



DEMEC

Delaware Municipal Electric Corporation

22 Artisan Drive, PO Box 310, Smyrna, Delaware 19977 Phone 302 653-2733 Fax 302 653-2734

October 2, 2017

EMAIL DELIVERED

City of Lewes Board of Public Works
Attn: Darrin Gordon, General Manager
107 Franklin Avenue
Lewes, DE 19958

RE: Submittal of the Municipal Electric Utilities Renewable Portfolio Standard Compliance Report for the 2016-2017 program year

Dear Lewes Board of Public Works Members,

The Delaware Municipal Electric Corporation has completed the administration of the Municipal Electric Utilities Renewable Portfolio Standard for the 2016-2017 program year on behalf of all nine of our Municipal Electric Utilities. As per state statute, we submit to your local regulatory body a copy of the Municipal Electric Utilities Renewable Portfolio Compliance Report for your records.

If you have any questions or would like to discuss the plan in further detail, please feel free to contact me.



Patrick E. McQuillan
President & CEO

cc: Delaware General Assembly
Robert Underwood, Delaware Energy Office, Co-Acting Director



DEMEC

Delaware Municipal Electric Corporation

22 Artisan Drive, PO Box 310, Smyrna, Delaware 19977 Phone 302 653-2733 Fax 302 653-2734

October 2, 2017

TO:

Local Regulatory Authorities:

- City of Dover City Council
- City of Newark City Council
- City of Milford City Council
- Town of Middletown Town Council
- City of Seaford City Council
- City of Lewes Board of Public Works
- Town of Smyrna Town Council
- City of New Castle Municipal Services Commission
- Town of Clayton Town Council

Delaware General Assembly
Delaware Energy Office

FROM:

Patrick E. McCullar, President & CEO, DEMEC

SUBJ:

Municipal Electric Utilities Renewable Portfolio Standard ("MRPS") 2016/2017
Compliance Year Report

In accordance with 26 Del. C. § 363(b), the Delaware Municipal Electric Corporation, acting on behalf of its member communities, submits the following MRPS Annual Report.

DEMEC Background

The Delaware Municipal Electric Corporation ("DEMEC") is a Public Power utility incorporated as a not-for-profit Delaware corporation in 1979; the members of DEMEC are the nine municipal electric distribution utilities in Delaware. DEMEC provides joint services to the members.

- DEMEC generates electricity from its portfolio of owned generation assets and purchases electricity from other generators through staggered short, medium, and long term power contracts to meet the requirements of its member municipal utilities.
- Eight of the nine member municipal utilities receive 100% of their requirements from DEMEC through long-term take-or-pay contracts and the City of Dover receives partial requirements service.

- DEMEC has been authorized by its nine member utilities to manage the compliance obligation created by the Municipal Electric Utilities Renewable Portfolio Standard Plan.

Delaware Renewable Portfolio Standard Background

The Renewable Portfolio Standard (“RPS”) is a State-mandated policy that obligates each retail seller of electricity to include in its resource portfolio annually increasing amounts of electricity from Qualifying Renewable Energy Resources through 2025 and beyond. The municipal electric utilities were exempted from the RPS requirements prior to 2010.

In 2010 DEMEC and its members responded to a request from Delaware Governor Jack Markell by voluntarily joining the Delaware RPS under S.S. 1 for S.B. 119. The bill provided, among other things:

- Increasing the RPS target to 25% by 2025 with at least 3.5% from solar resources.
- Allowed municipal electric companies to develop and implement a comparable program to the State Renewable Energy Portfolio Standard for its ratepayers beginning in the 2013 Compliance Year (6/1/2013-5/31/2014).
- Provided a method to freeze the RPS compliance obligations for utilities if costs exceed “circuit breakers” of 3% of the total cost of purchased power for Renewable Energy Credits (RECs) and 1% for Solar Renewable Energy Credits (SRECs) in any calendar year.

DEMEC Renewable Energy Commitments

In developing a comparable plan, DEMEC evaluated its accomplishments and commitments regarding investments in renewable energy. DEMEC has invested in the development of a portfolio of qualifying renewable energy resources to achieve the lowest possible compliance cost to protect its ratepayers from unreasonable and burdensome impacts on their cost of electricity. DEMEC’s goal is to comply with the spirit of the Delaware RPS without creating a negative impact on the community ratepayers or the Delaware economy.

Non-Solar:

- DEMEC has committed to purchase all the renewable electricity and associated RECs from a wind farm (Laurel Hill) in north-central Pennsylvania under a 25-year agreement. Laurel Hill is a 69-megawatt (69-MW) wind generation facility consisting of 30 Siemens wind turbines, each capable of generating 2.3 MW. Laurel Hill is capable of generating enough electricity to power more than 20,000 homes.
- DEMEC was the first to sign an agreement with Blue Water Wind to purchase offshore wind energy. DEMEC remains committed to support and purchase wind energy from off the coast of Delaware.
- DEMEC’s service territory is home to the only significant wind generation system installed in the State of Delaware; the utility-scale 2-megawatt (2-MW) wind turbine is located at the University of Delaware’s (“UD”) Hugh R. Sharp Campus in Lewes. RECs generated by the University of Delaware’s wind turbine are purchased by DEMEC through an agreement. The proceeds support wind and intermittent renewable energy graduate student research fellowship(s) in the University’s College of Earth, Ocean, and Environment (CEOE).

