayor's office, municipal government agencies and other civic organizations to distribute educational material promoting the benefits of energy conservation and efficiency. Make presentations at their constituent meetings and other joint ventures. • Provide energy education/awareness booths at scheduled community fairs and trade shows.
Marketing Strategy	See implementation strategy for a list of marketing activities.
EM&V Requirements	None at this time.

Estimated Budget	Annual Budgets	
	2012	2013
	$6,300	$6,300
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	30,000	30,000

Residential Services

Program Element	Residential Pilot/Emerging Technology Services
Objective	To identify and learn more about new energy efficient technologies and program strategies with potential to capture additional electric energy savings.
Target Market	Dependent on specific technology/service.
Program Duration	Initially, the utility will focus on the successful start-up and delivery of well-established services that have been proven to capture significant energy savings in similar regions throughout the country. Beginning in 2010, the utility plans to coordinate with other initiatives that might be undertaken by municipal utilities to research and pilot innovative technologies and strategies that will reduce residential energy consumption.
Program Description	Residential pilot services could pursue the following types of new initiatives: • Residential-sized HVAC equipment optimized for performance in cold-climate (may include new developments in heat-pump technology) • Advanced residential water heating technology (including heat pumps and solar water heating) • Promotion of LED lighting technology in residential applications • Participation in statewide initiatives to reward manufacturers for highest efficiency appliance design • One-switch controls for shutting down electric load in homes • Residential water-saving education and devices that could reduce electric energy use on municipal water handling systems • Financing packages that could assist capital-constrained customers • Neighborhood initiatives that motivate energy conservation through better information and normalized comparative energy use-data.
Eligible Measures	To be determined based on programs selected.
Implementation Strategy	To be determined based on programs selected.
Marketing Strategy	To be determined based on programs selected.
EM&V Requirements	Not available at this time.

Estimated Budget	Annual Budgets	
	2012	2013
	$7,800	$7,800
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	45,000	45,000

Business Services

Program Element	Commercial Prescriptive Incentive Service
Objective	There are two primary objectives for the Commercial Prescriptive Incentive Service: 1) Increase the market share of a targeted group of commercial high-efficiency electric technologies sold through market channels. 2) Increase the installation rate of a targeted group of high-efficiency electric technologies in commercial facilities by businesses that would not have done so in the absence of the program.
Target Market	All business customers are eligible to participate in the Commercial Prescriptive Incentive Service when they purchase qualifying equipment. However, the service will utilize a targeted outreach strategy to influence specific markets. 1) Market Providers (wholesalers, distributors, contractors, and retail stores that will promote the qualifying technologies) 2) High-impact/high-need customer sectors (such as schools, municipal buildings, hospitals, food service, and hospitality)
Program Duration	Start-up in July 2009. The Prescriptive Incentive Service will be an ongoing element of the EO portfolio.
Program Description	The service will affect the purchase and installation of high-efficiency technologies through a combination of market 'push' and 'pull' strategies that stimulate market demand while simultaneously increasing market provider investment in stocking and promoting them. The service will increase demand by educating business customers about the energy and money saving benefits associated with efficient products and equipping market providers to communicate those benefits directly to their customers. To address the first-cost barrier for customers, the service will utilize financial incentives (i.e. cash-back mail-in rebates) averaging 20% to 40% of the incremental cost of purchasing qualifying technologies. The service will stimulate market provider investment in stocking and promoting efficient products through a targeted outreach effort. The implementation contractor will employ field sales representatives to proactively train and equip market providers to convey the energy and money saving benefits to consumers. Further, the existence of cash-back incentives will elevate efficiency to a competitive issue that will naturally motivate market providers to stock and promote targeted products.
Eligible Measures	The Prescriptive Incentive Service targets measures where the unit energy savings can be reliably predicted and therefore standard per-measure savings ("deemed savings") and incentive levels can be established. This simplifies the application process and reduces administrative costs. The measures, savings and incentive levels listed below have been specified for planning purposes only. Deemed savings values were based on documented values from the Michigan Statewide Deemed Savings Database (as identified by MPSC Order U-15800.) The utility will revise eligible measures and incentive levels as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience.

