Energy Efficiency Advisory Council

2023 Annual Report

DNREC Division of Climate, Coastal and Energy
100 W. Water Street, Dover, DE 19904
dnrec.delaware.gov/climate-coastal-energy

Letter from the Chair

Dear Delawareans,

On behalf of the Delaware Energy Efficiency Advisory Council, I am pleased to present the 2023 Annual Report. Established by the legislature in 2014, the EEAC works to develop energy savings targets and assist program administrators to deliver energy efficiency programs to their customers. Energy efficiency brings cost savings to the individual ratepayer and provides benefits across the entire energy system. This report serves to inform stakeholders of the results of the 2023 calendar year, the last year in the 2021-2023 program term.

This year was a busy and exciting time in Delaware energy policy and program development. In 2023, both regulated utilities, Delmarva Power and Chesapeake Utilities, brought program plans to the EEAC, which were ultimately filed with the Public Service Commission (PSC). Chesapeake's plan marked the first time a regulated utility filed a plan focused on natural gas energy efficiency programs. Delmarva's program plan was approved in fall of 2023 and an agreement was in discussion between Chesapeake and the PSC at the end of 2023.

In 2023, the Governor's Energy Advisory Council (GEAC) was reconstituted to provide recommendations to the DNREC State Energy Office on updates to the Delaware Energy Plan. The Chair of the GEAC established four workgroups to help review past plans, study particular topics in greater detail and offer recommendations to the full council. These included an Energy Efficiency and Electrification workgroup, which explored current energy efficiency programs, transportation electrification, electric vehicles, building electrification, reliability and other topics raised by members. Their work culminated in a set of recommendations which will inform the Delaware Energy Plan as well as the work of the EEAC (see https://dnrec.delaware.gov/climate-coastal-energy/energy-office/advisory-council/efficiency-and-electrification/).

This report contains a summary of the activities of the EEAC over the past year, including work in the areas of Evaluation, Measurement, and Verification (EM&V) and the consideration of new opportunities for program enhancements. The report also provides individual updates for each energy efficiency program administrator. It includes their progress toward energy savings targets and program results and updates.

In 2024, the EEAC will continue its work of championing statewide energy efficiency efforts and identify opportunities to incorporate the work of the GEAC into its ongoing Council business.

Robert Uderwood
Administrator
DNREC State Energy Office
Chair, Energy Efficiency Advisory Council

Introduction

Since 2014, the Delaware Energy Efficiency Advisory Council (EEAC or Council) has been working as a collaborative panel of representatives to support the development of energy efficiency programs that increase energy efficiency, reduce energy usage and lower consumer energy costs across the state. One of the primary tasks of the Council is to assist Delaware's electric and natural gas utilities and program administrators with developing and deploying energy efficiency programs that are cost-effective, reliable and achievable. The 2023 EEAC Annual Report highlights the actions of the Council and participating program administrators over the past year and documents the state's progress toward the implementation of energy efficiency programs for all Delawareans.

Council Mission Statement

The EEAC's mission is to assist affected energy providers in the development of energy efficiency, energy conservation, peak demand reduction and emission-reducing fuel switching programs for all customer classes. These programs and financing mechanisms aim to be cost-effective, reliable and feasible, and include evaluation, measurement and verification of energy savings. The Council strives to collaborate with the Public Service Commission (PSC) staff and the Public Advocate to recommend candidate programs for three-year portfolios to be approved by the PSC or the appropriate governing body. For more information and to follow the work of the Council, visit de.gov/eeac.

2023 Program Summary

Energy Efficiency Performance Outcomes

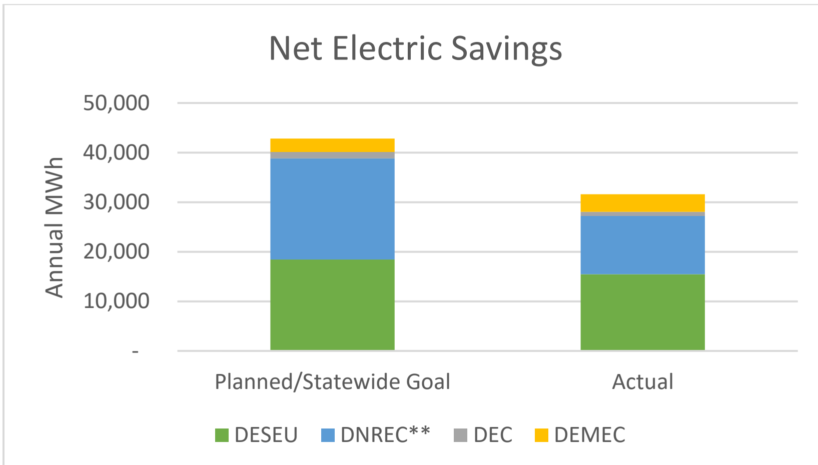
2023 energy efficiency savings were equivalent to:

- Approximately 6,575 homes powered for a year through electric savings
- More than 8,470 homes heated for a year through gas savings
- Almost 37,240 metric tons of carbon dioxide avoided each year, the equivalent of taking 8,095 cars off the road.

Progress Toward Energy Savings Targets

In early 2020, the EEAC established three-year non-binding energy savings targets based on the three-year program plans submitted by the non-regulated program administrators, as well as Delmarva Power & Light's plan that had already been approved by the PSC. 2023 represents the last year of the latest three-year plans. Figure 1 shows the electric program savings in 2023 compared to planned savings and the statewide target for the year. These savings represent preliminary (unevaluated) results.

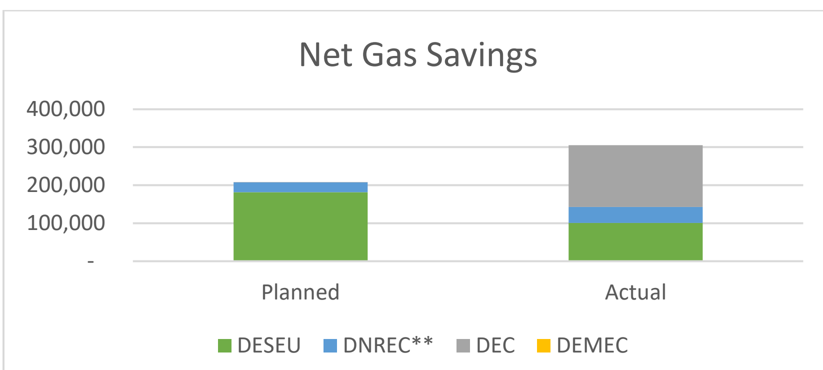
*Figure 1. 2023 Net Electric Savings**



**For preliminary results, net savings were calculated using statewide net-to-gross ratios as approved by the EEAC EM&V Committee*
*** DNREC EEIF planned numbers included savings for projects preapproved in 2023. Some of those projects will be completed in 2024 and are not included in 2023 final savings numbers.*

Figure 2 presents similar information from gas program savings.

*Figure 2. 2023 Net Gas Savings**



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Program Results and Updates

DNREC Division of Climate, Coastal, & Energy

The DNREC Division of Climate, Coastal and Energy (DCCE) supports energy efficiency and conservation programs that help reduce energy use and impact on the state's environment and public health. In 2023, the Division's energy efficiency efforts included the Energy Efficiency Investment Fund (EEIF) and the Weatherization Assistance Program (WAP). These programs contributed to reducing the production of harmful greenhouse gasses, lowered energy costs and improved the value and comfort of homes and businesses in Delaware. The table below presents preliminary results of DNREC's progress toward achieving its energy savings targets.

Table 1. 2023 DNREC Performance Metrics

Annual Electric Energy Savings (MWh)	9,449
Annual Electric Demand Savings (kW)	1,229
Annual Natural Gas Savings (MMBtu)	33,558
Annual Other Fuel Savings (MMBtu)	503
Program Spending (Millions)	$6.2

Energy Efficiency Investment Fund

EEIF provides financial incentives to Delaware businesses, local governments and non-profits to make building technology upgrades that result in energy, peak demand and operating cost savings. The program includes both prescriptive incentives and a custom incentives pathway that supports more complex and comprehensive projects. EEIF is primarily funded by the Delaware Public Utility Tax, with some additional funding in 2023 provided by the Regional Greenhouse Gas Initiative (RGGI). Results in the table below represent projects completed in 2023.