Solar:

DEMEC is the leader in deployment of Solar Renewable Energy Resources in Delaware. Of the 88.6 MW of installed or committed solar generation resources in Delaware, a clear majority (47.7 MW, or 54% of the total) is installed in DEMEC municipal service territories. This becomes an even more striking statistic when you consider DEMEC municipal service territories make up less than 15% of electric service in the entire state. DEMEC has participated in the development of qualifying solar energy systems in all of the following RPS Taskforce defined Tier sizes:

Solar Renewable Energy Tier Groups (State definition by size):

- Tier 1 = 0 to 25 kW – Typical Residential Rooftop
- Tier 2 = 25 to 200 kW – Typical Small Commercial
- Tier 3 = 200 kW to 2 MW – Typical Large Commercial and Industrial
- Tier 4 = 2MW and Up – Utility Scale

Tier 1 and Tier 2 – Green Energy Grants

- DEMEC has encouraged and supported residential and commercial renewable energy systems since June 1, 2006 through the Municipal Green Energy Grants Program.
- DEMEC has leveraged over \$7 Million dollars of overall investment in renewable energy with over \$2.3 Million dollars of grants.
- DEMEC has encouraged and supported the State Renewable Energy Taskforce to enable the owners of previously stranded solar projects to participate in the State SREC Auction and Sustainable Energy Utility SREC Procurement processes.
- DEMEC will continue to evaluate the cost effectiveness of participating in the State SREC auction process as our compliance obligation for SRECs increases.

Tier 3 – Community Scale

- DEMEC has always maintained that each member community should have support in siting a renewable energy system in its borders for the benefit of the whole community. This makes possible participation in solar by low-income customers, those without an adequate solar resource, and those who otherwise could not afford participation.
- DEMEC, on behalf of the City of Newark, developed McKees Solar Park, a 230-kilowatt community solar farm. The project revitalized a 3.91-acre brownfield site off East Cleveland Avenue. The Solar Park provides Newark with a behind-the-meter renewable power source to serve all residents of the community by reducing the City's peak power demand, lowering the wholesale cost of power, generating solar renewable energy credits, bringing locally produced green energy to the City's electric users, and reducing the City's carbon footprint. The 900-panel array produces enough electricity to power approximately 26 to 36 homes, depending on the season. The McKees Solar Park went commercial October 2014.

DEMEC also conceived and proposed to the City of Newark the State of Delaware's first opt-in community solar program. This program was approved by Newark City Council on June 23, 2014 to launch programs to promote community involvement in the solar park. There are several program participation options such as: "Sun Ray" in which subscribers have the opportunity to make a one-time investment of \$50 in return for a monthly rebate of \$1.00 and the opportunity to purchase one (1), 100 kilowatt-hour block of power generated from McKees Solar Park each month for ten years. Participants can

also select from a variety of a tax-deductible donation options to support the solar park and be recognized on the City's website. DEMEC's Community Solar Model for the City of Newark has been recognized **twice** by the national solar industry trade group, Solar Energy Power Association (SEPA), as a leading program design for increasing access to solar energy to the public. DEMEC intends to help its members replicate this unique model.

- Several other DEMEC communities are working toward installing their own community solar projects in various tiers :
 - Clayton - 4.0 KW firehouse project – went commercial 2Q/2015
 - New Castle - 29.0 KW project near its water treatment facility – went commercial 3Q/2016
 - Smyrna - ~1.5 MW project next to Smyrna public works building – Construction Phase expected completion 4Q/2017
 - Seaford – ~690 KW project – went commercial 1Q/2017
 - Middletown and Lewes are also considering initial concept designs for their own community solar projects
 - DEMEC will continue to support community interest, low-income participation, and meet its RPS obligation concurrently by investing in these community solar projects on behalf of their members.

Tier 4 – Utility Scale

- DEMEC recognized early on that the legislative circuit breakers for photovoltaics would be hit and freeze the solar portion of the municipal RPS plan within a few years if the compliance cost was not carefully managed. In order to avoid hitting the legislative circuit breakers prematurely and to assure that we do not unreasonably increase the cost of electric service to our municipal ratepayers, DEMEC chose to invest a significant portion of its RPS-dedicated funds in large-scale solar facilities. To prevent a negative impact on the Delaware economy from the cost of RPS compliance, DEMEC has committed capital to developing utility scale solar systems that create jobs and economic development for the State. The current DEMEC portfolio of Tier 4 Utility Scale Systems is:
 - Dover Sun Park – 10 MW – (DEMEC purchases 15 % of all SRECs) went commercial 2Q/2010 and produces enough to power over 1,100 Delaware homes.
 - Milford Solar Farm – 15 MW – (DEMEC purchases a majority of SRECs and all energy) went commercial 4Q/2012 and produces enough to power more than 1,300 homes.

