



DEMEC

Delaware Municipal Electric Corporation

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October 1, 2024

EMAIL DELIVERED

City of Newark Council
Attn: Tom Coleman, City Manager
220 South Main Street
Newark, DE 19711

RE: Submittal of the Municipal Electric Utilities Renewable Portfolio Standard Compliance Report for the 2023-2024 program year

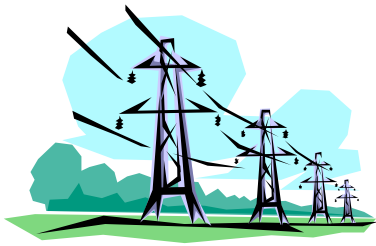
Dear Councilmembers,

The Delaware Municipal Electric Corporation has completed the administration of the Municipal Electric Utilities Renewable Portfolio Standard for the 2023-2024 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.

Kimberly Schlichting
President & CEO

cc: Delaware General Assembly
Dayna Cobb, Department of Natural Resources and Environmental Control



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TO: DEMEC Member 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
- Lewes Board of Public Works
- Town of Smyrna Town Council
- Municipal Services Commission of the City of New Castle
- Town of Clayton Town Council

Delaware General Assembly

Department of Natural Resources and Environmental Control

FROM: Kimberly Schlichting, President & CEO, DEMEC

SUBJ: Municipal Renewable Portfolio Standard (“MRPS”) 2023/2024 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 joint action agency incorporated as a not-for-profit Delaware organization in 1979. The members of DEMEC are the nine municipal electric distribution utilities in Delaware. DEMEC provides joint services to its members, including wholesale power supply.

- 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 member utilities to manage the compliance obligation created by the Municipal Renewable Portfolio Standard Plan.

Delaware Renewable Portfolio Standard Background

The Renewable Portfolio Standard (“RPS”) is a State-mandated policy that obligates Commission-regulated electric distribution utilities to include in their resource portfolio annually increasing amounts of electricity from “Qualifying Renewable Energy Resources” through 2035 and beyond. Cooperatives and municipal electric utilities were exempted from the RPS requirements prior to 2010.

In 2010, DEMEC and its members responded to a request from Governor Jack Markell and voluntarily joined 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 sources.
- Allowed municipal electric companies to develop and implement a comparable program to the State Renewable Portfolio Standard for their 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 exceeded “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.

In February 2021, State legislation increased the RPS again to 40% with a 10% solar carveout. This legislation also removed the cost cap “circuit breakers” and replaced them with REC and SREC market availability triggers.

DEMEC Renewable Energy Commitments

In developing a comparable plan, DEMEC evaluated its accomplishments and commitments regarding investments in renewable energy on behalf of its members. As part of DEMEC’s core value of sustainability, investments have been made in the development of a portfolio of Qualifying Renewable Energy Resources to achieve the lowest possible compliance cost to protect its customers from unreasonable and burdensome impacts on their cost of electricity. DEMEC’s Board of Directors approved complying with the current Delaware RPS targets for compliance years 2021 – 2025 for Commission-regulated electric distribution utilities while minimizing, to the best of its ability, a negative impact on the members’ customers or the Delaware economy.

Non-Solar Renewables:

- DEMEC has committed to purchasing all the renewable energy 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 can generate enough electricity to power more than 20,000 homes.
- 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 located at the University of Delaware’s (“UD”) Hugh R. Sharp Campus in Lewes. RECs generated by UD’s wind turbine are purchased by DEMEC through an agreement. The proceeds support wind and other renewable energy graduate student research fellowship(s) in UD’s College of Earth, Ocean, and Environment (CEOE).

Solar:

DEMEC is the leader in deployment of Solar Renewable Energy Resources in Delaware and has done so through a variety of pathways to support DEMEC members' individual interests and those of their customers. Detailed below, in RPS Taskforce defined Tier sizes, is a description of DEMEC's solar development areas.