Table 2. 2023 EEIF Performance Metrics

Annual Electric Energy Savings (MWh)	9,376
Annual Electric Demand Savings (kW)	1,204
Annual Natural Gas Savings (MMBtu)	33,167
Program Spending (Millions)	$4.2
Participants (# of businesses)	71

Case Study: Faithful Friends Secures DNREC Grant for Energy-Efficient Animal Center

Faithful Friends Animal Society was started in 2000 to provide care for animals in need while enforcing a no-kill policy. Over time, the shelter had outgrown the space and needed a new facility designed to function as an animal center. In 2023, Faithful Friends applied for an EEIF grant to support construction of a new energy-efficiency building and received $73,959 in funding through the custom project pathway. The project incorporated energy-efficiency measures including interior and exterior lighting, an HVAC

system, solar tubes, a water heater and appliances that maximized both their energy savings and cost-effectiveness. The new shelter is far more energy efficient, which not only helps save money for Faithful Friends but is good for the environment.

"Every cent helps. We had to raise about $350,000 more to finish the building, so this $74,000 gift, when it came, was a big help to help us finish the campaign."
– Jane Pierantozzi, Executive Director of Faithful Friends

Weatherization Assistance Program

Program Description

WAP was created to reduce energy costs for low-income Delaware households by increasing the energy efficiency of their homes. In Delaware, WAP has been available to low-income residents since 1976. The current program is administered by DNREC's Division of Climate, Coastal and Energy and implemented by a third party subgrantee. The program provides energy efficiency, weatherization, ventilation and other health and safety measures to eligible residents. DNREC administers its WAP as a grantee of the U.S. Department of Energy's WAP. Other sources of funding include the Low-Income Home Energy Assistance Program (LIHEAP), which is run by Delaware's Department of Health and Human Services, RGGI proceeds, and contributions from Delmarva Power and Light. To support WAP, the Delaware Sustainable Energy Utility's Pre-Weatherization Program (Pre-WAP) provides essential repairs to homes that have been deferred by WAP for structural reasons and has enabled hundreds of homes to receive WAP services that otherwise would not have due to the condition of the homes.

Table 3. 2023 WAP Performance Metrics

Annual Electric Energy Savings (MWh)	74
Annual Electric Demand Savings (kW)	25
Annual Natural Gas Savings (MMBtu)	391
Annual Other Fuel Savings (MMBtu)	503
Program Spending (Millions)	$1.9
Participants (# of households)	118

DNREC highlights from the WAP program include:

- Implemented a pay-for-performance contract, the first in WAP across the country, so that administrative costs are commensurate with the number of homes completed.
- Streamlined tracking and reporting processes to reduce more than 100 hours of labor annually.
- Applied for new uses of LIHEAP funds to include electrification measures.
- Initiated a Weatherization Readiness Plan that allows deferred clients to return to the program.
- Launched new desktop quality control procedures in which clients are surveyed immediately after job completion.
- Funneled 50 clients from the WAP pipeline into the Low- to Moderate-Income Solar Program.

Case Study: WAP Success with a Sussex County Resident

A single mother and her child with asthma were living in a 53-year-old home in Sussex County that was losing a lot of heat through the attic and crawl space. With the help of the Weatherization Assistance Program, their home received full blow insulation in the attic and crawl space, as well as air sealing around all the windows and doors. Ventilation and vapor barriers were also added in the crawlspace to make the air inside the home healthier to breathe. Including all other measures, such as LED light bulbs, the entire project resulted in a savings to investment ratio of 4.5. This allowed the mother to save more than $2,000 annually on utility bills, serving as a prime example of the program goals.

Delaware Sustainable Energy Utility

The Delaware Sustainable Energy Utility (DESEU) was created in 2007 by the state to foster a sustainable energy future. DESEU serves as a one-stop resource to residents and businesses by offering numerous programs through its Energize Delaware initiative. In 2023, DESEU helped more than 8,500 Delaware utility customers save money through energy efficiency. DESEU is primarily funded through RGGI but leverages multiple sources of funding such as tax-exempt bonds and leases, fees and interest on financing and fees for services.