DEMEC Comparable Plan Objectives

DEMEC has set the following objectives as goals for its Municipal RPS Plan.

- Develop and implement a compliance plan that is comparable to the State-mandated plan for Delmarva Power and that encourages development of qualifying renewable energy resources in the State of Delaware in all State-defined tiers.
- Plan in 5 year increments. The parameters of the 5 year planning cycle will have the goals of achieving a comparable plan that: 1) Achieves the lowest cost compliance solutions to mitigate high renewable energy cost impacts for our community ratepayers and the State economy, 2) Encourages the development of renewable resources in our member communities 3) Maintains the high reliability of electric service in our community systems.
- DEMEC will review and rebalance its compliance schedule annually to assure cost impacts to our community ratepayers are reasonable and accurately match qualifying retail electricity sales with renewable energy resource procurement.

State RPS Compliance Schedule

Compliance Year - (beginning June 1 st)	Minimum Cumulative Percentage from Eligible Energy Resources	Minimum Cumulative Percentage from Solar Photovoltaics
2013	10.00%	0.60%
2014	11.50%	0.80%
2015	13.00%	1.00%
2016	14.50%	1.25%
2017	16.00%	1.50%

* Minimum Percentage from Eligible Energy Resources Includes the Minimum Percentage from Solar Photovoltaics.

MRPS 2015/2016 Compliance

For compliance year 2015/2016 DEMEC set a 14.50% overall compliance goal which was achieved in this year’s MRPS implementation. The 14.50% compliance goal matches Delmarva Power & Light’s compliance target for 2016/2017.

The MRPS was rebalanced to value the renewable energy portion of DEMEC’s renewable energy assets. DEMEC also applied excess retirement credits from 2015/2016 to the 2016/2017 obligations. Annual adjustments will occur as necessary.

- The renewable energy sources used for REC compliance are the 69 MW Laurel Hill Wind Farm in Lycoming, Pennsylvania and 2.0 MW UD Wind Turbine in Lewes, Delaware.
- The solar renewable energy sources used for SREC compliance are the 10 MW Dover Sun Park and 15 MW Milford Solar Facility.

Municipal Renewable Energy 2016/2017 Compliance Year REC and SREC Retirements		
Municipality	Minimum Cumulative Percentage from Eligible Energy Resources 14.50%* Associated REC Quantity Retired	Minimum Cumulative Percentage from Solar Photovoltaics 1.25% Associated SREC Quantity Retired
New Castle	8,885	766
Newark	30,381	2,620
Middletown	18,778	1,619
Smyrna	10,929	943
Clayton	2,504	216
*Dover	64,795	3,040
Milford	16,630	1,434
Seaford	12,238	1,055
Lewes	8,302	716
Total	173,450	12,409
* Minimum Percentage from Eligible Energy Resources Includes the Minimum Percentage from Solar Photovoltaics.		

*The City of Dover reached the solar 1% compliance cost limit also known as the “circuit breaker” and may elect to stop increasing its solar portfolio percentage per 26 Del. C. § 363(g). The following sections of 26 Del. C. § 363(e) through (i) detail the circuit breaker provisions:

- (e) The total cost of compliance with this section shall include the costs associated with any ratepayer funded renewable energy rebate programs, REC and SREC purchases, or other costs incurred in meeting renewable energy programs.

(f) The total cost of complying with eligible energy resources shall not exceed 3% of the total cost of the purchased power of the utility for any calendar year.

(g) The total cost of complying with the solar photovoltaic program shall not exceed 1% of the total cost of the purchased power of the affected utility for any calendar year.

(h) At no time during any calendar year shall the total cost of compliance with this section result in an increase of an average consumer's monthly bill in excess of 4%.

(i) The Board of Directors of a rural electric cooperative and the local regulatory authority of a municipal electric company may approve an increase in the limit on the cost of compliance, as specified in subsections (f) and (g) of this section above.

Proposed 2017/2018 MRPS Plan

Per 26 Del. C. § 363(c), DEMEC member community local regulatory authorities shall continue to base renewable energy portfolio standard decisions on the need, value and feasibility of the renewable energy resources pertaining to the economic and environmental wellbeing of its members.

DEMEC continually evaluates the impact of the MRPS costs on its communities. Specifically DEMEC reviews the impact on rates and REC and SREC inventory as we proceed forward in the spirit of the RPS legislation. After review of these and other factors, DEMEC and its Board of Directors plan to continue forward with the original renewable energy compliance target for the 2017/2018 year.