DEMEC Solar Renewable Energy Tier Groups (RPS Taskforce definition by size):

RPS Taskforce Tier	Tier Size - 2023	Typical Customer
Alpha	less than or equal to 350 kW	Residential, Small Commercial & Community Benefiting
Beta	350 kW but less than or equal to 2 MW	Small, Large Commercial & Community Benefiting
Gamma	Any system up to 5 MW	Utility Scale & Community Benefiting

Tiers Alpha & Beta – Residential, Commercial and Community Benefiting

DEMEC has encouraged and supported residential, commercial, and community benefiting renewable energy systems since June 1, 2006.

The table below details the number and capacity of currently installed residential, commercial, and community benefiting solar facilities in DEMEC member communities.

DEMEC Member Residential, Commercial, and Community Benefiting PV Installations and Capacity (kW AC)

Community	Number of Installations	PV Capacity Total (kW AC)
New Castle	22	313
Newark	207	4,443
Middletown	335	4,501
Smyrna	159	1,341
Clayton	69	553
Dover	558	5,888
Milford	233	2,056
Seaford	40	1,329
Lewes	145	1,434
Total	1,768	21,858

In addition, the Municipal Green Energy Grants Program has leveraged over **\$8.2** million of overall investment in renewable energy with over **\$2.8** million of grants. This program assists residential, commercial and DEMEC communities with the installation of a variety of green energy systems including Photovoltaics, Geothermal, Solar Water Heating systems.

DEMEC continues its long-standing support and funding of community solar sited within each of our members' service territories for the benefit of the entire community. Municipally sited and owned, behind-the-meter solar systems result in optimal cost savings to the entire community due to reduced capacity, transmission, and ancillary costs. Additionally, municipally installed and owned solar systems benefit a variety of customers, such as low-to-moderate income, customers with properties not conducive to solar installations, historical building owners, and those who otherwise could not afford participation.

The following is a list of community benefiting projects, included in the installations table above, installed in DEMEC member service territories. Each municipality's community project was designed and implemented to meet the specific needs, interests, zoning, and desired benefits of each community. DEMEC recognizes that there is no "one size fits all" approach; therefore, DEMEC assists with development paying specific attention to meeting the unique interests of each of its members.

1. **Newark – ~230 kW project** – went commercial 4Q/2014. 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 27 homes.
2. **Newark – opt-in program** - 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 programs such as: "Sun Ray" in which subscribers can 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 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, now the Smart Electric Power Alliance (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.
3. **Newark – ~1,300 kW (over four projects)** – went fully commercial 4Q / 2022. Several locations in the City of Newark were utilized for this project: City Hall, Field Operations Complex, Newark Reservoir, and McKees Solar Park. Collectively these projects produce enough electricity to power approximately 162 homes. The SRECs generated by the project will be used to fulfill some of the need to source RECs for Newark's 100% Renewable Option.
 - Newark created a 100% renewable energy option for all electric customer classifications. The rate will automatically apply, with the option to opt-out, for all new electric accounts created after May 26, 2021. Existing electric customers can opt into this program. The fee is set per kilowatt-hour (kWh), and the revenue derived from this fee is used to purchase enough RECs to cover all usage from accounts that have opted to participate in the program. The RECs will then be

retired on behalf of those customers. In 2023, The City of Newark enrolled 5,524 customers in the Renewable Energy Program. This volunteer program contains over 41% of the City's electric accounts.

4. **Clayton - 4.0 kW project** – went commercial 2Q/2015. This project was installed on the local Clayton firehouse to not only green the new building, but also reduce community taxes that pay for this critical infrastructure. The system generates electricity equivalent to saving up to 9 barrels of oil annually.
5. **Clayton – 6.0 kW project** – went commercial 1Q/ 2022. This project was installed on the Clayton Public Works building. Like the Clayton firehouse project, the kilowatt-hours produced not only green the new building, but also reduce community taxes that pay for town facilities. The system generates electricity equivalent to charging up to 724,000 smart phones.
6. **New Castle - 29.0 kW project** – went commercial 3Q/2016. This project was designed to fit within a unique area. The historical nature of the community limits placement so the facility was located near the local water treatment facility next to the Penn Farm. It represents the successful combination of historic preservation with new technology. The system generates electricity equivalent to saving up to 2,000 gallons of gasoline annually.
7. **Seaford – ~690 kW project** – went commercial 1Q/2017. This project provides power to the local water treatment plant and benefits the community by reducing municipal expenses. The system generates electricity equivalent to up to 85 homes' average annual electric use.