Table 4. 2023 DESEU Performance Metrics

Annual Electric Energy Savings (MWh)	15,471
Annual Electric Demand Savings (kW)	788
Annual Natural Gas Savings (MMBtu)	101,047
Annual Other Fuel Savings (MMBtu)	22,047
Program Spending (Millions)	$40.8
Participants (# businesses, organizations, or households)	8,544

Home Performance with Energy Star

The DESEU's flagship Home Performance with ENERGY STAR® (HPwES) program, which is going into its 10th year, offers a whole house approach to improving comfort and safety in the home, and it provides homeowners significant savings on their utility costs. Delaware homeowners learn ways to improve the energy efficiency of their homes through completion of a subsidized, comprehensive home energy assessment performed by certified contractors. They also receive up to $200 of energy saving items such as LED light bulbs and pipe insulation.

HPwES is a cost sharing partnership program. In addition to Energize Delaware's program funding, Delaware Electric Cooperative (DEC) funded 753 energy audits and home energy upgrades in the amount of $243,659 which resulted in 720 MWh of electric and 180,536 MMBtu of gas savings. Funding provided by DEC and the associated savings are counted in Table 6 of the DEC section of this report.

After the assessment, homeowners making recommended energy saving improvements can take advantage of rebates that make energy improvements more affordable. Reduced assessment costs and increased rebates are also available to income qualified Delawareans.

Additional 2023 results and program changes

Savings results from DESEU's numerous other programs in 2023 are listed in Table 5 below. The numbers in the table may not precisely add up due to rounding.

Table 5. 2023 DESEU Savings by Program

Program	Annual Electric Energy Savings (MWh)	Annual Electric Demand Savings (kW)	Annual Natural Gas Savings (MMBtu)*	Annual Other Fuel Savings (MMBtu)
Residential	**4,196**	**788**	**40,105**	**21,395**
Affordable Multifamily Housing	634	-	(5)	-
HEC2	67	-	(4)	(17)
Home Performance with Energy Star	2,636	782	34,368	21,412
Lights On Program	261	-	-	-
Online Marketplace	597	5	-	-
Commercial & Industrial/Non-profit	**11,263**	**-**	**66,688**	**653**
Delaware C-PACE	2,635	-	-	-
Performance Contracting	6,970		60,278	
Revolving Loan Fund	476	-	665	434
Farm Efficiency Program	1	-	-	218
Energy Assessments for Non-profits	1,181	-	5,746	-
Other	12	**-**	-	-
Empowerment Grant	**-**	**-**	-	-

* Note: Negative savings numbers due to fuel switching.

Delaware Electric Cooperative

The Delaware Electric Cooperative (DEC) is a member-owned electric distribution company serving 105,000 members in Kent and Sussex Counties. DEC implements several efficiency programs for residential, commercial and agricultural customers. The programs typically provide prescriptive incentives for a short list of qualifying measures and equipment types. In 2023, DEC offered several energy efficiency programs, including Roadway Area Lighting, Heat Pump Water Heaters and C&I Lighting, as well as the Home Performance with Energy Star program, offered in partnership with the DESEU.

DEC also offers demand response programs. Through the Electric Vehicle (EV) Program, EV owners can receive a one-time $200 billing credit and an additional $5 monthly billing credit for not using their EV chargers during Beat the Peak alerts. DEC also partners with NEST's Rush Hour Rewards program to provide incentives for allowing DEC to adjust participating customers' NEST thermostats a few degrees during summer Beat the Peak alerts. Customers that sign up for the program receive a $100 credit on their electric bills. Customers can also receive a $5 monthly billing credit from June through September.

Table 6. 2023 DEC Performance Metrics

Annual Electric Energy Savings (MWh)	801
Annual Electric Demand Savings (kW)	22,935
Annual Natural Gas Savings (MMBtu)	162,482
Program Spending (Millions)	$1.4
Participants (# of businesses, residents, or units)	4,414

DEC highlights from these programs include:

- Home Performance with Energy Star program saw a significant increase in projects in November 2023. The program saved almost 200,000 MMBtu in November compared to 50 MMBtu in October 2023.
- EV charging program saw a three-fold increase in participation in 2023.

Program Spotlight: Beat the Peak

DEC has had much success with its Beat the Peak program over the years, and many methods of device communication have been utilized. DEC began offering its Beat the Peak with EVs program in 2018 and was only compatible with ChargePoint Home Flex chargers. While controlling EVs through ChargePoint was a great leap in the right direction, participation in the program was limited to only those who had a ChargePoint charger. Most EV owners charge their EVs with their vehicle manufacturer-made charger. This excluded many members.