	Outreach will include orientation meetings and conducting in-person visits aimed at training and equipping market providers to communicate service information to customers. The Contractor will ensure that providers have an updated stock of service materials. Key market providers that will be targeted include: • Lighting distributors, wholesalers, • HVAC distributors and retail contractors • Motors/compressed air vendors • Food service equipment distributors and retailers • Engineering firms • ***Outreach to targeted customers***. The implementation contractor will personally contact energy managers and decision-makers within the targeted customer sectors. The Contractor will assist business customers in determining whether the prescriptive incentives or the custom approach would be most appropriate for their operations. The utility's customer service representatives may also assist with outreach within the course of their regular contacts with business customers.
Marketing Strategy	The Commercial Prescriptive Incentive Service will employ the following marketing strategies: • ***Engage market providers.*** Outreach and training will be provided to a targeted group of providers that have business motivations for promoting Prescriptive Incentives to their customers. • ***Directly market to targeted customers.*** Depending on potential budget limitations, the utility may decide to initially pursue a targeted marketing strategy with business customers to ensure that the program isn't over-subscribed. Initial targeted customer sectors might include schools, municipal office buildings, retail, food service, and lodging.
EM&V Requirements	The utility's implementation contractor will be responsible for implementing the following types of measurement and verification activities to facilitate the utility's third-party evaluation work: • Collect and track all customer, measure installation, and incentive data. • Verify that each product on which incentives are paid meets the prescribed efficiency standards using third-party databases (e.g. ENERGY STAR, GAMA, ARI). Products that cannot be verified using a credible third party database will be considered on a case-by-case basis; product performance information will be requested from the contractor or manufacturer and efficiency will be verified by a qualified engineer. • Conduct on-site inspections of 2% to 5% of equipment for which customers receive incentives to verify that products were installed and that the model and serial numbers match those provided on the incentive claim. Any inconsistencies will be researched and the resolution recorded. Market providers associated with inconsistencies will receive follow up inspections on projects that they are associated with.

Estimated Budget	Annual Budgets	
	2012	2013
	$60,700	$60,700
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	500,000	500,000

Business Services

Program Element	Commercial/Industrial Custom Incentive Service
Objective	Affect the installation of site-specific and unique energy efficiency technologies and process improvements (that do not fit the parameters of the prescriptive incentive program) by business customers that would not have done so in the absence of the service.
Target Market	The Custom Incentive Service will be available to all commercial and industrial customers. The service will serve all customer requests, but the utility will work with its implementation contractor to identify a select group of customers whose operations could most benefit from a custom approach. Target markets could include: • Large manufacturing facilities • Hospitals • Schools • Lodging/hospitality
Program Duration	Start-up in July 2009. The Custom Incentive Service will be an ongoing element of the EO portfolio.
Program Description	The utility is interested in providing a seamless set of energy efficiency services to its business customers. Over the long term, the Custom Incentive Service will allow the utility to develop and enhance the assistance they can provide to businesses with unique opportunities – including industrial process improvements, emerging technologies, and new facility design and/or modernization. The Custom Incentive Service helps customers and market providers identify more complex energy savings projects, analyze the economics of each project, and complete a customized incentive grant application. If additional budget is available, the service could also approve and co-fund a limited number of investment-grade audits and/or feasibility studies to assess opportunities and motivate the customer to take action.
Eligible Measures	The Custom Incentive Service identifies unique measures for each participant, so specific savings and incentives are determined when the project is specified. Any cost-effective electrical measure that is not covered by the Prescriptive Incentive Service is potentially eligible.

