

## 1.0 Introduction

This revised report details additional energy efficiency program activities beginning in 2018 and continuing through to 2020. The Delaware Municipal Electric Corporation, Inc. (“DEMEC”) submits this plan to conform to the Energy Efficiency Advisory Council (“EEAC”) review process. DEMEC requests EEAC acceptance of this additional program.

## 2.0 Program Overview

On behalf of all member communities, DEMEC contracted for energy efficiency services to assist municipal residential and commercial/industrial electric customers. The program offering includes residential incentives for retail lighting, appliances, and appliance recycling, business energy efficiency upgrades and custom commercial and industrial (“C&I”) measures. C&I customers will also have access to significant technical services to assist them with determining energy efficiency options and courses of action. The vendor providing DEMEC with these services is Vermont Energy Investment Corporation, Inc. (“VEIC”) under the brand name Efficiency Smart.

## 2.1 Target Market

DEMEC cities and towns residential and commercial/industrial electric customers are the focus. DEMEC is comprised of nine municipalities (DEMEC Nine) including New Castle Municipal Services Commission, City of Newark, Town of Middletown, Town of Clayton, Town of Smyrna, City of Dover, City of Milford, City of Seaford, and City of Lewes.

## 2.2 Market Analysis and Trends

This program marks a significant investment by DEMEC in what is considered the cheapest method of providing Americans with reliable electricity. Energy efficiency provides numerous benefits to utilities and to participants from reducing peak energy costs to saving on customer energy bills. According to the US Department of Energy, electric power providers are implementing demand response and energy efficiency programs as an increasingly valuable resource option.

DEMEC established this program to serve its member communities in several ways:

- To offer a program that is customizable to meet each member’s unique interests and diverse customer base
- To support municipal economic growth and customer retention efforts
- To meaningfully engage key account customers regarding their unique interests and needs
- To take steps to lower wholesale electricity costs to its member municipalities which in turn, can lead to lower customer retail rates
- To align its member communities in the spirit of Delaware’s overall energy efficiency efforts

## 2.3 Eligible Measures/Services and Customer Incentives

### Energy Efficiency Savings

Residential Customers:

The eligible measures may include but may not be limited to:

- Product Rebates: Thermostats, Water heaters, Dehumidifiers, Clothes Washers and Dryers, Power strips, Refrigerators, Ceiling Fans with Lights, Pool Pumps, and Furnaces with Qualified Furnace Fans with Electronically Commutated Motors (ECM)
- LED Lights and Fixtures
- Meter Loan: Borrow a free electric meter to determine household product use
- Appliance Retirement and Recycling Program (not available initially)

Business Customers:

The eligible measures may include but may not be limited to:

- Lighting and lighting controls
- Refrigeration
- Heating, ventilation, and air conditioning (HVAC)
- Compressed air systems
- Variable frequency drives (VFDs)

C&I Custom Technical Services:

The eligible measures may include but may not be limited to:

- Project opportunity identification and prioritization
- Energy savings and cost-benefit analysis
- Site energy usage evaluations
- Specific equipment electrical usage metering
- Contract support and scope analysis
- Financial incentives for qualifying products

DEMEC cities and towns intend to make use of funds set aside from existing and future energy budgets for this program to benefit all members.

## 2.4 Marketing

DEMEC will work with our program delivery agent Efficiency Smart to publicize program offerings using tools such as social media, bill inserts, bill messaging direct mail, and other media resources. DEMEC will continue to evolve its program offering and media publications based on program evaluation results and feedback from its members.