Tier Gamma – Utility Scale

DEMEC recognized early on that the legislative circuit breakers for photovoltaics would be hit and freeze the solar portion of the RPS within a few years if the compliance costs were not carefully managed. To avoid hitting these caps prematurely and assure that costs did not unreasonably increase for members' customers, DEMEC chose to invest a significant portion of its RPS-dedicated funds into utility scale solar facilities. To prevent a negative impact on the Delaware economy from the cost of RPS compliance, DEMEC committed capital to develop utility scale solar systems that created jobs and economic development for the State. The current DEMEC portfolio of Tier Gamma utility scale systems is:

1. **Dover Sun Park – 10 MW Tracking System** – (DEMEC purchases 15 % of all SRECs) went commercial 2Q/2010 and produces enough to power up to 1,100 homes.
2. **Milford Solar Farm – 15 MW Fixed Tilt** – (DEMEC purchases all of the SRECs and energy) went commercial 4Q/2012 and produces enough to power up to 1,300 homes.
3. **Smyrna - ~1.5 MW Fixed Tilt** – went commercial 3Q/2018. This project blends efficiency with renewables. Space in municipalities is at a premium, so making smart choices is important. This project utilizes land surrounding a dry retention pond which has little use otherwise. Through efficient land use, Smyrna is adding more solar to the community while also preserving open land for economic development and growth. The system generates electricity equivalent to removing up to 239 passenger cars from the road.

Potential Future Projects

DEMEC is assisting its members in the development of future projects to support DEMEC and its members' sustainability goals. Current projects being considered include floating solar, battery storage to support additional solar in communities, and other clean energy technologies.

DEMEC plans to execute contracts for an innovative form of renewable energy deployment through floating solar, which currently does not exist in the state of Delaware and is minimally deployed nationwide. DEMEC intends to contract for approximately 3MW DC of floating solar in the Town of Middletown. Unlike traditional solar, the project will be deployed on water using one of the town's wastewater treatment ponds to preserve open real estate for economic development and agriculture, remedy an algae issue on the pond, and increase renewable generation in DEMEC's power supply portfolio. This project will use one of three ponds, leaving room for two additional solar phases in the future. This project could be an example to alleviate pressure on municipalities to choose between adding local renewable energy and economic growth. Many municipalities face similar issues with limited open land while needing to reach annually increasing renewable/clean energy targets. Further, municipalities commonly have water/wastewater utilities making the opportunity to participate in this technology and address algae a win-win. Increasing renewable assets within utilities' power supply portfolios not only serves communities with cleaner energy, but also meets compliance targets when layering the purchase of REC/SRECs. What makes this project more cost effective is locally siting the facility within the utility's service territory (behind the meter) to reduce capacity, transmission, and ancillary services charges. With growing regulatory costs, these savings make a significant difference in reducing cost impacts to customers. Moreover, this project is a demonstration of how Delaware's municipal public power utilities accomplish innovative projects for the benefit of their customers and the environment - focusing on the benefit of local decision-making and planning to showcase the importance of timing, location, and sizing.

The project is expected to achieve commercial operations in the 3rd or 4th quarter of 2025. The facility is predicted to produce enough energy to power 352 homes annually.

This project has also been recognized as a leading research and development project nationally by the American Public Power Association (APPA). APPA awarded DEMEC a \$125,000 grant to develop this project and generate a report that will detail the development process to assist other municipal governments around the country in implementing their own floating solar project.