DEC has expanded its Beat the Peak with EVs program to now incorporate Optiwatt, which is a third-party app that may be downloaded on a member's phone. The main advantage of Optiwatt is that it is charger-agnostic: it uses telematics to communicate directly to the EV. Optiwatt is compatible with the majority of EV manufacturers and offers greater accessibility to members who want to help reduce peak demand without needing a specific type of EV charger. Optiwatt will automatically pause an enrolled vehicle's charging during peak demand times and, in turn, yields energy savings for members. In the 2023 pilot year for the program DEC enrolled 120 members. The program was made possible through a partnership with Old Dominion Electric Cooperative (ODEC), DEC's Generation and Transmission (G&T) cooperative. ODEC has made Optiwatt available to other neighboring cooperatives as well.

DEC was very excited to expand our Beat the Peak program in 2023 with the addition of Optiwatt. This allows us to provide yet another way for members to participate in Beat the Peak and automatically reduce consumption during times of peak energy demand. Optiwatt has proven to be very accessible and many of our members have expressed their praise for the ease of use and extra savings on their bills! – Lucas Zlock, Manager of Energy Services, DEC

Delaware Municipal Electric Corporation

The Delaware Municipal Electric Corporation (DEMEC) was incorporated in 1979 as a public corporation constituted as a Joint Action Agency and a wholesale electric utility. DEMEC represents and serves the eight municipal electric distribution utilities located in Delaware. Collectively, they serve more than 99,000 residents and businesses in their communities. DEMEC's Efficiency Smart program was initially launched in 2018. The program offers several options to help participating communities and their residential and business customers use less energy and save money through energy education, plug load meter reports, technical assistance and financial incentives. Among other successes, the number of small businesses completing a project through DEMEC's program increased 84% over 2022.

DEMEC also works with residential and commercial electric customers to reduce energy consumption during peak energy usage times through the Power Savers demand response program. On days that large increases in electric usage are expected, DEMEC will encourage customers to avoid activities that will increase their use by issuing “Power Saver Alerts.” DEMEC uses a combination of municipal notification systems, contractor support and website and social media to issue alerts and notify customers.

Table 7. 2023 DEMEC Performance Metrics

Annual Electric Energy Savings (MWh)	3,572
Annual Electric Demand Savings (kW)	554
Annual Natural Gas Savings (MMBtu)	-
Program Spending (Millions)	$1,314,071
Participants (# of unique account holders or locations)	866

Case Study: Upgraded Existing Lighting to LED in Town of Smyrna

In 1924, the members of David C. Harrison, American Legion Post #14, initiated the first American Legion ambulance service in the world. Its 18 founding members were veterans of World War I who volunteered their time to transport the sick and injured to hospitals in Wilmington, Dover, Milford and beyond. The ambulance service has been in continuous operation since its founding and was responsible for answering more than 25,000 calls for assistance during its first 75 years of operation.

In 2023, the ambulance service completed a project through DEMEC’s Efficiency Smart Program to upgrade their existing lighting to LEDs. They replaced 53 2x4 troffers, 23 2x2 troffers and two linear surface mount fixtures with new LED fixtures. As a small business that used a local company as their contractor, the American Legion ambulance service’s project qualified for DEMEC’s Small Business Buy Local initiative. The initiative is designed to help small businesses that don’t have the resources that larger companies have, while also helping to drive local economic activity when customers choose a local contractor or supplier. The ambulance service ended up receiving nearly double the normal small business incentive by meeting the eligibility requirements.

DEMEC highlights from this case study include:

- Annual Electric Savings: 23,693 kWh and 3.16 summer kW (gross savings)
- Lifetime Customer Savings: $57,018
- Simple Project Payback: 2.4 years

Efficiency Smart proved to be an excellent program. After outlining our project to the planner, we received a response within two days detailing the rebate amount. We completed Phase One, upgrading the Ambulance Bay Lighting, by the end of 2023. The rebate program significantly benefited Station 64 by adding funds back into our budget, allowing us to purchase additional life-saving equipment for our community. With the project now complete, Station 64 is proud to be an all-LED facility.