Imple mentation Strategy	Key elements of the implementation strategy include: • ***Outreach to targeted customers.*** The utility's implementation contractor will work closely with the utility to identify and conduct face-to-face meetings with key end-use customers to recruit their participation. The contractor will target decision makers within the customer's organization including: energy managers, facility managers, financial and operations managers, chief engineer and facility/property managers, maintenance supervisors, and building operators. • ***Outreach to key influencers***. The implementation contractor's energy advisor(s) will work to generate awareness of the Custom Incentive Program through presentations and seminars with appropriate trade associations (ASHRAE, BOMA, school administrators,
	etc.). • ***Outreach to market providers***. The energy advisor(s) will also conduct in person visits to key market providers at their place of business to recruit their support in providing referrals of custom incentive projects. • ***Technical assistance:*** The implementation contractor's energy advisors will provide engineering support to identify and analyze the cost-effectiveness of energy saving opportunities. The energy advisor will work with the customer and/or market provider to complete custom engineering calculations that assess the energy savings potential, customer financial criteria for efficiency investments, project eligibility, and incentive amount. If the project is deemed eligible, the advisor will assist the customer or market provider in completing a Custom Incentive grant application. • ***Quality assurance:*** Incentive applications will be subject to a quality assurance review by program technical staff to ensure accuracy of savings estimates and incentive calculations. • ***Verification:*** The implementation contractor will provide on-site verification for a specified % of completed projects.
Marketing Strategy	The marketing strategy for the Custom Incentive Service is a very direct networking approach with trade groups, business associations, and key customers. The program will affect the purchase and installation of efficient technologies and/or implementation of process improvements by working directly with : • Key end-use customers, and • Market providers – to identify potential energy savings projects, analyze the economics of each project, and complete an incentive grant application. This strategy is highly dependent upon referrals and networking with trade allies and utility staff to identify projects.
EM&V Requirements	To facilitate accurate measurement and verification the utility will collect the following information on each incentive transaction: • Business customer data (e.g. name, address, telephone, e-mail) • Installation data (e.g. address, date, contactor) • Complete project and measure information (e.g. quantity, model, serial number, efficiency and payback calculations) • Transaction data (e.g. invoice, measure cost, purchase date)

Estimated Budget	Annual Budgets	
	2012	2013
	$169,600	$169,600
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	1,441,500	1,441,500

Business Services

Program Element	**Commercial & Industrial Education**
Objective	• To develop broad business awareness of the benefits of energy conservation and efficiency. • To provide educational materials and services that motivate business customers to participate in the utility's energy optimization services and to motivate energy management practices that can further reduce energy consumption.
Target Market	All commercial and industrial customers.
Program Duration	Start-up in July 2009. Educational services will be an ongoing element of the EO portfolio.
Program Description	• In addition to the Business Solutions services, the utility plans to implement educational outreach initiatives to build and expand the business customer's awareness of the benefits of efficient energy management.
Eligible Measures	Not applicable for this service.
Implementation Strategy	The following types of initiatives will be considered for implementation: • Develop, produce, and distribute energy efficiency tips, fact sheets and case studies that promote the benefits of energy efficiency. • Work with the Chamber of Commerce, Mayor's office, municipal government agencies and other civic organizations to promote the energy optimization programs. • Participate in Rebuild Michigan seminars in the area.
Marketing Strategy	See implementation strategy for a list of marketing activities.
EM&V Requirements	None at this time.

Estimated Budget	Annual Budgets	
	2012	2013
	$6,300	$6,300
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	30,000	30,000

Business Services

Program Element	**Commercial & Industrial Pilot/Emerging Technology Services**
Objective	To identify and learn more about new energy efficient technologies and program strategies with potential to capture additional electric energy savings in the business sector.
Target Market	Dependent on specific technology/service.
Program Duration	Initially, the utility will focus on the successful start-up and delivery of well-established services that have been proven to capture significant energy savings in similar regions throughout the country. Beginning in 2012, the utility plans to coordinate with other initiatives that might be undertaken by municipal utilities to research and pilot innovative technologies and strategies that will reduce commercial and industrial energy consumption.
Program Description	Commercial and Industrial pilot services could pursue the following types of new initiatives: • Promotion of LED lighting technology in commercial applications. • Emerging electric technologies specific to the utility's customer base. • Electric storage systems for commercial and industrial applications. • Recent advances in equipment, controls, and design techniques for large and small commercial HVAC systems, including new chiller designs and variable air volume box controls. • New water and energy saving technologies for the municipality's water handling system. • Design strategies from some of the most highly efficient new buildings that are achieving significant savings from technologies that are under-adopted or emerging in today's market. • New and emerging technologies for daylighting applications including communications and controls.
Eligible Measures	To be determined based on programs selected.
Implementation Strategy	To be determined based on programs selected.
Marketing Strategy	To be determined based on programs selected.
EM&V Requirements	Not available at this time.

