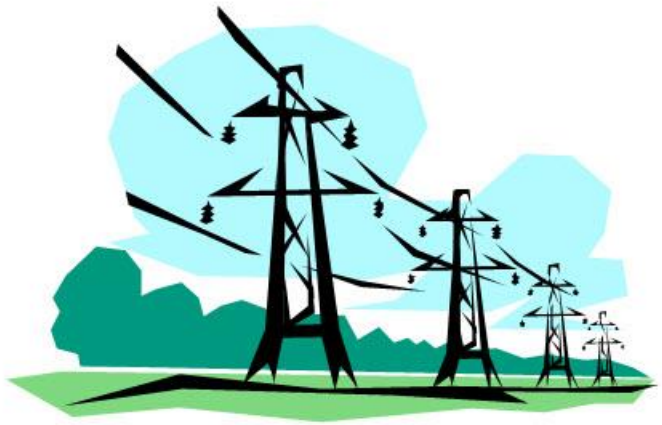

DEMEC

Delaware Municipal
Electric Corporation

Energy Efficiency Projects:
2016, 2017, 2018, 2019

Delaware Municipal Electric Corporation – Energy Efficiency Projects 2016, 2017, 2018, 2019

SUBMITTED TO:

DELAWARE ENERGY
EFFICIENCY ADVISORY
COUNCIL

March 8, 2017

1.0 Introduction

This report details energy efficiency improvement activities completed in 2016 and continuing through to 2019. In keeping with the Energy Efficiency Advisory Council ("EEAC") vote to allow 2016 measures to count towards 2017 goals, DEMEC submits this form of a plan to conform to the EEAC process. Many of these measures have been completed with more planned for the upcoming years. The Delaware Municipal Electric Corporation, Inc. ("DEMEC") requests Council approval.

2.0 Program Overview

The DEMEC cities and towns including, New Castle, Newark, Middletown, Smyrna, Clayton, Dover, Milford, Seaford, and Lewes, worked together on a large scale LED streetlight installation project. On behalf of all member communities, DEMEC developed specifications and issued a request for proposes ("RFP") from vendors that could furnish LED lighting fixtures. The RFP was designed specially to allow any or all communities to participate in the program at any level desired, permitting all cities and towns to benefit from a scaled purchase, but without the obligation to commit to any one vendor, any number of fixtures or installation services. In other words, DEMEC members received very attractive pricing with a la carte menu options.

2.1 Target Market

The Targeted market was DEMEC cities and towns.

2.2 Market Analysis and Trends

LED streetlights are more energy efficient and longer-lasting than other common street lighting technologies. Retrofitting saves cities and towns money both on their electric bills and in operations and maintenance. LEDs offer a number of other advantages as well, including improved visibility, reduced light pollution, and additional more advanced options such as dimming, remote control, and Wi-Fi capability. LED technology is well-established technology

for this application. The costs for this technology have continued to decline making investment a realistic next step. DEMEC will continue to monitor LED costs and use any available incentives as necessary to install more LED Streetlights.

2.3 Eligible Measures/Service and Customer Incentives

The eligible measures are LED Streetlights. Some replacements have been made with more planned. DEMEC cities and towns intend to make use of their respective Green Energy Funds for this purpose and plan to provide 100% incentives as available.

2.4 Marketing

DEMEC has publicized the results of these efforts to its DEMEC board members and when requested has drafted press releases for municipal use. DEMEC continues to invite additional LED Streetlight replacement requests from its members as incentives and interest continues.

Going forward DEMEC can build on its 2016 success by:

- Continuing to use the original design specifications, as appropriate, for new LED retrofits
- Maintaining a relationship with the original vendor to easily obtain product
- Encouraging DEMEC cities and towns to plan for efficiency in Green Energy Fund budgets
- Considering reusing the financing template with the Sustainable Energy Utility
- Continuing to include municipal improvements as part of the DEMEC Energy Efficiency Program customer pool

2.5 Evaluation, Measurement and Verification

The EM&V plan, proposed by Vermont Energy Investment Corporation (VEIC) to DEMEC, provides services described below for the DEMEC LED Streetlight Conversion Project. Due to the size of the project, and the fact that this will be the first assessment of a DEMEC energy efficiency project, the EM&V plan specifies that a custom methodology will be utilized for EM&V, rather than using a deemed savings methodology. The Evaluation plan includes:

- Description of the project including impetus for undertaking the project and project goals
- Assessment of pre-installation conditions, including lighting technology, controls, wattages, burn time, usage, quality of fixtures and maintenance costs
- Evaluation of street lighting proposal, including review of equipment, controls, and installation specifications, along with cost and savings estimates
- Evaluation of equipment, as installed, including visual inspection of representative fixtures, and interviews with relevant personnel and installation personnel.
- Evaluation of new fixture performance including light quality
- Evaluation of project economics using DE state-wide avoided costs, to determine the cost effectiveness of the project using the TRC test

VEIC will also conduct the following activities:

- Initialize a VEIC screening tool with approved DE state-wide avoided costs to be used in conjunction with VEIC energy efficiency measure analysis tools.
- Travel to Delaware to inspect equipment and to interview relevant project personnel.
- 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 one meeting (by phone conference) to present findings to DE EEAC, if requested by DEMEC.

The cost for these services, as proposed, is approximately $15,000

2.6 Savings, Costs, and Cost-effectiveness

Program Years	2016	2017	2018	2019	Total
MWH Savings	1,339	103	66	75	1,583
KW Peak reduction	-	-	-	-	-
Implementation Cost	$ 15,000	$ 4,500 estimated			$ 19,500
Incentive Costs	$ 651,472	$ 47,880	$ 30,552	$ 34,718	$ 764,622
Total Costs	$ 666,472	$ 47,880	$ 30,552	$ 34,718	$ 784,122
TRC ratio	1.9	1.9	1.9	1.9	