We highly recommend that homeowners and business owners contact their community leaders and power companies to explore available programs that can help improve energy efficiency and reduce costs. It was a pleasure working with the folks at DEMEC and Efficiency Smart. – American Legion Ambulance

Regulated Utilities

In 2023, Delmarva Power (DPL) filed its second program plan covering 2024-2026. A settlement agreement was reached with the PSC in December 2023. Approved programs include ENERGY STAR® for New Home Construction, Quick Home Energy Check-up and a Behavioral Program, which are expected to result in 75,000 MWh of electric savings.

Chesapeake Utilities filed its first proposed plan with the PSC in September 2023, which is the first gas-focused plan by a regulated utility in Delaware. A decision on the filed plan is expected in 2024.

Council Background and Activities

Legislative Background

Title 29 §8059 of the Delaware Code enables all of Delaware's energy providers to offer cost-effective energy efficiency programs to their customers in collaboration with DESEU. The legislation specifies that programs should utilize private financing and allowance proceeds from the Regional Greenhouse Gas Initiative as the preferred sources of program financing prior to funds recovered from ratepayers. It also requires that regulations be promulgated, specifying how energy savings should be measured and verified. The legislation also created the EEAC, which is composed of a variety of energy efficiency stakeholders appointed by the Cabinet Secretary of DNREC.

Committee Updates

The Council includes two permanent subcommittees. The membership of both includes, at a minimum, a representative from each program administrator. Other members of the Council may join either subcommittee. The sections below summarize the activities of these committees in 2023.

EM&V Committee

The Evaluation, Measurement and Verification Committee works to address aspects of planning, managing, overseeing and reporting of all EM&V activities in Delaware. In addition to ensuring that public spending on efficiency is prudent and cost-effective, EM&V also informs program design improvements and guides future investment decisions. Committee participants include energy efficiency program administrators, Council members, and community stakeholders. In 2023, the Committee reviewed bi-annual snapshot reports from all program administrators with active energy efficiency programs, finalized updates to the avoided costs used in cost-effectiveness screening and discussed potential updates to Delaware's EM&V regulations and the Delaware Technical Reference Manual (TRM).

In 2024, the EM&V Committee will continue to focus on ensuring that all program administrators with active energy efficiency programs are fulfilling their regulatory-based EM&V obligations, work on revising the statewide reporting framework and complete its annual review of updates to the Delaware TRM.

Energy Access and Equity Collaborative (Formerly Low-Income Committee)

The Energy Access and Equity Collaborative (EAEC) was created to support all Delaware low-income energy efficiency programs and initiatives. The EAEC has provided feedback and guidance on the development and implementation of cost-effective program offerings. The EAEC membership includes EEAC members (including utility representatives), state agencies, community action agencies, community-based organizations, faith-based organizations and community foundations.

In 2023, meetings of the EAEC were paused to ensure coordination with work done by the Environmental Justice and Energy Equity workgroup of the Governor's Energy Advisory Council. The workgroup was charged with developing recommendations for Delaware's State Energy Plan which is forthcoming in 2024. These recommendations envision a more comprehensive approach to energy justice in energy programs and policies.

2023 Council Members

Rob Underwood (Chairperson)
    Department of Natural Resources and Environmental Control
Scott Lynch
    Delaware Municipal Electric Corporation
    Program Administrator
Cassandra T. Marshall
    Quaker Hill Neighborhood Association
    Residential Sector
Ric Moore
    Delaware Sustainable Energy Utility
Kelly McKeown
    Delaware Manufacturing Extension Partnership
    Commercial Sector
Kevin Yingling
    Delaware Electric Cooperative
    Program Administrator
Derrick Craig
    Chesapeake Utilities
    Program Administrator
Christian Fuess
    Delaware Energy Users Group
    Manufacturing sector
Joseph Schorah*
    Delaware Sustainable Energy Utility
Clem Dinsmore
    Delaware Nature Society
    Environmental
Vacant
    Delmarva Power & Light
    Program Administrator
Vacant
    Low-income sector
Vacant
    Agricultural Sector

*Drew Slater, the Executive Director of DESEU, has been given the proxy of one of the DESEU Council members on an "as needed" basis. Drew was a key contributor to the EEAC in 2023.