Going forward DEMEC can build on its 2016/2017 success by:

- Encouraging municipal customers and new vendors to build relationships with Efficiency Smart

- Encouraging DEMEC cities and towns to plan for efficiency in green energy fund budgets
- Coordinating with the Sustainable Energy Utility to cross promote efforts specifically with regard to thermal measures and other financing products not offered by Efficiency Smart.
- Continuing to include municipal improvements as part of the customer pool

## 2.5 Evaluation, Measurement and Verification (EM&V)

EM&V for the efficiency program will be coordinated by American Municipal Power (“AMP”). They will conduct and/or hire and direct a third-party EM&V contractor to review energy efficiency work performed by Efficiency Smart. The EM&V will use a variety of industry standard methodologies. The EM&V plan and EM&V provider will conduct the following activities:

- Use the Mid-Atlantic TRM as a starting point for deemed savings
- Initialize a screening tool with approved DE state-wide avoided costs to be used in conjunction with vendor energy efficiency measure analysis tools
- Meter program activities in real time as appropriate
- Travel to Delaware to inspect equipment and to interview relevant participants
- Present findings of the evaluation in a written report that will include results for cost-effectiveness using Delaware state-wide avoided costs
- Provide numeric inputs and outputs of the analysis in a format to be specified by the EEAC or its contractor
- Participate in a meeting to present findings to DE EEAC, if requested by DEMEC
- The cost for these services, as proposed, is no more than 5% of implementation costs

## 2.6 Savings, Costs, and Cost-effectiveness

DEMEC members evaluated the state goals and have chosen a three-year cumulative energy efficiency target of 0.75% of wholesale consumption for the four communities (New Castle, Clayton, Milford Seaford) participating. The target is set using 2017 calendar wholesale consumption as a baseline. DEMEC’s contract for efficiency services includes an overall Megawatt-hour (“MWh”) saving goal and a guarantee by Efficiency Smart that 70% of the overall goal will be realized. There are no annual guarantees. This guarantee is in place to mitigate administrative cost overruns and provide some assurance that funds will be used in a responsible manner to achieve contractual requirements.

### Energy Efficiency Program through Efficiency Smart (New Castle, Clayton, Milford, Seaford)

Program Years	2018	2019	2020	Total
MWh Savings*	334	1,668	1,335	3,337
MWh 70% Guaranteed	-	-	-	2,335.9
Implementation Cost*	\$400,415	\$400,415	\$400,415	\$1,201,245
Cost Effectiveness Ratio				1.99

\*The annual figures for MWh Savings and Implementation Cost are estimates. The MWh and Implementation Cost totals reflect accurately the program overall savings goal and cost.

## DEMEC Energy Efficiency Portfolio

### LED Streetlight Program – Participating (Newark, Smyrna, Dover, Lewes, Seaford)

Program Years -	2016	2017	2018	2019	2020	Total
MWh Savings	1,339	103	66	75		1,583
KW Peak Reduction	-	-	-	-	-	-
Implementation Cost	\$15,000	\$4,500			\$19,500	
Incentive Costs	\$651,472	\$47,880	\$30,552	\$34,718		\$764,622
Total Costs	\$666,472	\$47,880	\$30,552	\$39,218		\$784,122
TRC ratio	1.90	1.90	1.90	1.90		1.90

### Efficiency Smart Program – Participating (New Castle, Clayton, Milford, Seaford)

Program Years	2016	2017	2018	2019	2020	Total
MWh Savings	-	-	334	1,668	1,335	3,337
MWh 70% Guaranteed	-	-	-	-	-	2,336
KW Reduction			37	184	147	367
Implementation Cost*	-	-	\$400,415	\$400,415	\$400,415	\$1,201,245
Cost Effectiveness Ratio						1.99

### DEMEC Total Energy Efficiency Portfolio – All Member Communities

Program Years	2016	2017	2018	2019	2020	Total
MWh Savings	1,339	103	400	1,743	1,335	4,920
KW Reduction			37	184	147	367
Implementation Cost	\$666,472	\$47,880	\$430,967	\$439,633	\$400,415	\$1,985,367
Annual Savings Percentage - DEMEC Nine Members Comparison*	0.06%	0.01%	0.02%	0.08%	0.06%	0.23%
Cost Effectiveness Ratio						1.96

\*The DEMEC Total Energy Efficiency Portfolio is a combination of programs each municipality elects. Please note the total saving percentage for an individual municipality may be higher or lower than DEMEC's Nine Member Comparison due to individual participation elections.