DEMEC will continue to concurrently support community interest, low-to-moderate income participation, and meet its MRPS obligation by investing in member community solar and cost-effective projects.

Beyond Tiers – Meeting Individual Corporate Sustainability Goals/Targets

DEMEC Corporate Renewable Energy Block Program – DEMEC continues to use this program in response to corporate interest for more renewable energy. It is designed to offer commercial/industrial customers the opportunity to select renewable energy options that meet their corporate sustainability goals/targets based upon their organization's typical and projected energy consumption. DEMEC works with corporate management teams to determine what products fit their individual needs. This is not a "one size fits all" program but rather a unique option afforded to corporate customers to purchase a customized portfolio of renewable products through market purchases of select Renewable Energy Credits (RECs) or Solar Renewable Energy Credits (SRECs) from a variety of generation technologies (wind, solar, hydro, etc.).

DEMEC Comparable Plan Objectives

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

- Develop and implement a compliance plan that is comparable to the State-mandated plan for Commission-regulated electric distribution utilities and that encourages development of Qualifying Renewable Energy Resources in all RPS Taskforce defined tiers.
- Plan in 5-year increments. The 5-year planning cycle will have goals to achieve a comparable plan that:
 1. Mitigates high renewable energy cost impacts for members' customers and the State economy by securing lowest-cost compliance solutions.
 2. Encourages the development of renewable resources in our member communities.
 3. Maintains a high reliability of electric service in member distribution systems.
- DEMEC will review its compliance schedule annually to determine cost impacts to members and accurately match qualifying retail electric sales with renewable energy resource procurement.

MRPS Schedule

MRPS 5-Year Schedule (2019 – 2023)			
Compliance Year - (beginning June 1st)	Non-Solar Percentage	Solar Percentage	Cumulative Percentage
2019	17.00%	0.98%	17.98%
2020	17.75%	1.12%	18.87%
2021	18.50%	2.50%	21.00%*
2022	19.25%	2.75%	22.00%*
2023	20.00%	3.00%	23.00%*
<i>* Total Cumulative Percentage Includes Non-Solar and Solar Percentages and does not include previously applied 1% Solar Cost Cap provisions that were in State statute</i>			

MRPS 2023/2024 Compliance Goal

For compliance year 2023/2024, DEMEC set and achieved a **23.00%** compliance goal. DEMEC's **23.00%** compliance goal matches the State-mandated schedule for 2023/2024 Commission-regulated electric distribution utilities.

- REC compliance was achieved using the 69 MW Laurel Hill Wind Farm in Lycoming, PA and 2.0 MW UD Wind Turbine in Lewes, DE.
- SREC compliance was achieved using: Dover Sun Park, Milford Solar Project, Seaford Solar Project, McKees Solar Park, Smyrna Solar Project, and New Castle MSC Project.
- The City of Dover used its own procured resources to meet its REC and SREC obligations.

Municipal Renewable Energy 2023/2024 Compliance Year REC and SREC Retirements		
Municipality	Total SRECs Retired <i>(Solar Carveout Percentage 3.00%)</i>	Total Credits RECs + SRECs Retired <i>(Cumulative Percentage 23%*)</i>
New Castle	1,535	12,275
Newark	5,430	43,438
Middletown	3,827	30,611
Smyrna	2,145	17,155
Clayton	557	4,453
Dover	13,048	100,031
Milford	3,349	26,791
Seaford	2,191	17,528
Lewes	1,647	13,173
Total	33,729	265,455
<i>* Cumulative Percentage Includes the RECs from Eligible Energy Resources and SRECs.</i>		

Proposed 2024/2025 MRPS Plan

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

DEMEC continually evaluates the impact MRPS costs have on its member communities. Specifically, DEMEC reviews the impact on rates and its REC/SREC inventory as municipalities 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 matching the State-mandated percentage for Commission-regulated electric distribution utilities for the 2024/2025 year.