Attachment B

Estimated Budget	Annual Budgets	
	2012	2013
	$7,800	$7,800
Savings Targets	Energy Savings (Gross Annual kWh)	
	2012	2013
	45,000	45,000

Overview of Efficiency Smart

AMP has been working with the Vermont Energy Investment Corporation (VEIC) since late 2007 to analyze the potential benefits and approaches for an enhanced EE program for its Members. As part of that effort, AMP's Board of Trustees has established the goal of having an EE program that would place AMP in the top-tier nationally in terms of energy savings. To be a national leader, AMP will seek to achieve a goal of 1% annual energy savings (for its Members) in the 2015 timeframe.

VEIC is a non-profit corporation founded in 1986 with extensive experience in EE program analysis design, and implementation. VEIC has clients in 25 states and several foreign countries. Included in that client mix have been several public power entities. VEIC also runs Efficiency Vermont – the nation's first statewide provider of EE services.

Efficiency Smart

The Efficiency Smart represents a partnership between AMP and VEIC to create a turnkey entity to deliver energy efficiency services to subscribing Members (i.e., primarily through VEIC's expertise and financial incentives). Efficiency Smart uses a "markets approach" – a holistic effort designed to address a retail customer's total EE needs and not simply offer programs. Efficiency Smart differs from a traditional contract with an ESCO due to a focus on building long-term infrastructure (i.e., "capacity building"). Efficiency Smart also differs from an educational program alone due to its serious service focus. In addition, the contract between AMP and VEIC for the Efficiency Smart is performance-based in that a portion of VEIC's margin is at risk if a specified level of energy savings is not reached.

Administratively, the Efficiency Smart will be managed by a Director who oversees five divisions. These divisions will provide the necessary "back-office" support, as well as, the necessary customer service personnel for the residential, commercial, and industrial classes. A Customer Call Center (CCC) will be part of the Efficiency Smart's administrative structure. The CCC will be the central contact point for all Member customers and market participants (i.e., trade allies; vendors; design professionals; and, the general public). The primary role of the CCC is to assist all Member customers with all aspects of their EE needs. The CCC will be supported by an ESPP website and will feature a tracking system to record all calls.

The proposed Efficiency Smart services encompass all three major customer classes and include retail efficient products and emerging markets for residential customers; new business construction/renovation, existing facilities, and equipment

replacement for commercial customers; and, existing facilities and market opportunities for industrial customers.

Overview of VEIC

VEIC is a national energy efficiency and renewable energy organization with headquarters in Burlington, Vermont and additional offices in New Jersey, Ohio and Washington, DC. It was founded in 1986 as a mission-driven non-profit organization. Today, it has a staff of 200 energy efficiency and renewable energy professionals and an annual budget of approximately $60 million. We have served a wide variety of public and private sector clients in more than 25 states, 6 Canadian provinces, China and several other countries.

VEIC is nationally acclaimed for our highly successful role creating and running Efficiency Vermont, the nation's first energy efficiency utility. Efficiency Vermont has met or exceeded virtually every contract goal since its inception in 2000. In 2008 alone, Efficiency Vermont achieved incremental annual savings equal to 2.5% of Vermont's sales – more than any other state in the country and easily enough to result in a second straight year of negative load growth.

