The Sustainable Energy Utility and Energize Delaware

The Delaware Sustainable Energy Utility is a unique non-profit organization offering a one-stop resource through its Energize Delaware programs to help residents, businesses, non-profits and government save money through clean energy and efficiency. The DESEU was created in 2007 by the State of Delaware to foster a sustainable energy future.
Delaware Sustainable Energy Utility Vision Statement

The Delaware Sustainable Energy Utility (DESEU) will be the leading organization in the State of Delaware that offers cost-effective opportunities for energy savings, creates new markets for customer-sited renewable energy generation and reduces environmental impacts of energy production and use.

The DESEU’s efforts will build jobs in Delaware, improve our national security, support the local economy, improve energy reliability and protect Delaware from the damaging effects of volatile energy prices. The DESEU will accomplish this by utilizing both its authority granted by the State of Delaware and private sector entrepreneurial strategies.

Respected as an accountable, transparent, effective and nimble non-profit organization, the DESEU operates at the highest standards recognized in its industry.

Delaware Sustainable Energy Utility Mission Statement

Delaware Sustainable Energy Utility (DESEU) a 501 (c) 3 non-profit organization, serves Delawareans by promoting the use of affordable, reliable clean energy and energy efficiency initiatives. The DESEU operates as the premier one-stop-shop for connecting and empowering energy consumers with the resources to reduce costs, improve the environment and ensure energy independence for future generations.

The DESEU develops and implements energy efficient solutions, clean energy and air pollution reduction programs. These programs include funding, financing, and educational programs. In addition, we provide highly valuable technical and financial services to our clientele so that they can make informed decisions regarding their energy future.

The DESEU offers its programs by fully utilizing the authority granted by the State of Delaware to issue tax-exempt bonds, use Regional Greenhouse Gas Initiative (RGGI) funds, bank solar renewable energy credits (SRECs). The DESEU also utilizes private sector entrepreneurial strategies.

The DESEU focuses on building relationships with residents and businesses so that they are motivated to use less energy, generate clean energy and reduce harmful emissions. We serve people of all incomes and housing styles. We serve businesses, industries and institutions from all sectors. We apply our programs to new construction projects, the rehabilitation of existing buildings, transportation projects and innovative technologies.
Dear Delawareans,

Throughout 2016, the Delaware Sustainable Energy Utility continued to build on its many successes by expanding existing programs and introducing new ones. Overall, the DESEU continues its track record of providing real value to the State of Delaware through its energy efficiency and clean energy programs.

Our third Annual Report includes a page dedicated to each of our energy saving programs with supporting data and testimonials. We are especially proud to have launched two programs for those Delawareans who are most financially vulnerable and are making considerable progress toward launching several others in 2017. This report includes our annual financial statement, annual energy savings chart, several pages that highlight new initiatives, as well as what we are looking forward to in 2017.

The DESEU has achieved several ambitious accomplishments for 2016, including:

• Recognized by the Standards for Excellence Institute® for completing the requirements for their Standards Basics program
• Finalized participants for the 2017 Bond Issue
• Closed on a $4.5 million loan with the Delaware Army National Guard
• Launched two programs for low to moderate income families: Pre-Weatherization Program and Community Energy Centers
• Provided grants to non-profits for energy efficiency measures through DNREC’s Energy Efficiency Investment Fund
• Upgraded our website with a new look and more functional and secure back-end
• Hired Kate Bayard as Marketing and Communications Manager

Created new program alliances with:
• New Ecology and Elevate Energy
• First State Community Action Agency
• Catholic Charities
• Milford Housing Development Corporation

The Delaware Sustainable Energy Utility is excited to continue serving Delaware businesses, non-profits, state agencies, local governments and residents through our Energize Delaware programs. We are dedicated to the goals of reducing energy consumption via energy efficiency, creating green jobs, reducing greenhouse gas emissions and pollution, all while saving our customers money and reducing our dependence on foreign oil.

With our array of funding mechanisms, we will continue to add more sustainable energy programs in 2017. We thank all Delawareans for our success!

Sincerely,

Sen. Harris B. McDowell III
Chairman

Anthony J. DePrima
Executive Director

“We are especially proud to have launched two programs for those Delawareans who are most financially vulnerable.”

Tony DePrima
Executive Director
We are proud of the progress we’ve made during the 2016 calendar year. We’ve established energy saving and clean energy programs in Delaware. We have expanded our partnerships to broaden our program inventory, making energy savings programs accessible to even more Delawareans. We are now positioned as the one-stop-shop for reducing operating costs and lowering greenhouse gas emissions. Many of our programs are designed to be cash positive from the point of implementation.