VEIC is also a national leader in the delivery of customer-sited renewable energy programs. VEIC established the Northeast region's first "Million Solar Roofs Partnership" with the U.S. Department of Energy in 1998, successfully developing and operating the Renewable Energy Resource Center in Vermont, which has provided consumer education, information, outreach and customer rebate program design and administration services for the last decade. VEIC has also worked for more than a decade with regulators and utilities in New Jersey on the design, development and delivery of New Jersey's Clean Energy Programs. New Jersey is now one of the leading markets for solar electric photovoltaics (PV) in the US. VEIC staffs a 4-person office in the state who provide the front-line, day to day, program implementation and administration services for the statewide renewable energy incentive program.

VEIC is also widely respected for its expert energy efficiency and renewable energy consulting services. We have helped a wide range of clients analyze markets for energy efficiency and renewable energy. We have also helped numerous clients design programs and policies to promote efficiency and renewable energy. We are regarded as leading experts on the current "cutting edge" in the industry, as well as our creativity in helping clients develop the next program or policy frontiers. We are also well-known for our technical expertise and credibility. That credibility has led a diverse range of clients – including utilities, environmental groups, consumer advocates, regulators and other government agencies – to hire us. VEIC has provided consulting services to clients in more than 25 states, six Canadian provinces, China and several other countries.

Services Available from VEIC

Program Design and Planning

VEIC has industry leading experience in planning and designing sustainable energy programs. For the last twenty years we have been hired to design programs from the ground up, to critique existing programs, and to recommend improvements to literally hundreds of electric efficiency, gas efficiency, renewable energy, and green building programs. This includes development or critiquing of program budgets and program cost-effectiveness screening. We have also both developed and critiqued numerous regulatory filings and – in more than 10 different states and provinces – filed and defended expert witness testimony before regulators. VEIC has performed this work on behalf of consumer advocates, environmental groups, regulators, other government agencies, utilities, and other program administrators.

Program Implementation Support

One of VEIC's unique attributes is that we marry our broad expertise in program design with extensive experience in the delivery of a broad spectrum of energy programs and services. One illustration of VEIC's experience in program implementation is our national award-winning delivery of Efficiency Vermont. For more than a decade prior to the start of Efficiency Vermont in 2000, VEIC was very active in providing program implementation services for several Vermont utilities. Since formation of Efficiency Vermont, VEIC has continued to implement several additional programs – beyond our statewide Efficiency Vermont mandate – on behalf of progressive utilities in the state. We also administer both Vermont's customer-sited renewable energy program (since its inception in 2003), the state's Renewable Energy Resource Center – as part of our Million Solar Roofs Partnership with the U.S. Department of Energy, and play a critical, front-line role in delivering New Jersey's ground-breaking customer-sited renewable energy program (since 2006).

We apply our marketplace experience to our program design work – enabling us to effectively base our programmatic, policy, and regulatory recommendations in real world experience. In addition, once program designs are put in place, we often leverage our implementation experience to provide on-going strategic, technical, and logistical support during field implementation of the programs. This work takes many forms, including:

Resource Planning, Market Assessment, & Potential Studies

Policy makers, advocates, regulators, and program planners need reliable assessments of the role that efficiency and renewable energy resources can play in meeting future energy needs. VEIC has twenty years of extensive experience in the theory and

practice of assessing the market potential for efficiency and renewable energy resources. We have conducted such assessments in Vermont, New York, New Jersey, Pennsylvania, Ohio, Maine, Michigan, Quebec, New Brunswick and Prince Edward Island. These analyses are conducted at the measure, project, program, portfolio, statewide, and regional levels. We have also critiqued similar work by other firms in numerous jurisdictions. This work has provided the foundation for multi-year portfolio investments as well as the development of legislation, and regulations, including policy decisions on issues such as setting system benefit charges, program design, goal setting, and cost effectiveness screening.

Savings Protocols and Verification Processes

VEIC have extensive experience developing protocols and algorithms for efficiency measure savings and renewable energy generation. As part of our Efficiency Vermont (EVT) work, we have developed an extensive (i.e., 350+ page) Technical Reference Manual (TRM) that documents all assumptions concerning;

- measure savings,
- load shapes,
- incremental costs,
- measure lives,
- free rider rates, and
- spillover rates.

The basis for these assumptions, including specific evaluation references and engineering algorithms, is detailed for all of the efficiency measures that EVT implements to claim prescriptive savings. This manual was the first of its kind in the Northeast. We have also developed, in cooperation with the Vermont Public Service Board (our client) and our Contract Administrator, a formal process by which new measure characterizations can be added to the TRM and older characterizations can be updated.

Program Evaluation

VEIC has considerable expertise in the area of demand-side management (DSM) evaluation. We have extensive experience in program design and management that many firms that specialize in evaluation do not have. As a result, we bring sensitive and unique insights into the role that evaluation can play in helping program managers and program designers identify opportunities for program improvement. We have been

called on by clients in Vermont, Massachusetts, New York, New Jersey, Ontario, and other jurisdictions to assist with evaluation planning.

Energy & Regulatory Policy

VEIC has an in-depth understanding of the policy and regulatory frameworks in which efficiency and renewable energy initiatives are typically considered. There are many areas in which we perform this work. These include:

- Models for Energy Efficiency Program Administration – VEIC has assisted officials in more than a dozen states and provinces to explore the advantages and disadvantages of different approaches to administering ratepayer-funded efficiency programs, including the concept of an energy efficiency utility. This has included testimony before legislative bodies (in Indiana and Quebec), a presentation to the National Conference on State Legislatures, and workshops and briefing sessions with regulators and local energy agencies (in New Jersey, Manitoba, Iowa, Kansas, Colorado, New Mexico, New Orleans, and two Chinese provinces). We have also helped the New Brunswick Ministry of Energy establish the regulatory and other procedures necessary to launch an Efficiency New Brunswick, in entity modeled on Vermont's Efficiency Utility.

- Performance Incentive Mechanisms – VEIC has been intimately involved in the development, refinement, and/or implementation of performance incentive mechanisms for efficiency program administration in Vermont, Connecticut, Massachusetts, New Jersey, Maryland, Iowa, and Ontario.

- Alternatives to Transmission and Distribution Investments – VEIC has been involved in exploring innovative roles that efficiency investments could play as alternatives to transmission and distribution system expansions. Working collectively for Vermont's utilities, we helped develop a scoping tool that enables any utility to quickly make a rough-cut determination as to whether efficiency investments have the potential for cost-effectively deferring distribution system investments.

- Inter-connection Standards, Net Metering, and Renewable Energy Portfolio Standards – VEIC assisted officials in Vermont, New York, New Jersey, and Pennsylvania in the development of one or more of these important policies affecting renewable energy investments.

- Forward Capacity Markets – VEIC was one of just a few efficiency and renewable energy organizations that participated in an intensive six month process run by the New England ISO to develop the rules under which efficiency and other demand resources would be able to compete in the market with generators. Our staff also served on a regional steering committee that guided input to the New England ISO on

its measurement and verification requirements for demand resources. Finally, we have successfully participated in the market, having cleared more than 60 MW of efficiency resources in the first two auctions. We have share keys insights from this experience with numerous organizations across the U.S. and Europe.

• Codes and Standards – VEIC has helped clients participate in several of the U.S. Department of Energy's energy efficiency standard-setting processes for different types of equipment. We have also helped clients develop and implement aggressive building energy codes, including work for the Long Island Power Authority in helping several Long Island communities who did ground-breaking work in establishing the federal Energy Star standard as a minimum requirement for new homes. We also helped our home town of Burlington, Vermont develop and adopt a rental energy code that establishes minimum efficiency standards for rental properties (one of only a handful of such requirements in the country). We are currently engaged by Northeast Energy Efficiency Partnerships in analyzing options for possible future legislation requiring disclosure of the efficiency of existing buildings to prospective buyers at the time of sale (i.e. a "time-of-sale") energy ordinance.

Selected examples of our energy efficiency and renewable energy work are summarized in the tables below.

Energy Efficiency

VERMONT ENERGY INVESTMENT CORPORATION: SELECTED ENERGY EFFICIENCY PROJECTS

Dates	Client/Program	VEIC Services
2000-present	**Vermont Public Service Board (*Efficiency Vermont)***	Design, development, & turn-key implementation of *Efficiency Vermont*, the nation's first efficiency utility
2010-present	**American Municipal Power, Inc. *(Efficiency Smart)***	Design. Development, and turn-key implementation of *Efficiency Smart*, currently serving 48 municipalities in Ohio and Pennsylvania
2011	**District of Columbia Department of Environment *(DC Sustainable Energy Utility)***	Design. Development and turn-key implementation of the *District of Columbia Sustainable Energy Utility,* offering energy efficiency services for all fuels and renewable energy.

VERMONT ENERGY INVESTMENT CORPORATION: SELECTED ENERGY EFFICIENCY PROJECTS		
Dates	**Client/Program**	**VEIC Services**
2006-present	**New Jersey Board of Public Utilities**	Lead program design, development of regulatory filings and evaluation support for all statewide residential efficiency programs (as part of Honeywell team)
1993-present	**Iowa Consumer Advocate**	Critical review of utilities DSM plans, budgets and savings claims. Also critiqued need for and cost-effectiveness of a utility proposal to build a new coal-fired power plant. Expert witness testimony on several occasions.
1998-present	**Long Island Power Authority Clean Energy Initiative**	Develop efficiency and renewable energy program portfolio (1998); then provide on-going assistance with market analysis, design of new programs and refinement of existing ones, design, goal and budget development and implementation support
2007-present	**American Municipal Power -Ohio**	Helping coordinating agency of 120+ municipal utilities in Ohio and several other states to assess benefits of, design and then launch a comprehensive portfolio of energy efficiency programs for its members and their customers.
1999-present	**Massachusetts Energy Efficiency Advisory Council**	Functioning as staff to non-utility parties (the Council starting in 2008) in work with utilities on program design, goals and budget planning, review of savings claims and implementation support for residential efficiency and related renewables initiatives
2007-present	**Connecticut Energy Conservation Management Board**	Function as staff to ECMB in work with utilities on program design, goals and budgets, and savings claims for residential efficiency programs.
2008-present	**Rhode Island Efficiency and Resource Management Council**	Function as staff to ERMC for both development of proposed energy policies for the state and in work with utilities on program design, goals and budgets, and savings claims for efficiency, demand response & renewables programs.
2002-2007	**Maine Office of Public Advocate**	Assess efficiency potential to inform development of statewide efficiency charge; recommend funding levels and programs to be run with funds; periodic review of programs that have been implemented

VERMONT ENERGY INVESTMENT CORPORATION: SELECTED ENERGY EFFICIENCY PROJECTS		
Dates	**Client/Program**	**VEIC Services**
2004-2005	**Ohio Consumer's Counsel**	Develop proposed DSM program plan and budget for Vectren Gas
2003-2004	**Connecticut Consumer Advocate**	Comprehensive review of utilities' DSM performance, develop recommendations for program changes, develop recommendations for performance incentives; expert witness testimony
2004-present	**New Brunswick Department of Energy**	Assessment of program savings potential, RFP development support for the launch of "Efficiency New Brunswick", and on-going technical support
2002-present	**NYSERDA**	Electric efficiency, gas efficiency and renewable potential studies for NY State & 5 load zones within the state.
1997-present	**Northeast Energy Efficiency Partnerships**	Developed regional residential HVAC initiative; input on federal efficiency standards; assessed of Northeast efficiency potential and implications for regional initiatives; develop time-of-sale energy efficiency disclosure concept
2003-2005	**Oregon Energy Trust**	Assess the role of community-based programs for promotion of efficiency & renewable energy projects for possible integration into a DSM portfolio
1994-present	**Ontario Green Energy Coalition**	Review gas utility DSM plans, goals and performance incentive mechanisms; regularly negotiate with utilities and/or testify before Ontario Energy Board; serve on audit committees of stakeholders charged with reviewing and suggesting modifications to utility savings estimates
2004	**Coalition of Quebec Environmental Groups**	Analysis of cost-effective efficiency potential in Quebec; review and critique of Hydro Quebec proposed budget, programs and goals; expert witness testimony

Overview of AMP's Evaluation, Measurement & Verification Contractor

In July 2011, AMP selected the team led by Integral Analytics, Inc. (hereafter 'IA') as its independent EM&V contractor for the Efficiency Smart program. The initial contract with IA will last through June 2004. These EM&V services are essential to comply with the performance provisions of the AMP/VEIC contract for Efficiency Smart; the reporting requirements contained in an EPA Consent Decree that applies to certain participants in the Efficiency Smart project; and, to ensure that the guaranteed savings that each full-paying participant in Efficiency Smart is entitled to occurs.

IA has partnered with three primary subcontractors. These primary subcontractors are: Sageview, Inc. (hereafter 'Sageview'); Integrative Growth (hereafter 'IG'); and, Architectural Energy Corporation (hereafter 'AEC'). The IA team is comprised of a set of expert evaluation professionals who are currently leading or providing significant contributions to many efficiency portfolio evaluations throughout the country. This team was specifically formed to include leading evaluation contractors who have consistently performed in an exemplary manner; strive to be known as the "best-in-class" in their respective disciplines; and, demonstrated extensive experience in all aspects of energy efficiency (EE) program design, implementation, monitoring, measurement, verification, and valuation.

IA is an analytical software and consulting firm focused on operational, planning, and market research solutions for the energy industry. IA has extensive experience in process and impact evaluation, program design and cost-effectiveness testing, conjoint analysis, market segmentation, research surveys and market opportunity evaluation. Sageview is a recognized leader in market research. IG possesses capabilities in the areas of program evaluations, process improvement, market characterization/market potential, sample/questionnaire design, statistical analysis, project oversight and management. AEC is a leading energy and sustainability consulting firm that specializes in the provision of engineering services for EM&V purposes.

<u>Key Staff</u>

Dr. Kenneth Skinner (of IA) will be the overall project director for this project. As such, Dr. Skinner will provide project coordination and oversight, point-of-contact liaison with AMP, and quality control supervision for all project activities. Dr. Skinner possesses over 18 years' experience in evaluation and risk measurement research with a focus on energy efficiency.

Dr. Michael Ozog (of IA) will serve as the project's technical advisor and lead all analytical activities. Dr. Ozog specializes in econometric analysis and economic modeling and possesses extensive experience in the area of impact evaluation.

Dr. Tom Osterhus (of IA) will serve as a technical advisor. Previously, Dr. Osterhus has successfully designed, developed, and implemented planning and valuation tools used in EE planning and demand response valuation.

William Kallock (of IA) will serve as the engineering advisor for the project and possesses over 15 years of EE experience (i.e., including 6 years of direct experience in verifying savings from performance-based contracts). Mr. Kallock previously worked for VEIC.

Patricia Thompson (of Sageview) will lead all Sageview activities (e.g., impact evaluation support; questionnaire development, segmentation and social marketing). Ms. Thompson possesses nearly 20 years of experience in the energy and environmental sectors.

Doreen Caruth (of IG) will lead the process evaluation activities and possesses over 19 years of research experience.

John Bates (of AEC) will be the primary lead for all AEC activities (e.g., on-site inspections, monitoring and metering, engineering models, engineering estimates and measure characterizations) and possesses 20 years of experience.

A Short Sample of Prior EM&V Projects Performed by Team Members

Duke Energy/Custom Incentive Program Evaluation (AEC)

California/Building Energy Initiative (AEC)

Boston Edison/Custom Incentive Program Evaluation (IA)

Sacramento Municipal Utility District (SMUD)/Impact Evaluations/Modeling (IA & Sageview)

National Grid/Impact Evaluation of Small Business Services & Energy Initiative Program (IA)

Louisville Gas & Electric and Kentucky Utilities/Impact and Process Evaluations (IA)

XCEL/Minnesota AC and Quality Installation Process Evaluation (IG)

XCEL/Home Electric Savings Program Process Evaluation (IG)