**ACCOMPLISHMENTS**

**2016 DESEU ACCOMPLISHMENTS**

The Delaware Sustainable Energy Utility (DESEU) and the Energize Delaware programs have a proven track record of providing energy savings for Delaware’s homes, businesses, non-profits and schools. These programs make more money available for expansion and job growth through energy savings projects that reduce operating costs and lower greenhouse gas emissions. Many of our programs are designed to be cash positive from the point of implementation.

We are extremely proud of our achievements, growth and success in 2016. As we move into market demand.

A number of new Energize Delaware initiatives are in the works for 2017.

- **Energy Efficiency Bond Issue** - Throughout 2016, DESEU worked with state agencies and school districts to develop Energy Saving Performance Contracts (ESPC) to be funded with an Energy Efficiency Bond Issue. There are three state agencies and two school districts participating in the program, with the potential for a third school district joining. Originally planned for 2016, the bond issue will move forward in 2017, and is expected to be as high as $30 million.

- **Zero Net Energy Regular Housing (ZNER) Program** - A unique housing option being developed for low and moderate income Delawareans, these modular homes produce as much energy through solar panels as they use annually. Beracah Homes in Greenwood, Delaware is manufacturing the homes, and expects to have two models completed by June 2017. We will be developing these homes in a partnership with the Milford Housing Development Corporation.

- **Energize Delaware Affordability Multifamily Housing Program** - This program is designed to help owners and tenants of multifamily housing save energy and utility costs through a combination of incentivized audits, technical assistance, rebates, and low-interest loans. Our goal is to roll this program out in the summer of 2017 in conjunction with our partners at New Ecology and Elevate Energy.

**Looking Forward**

- **Quick Home Energy Check Up** - This program is planned to complement the Home Performance with Energy Star program by offering lower cost, quicker and simpler energy assessments that can help homeowners decide what’s best path toward energy savings. This program will also be an option for Delawareans who live in apartments and condominiums, which will make it a valuable addition to our Community Energy Center program. Our goal is to launch this program in late 2017.

- **Property Assessed Clean Energy (PACE) Legislation** - PACE allows for voluntary clean energy financing through commercial property assessments. Similar PACE programs in other states have been successful in increasing the number of commercial energy efficiency and renewable projects completed. The DESEU and the Delaware Division of Energy and Climate drafted legislation in 2016, and is working on building enough support for its adoption in 2017.
Telling Our Story

2016 saw the DESEU and Energize Delaware programs represented in a variety of ways across print, radio and digital platforms.

In Print
We ran a series of full page ads in the Delaware Business Times that featured our business, government, non-profit, and renewable energy programs.

On the Air
A four week long spring radio ad campaign on WDSD, WDOV and WILM also featured a series of on air interviews about the DESEU and three of its programs, Home Performance with Energy Star, Faith Efficiencies, and Pathways to Green Schools.

Online
In July, 2016 we launched our first e-newsletter. Delivered quarterly, this newsletter will feature our favorite news items, tips and stories from our portfolio of programs. At the end of the year we revealed a new look and feel to the EnergizeDelaware.com website. This more modern look is matched by exciting behind the scenes changes that increase the functionality and security of the site.

Personnel
In the fall we hired our first full-time Marketing and Communications Manager, Kate Bayard. Having Kate onboard will allow us to increase our marketing and community outreach efforts, so you will see more about the DESEU and Energize Delaware in print, on the radio and online in 2017.

2016 ENERGIZE DELAWARE PROGRAM LIST

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>MARKETS SERVED</th>
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<tbody>
<tr>
<td>• Home Performance with ENERGY STAR®</td>
<td>Homeowners</td>
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<tr>
<td>• Assisted Home Performance with ENERGY STAR®</td>
<td>Low-income home owners</td>
</tr>
<tr>
<td>• Energize Delaware Revolving Loan Fund</td>
<td>Businesses; non-profits; government</td>
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<tr>
<td>• SREC Upfront Purchase Program</td>
<td>Homes; businesses; non-profits</td>
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<tr>
<td>• Green for Green program</td>
<td>Homeowners</td>
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<tr>
<td>• Energy Assessments for Non-Profits and Government</td>
<td>Non-profits; local government</td>
</tr>
<tr>
<td>• Pathways to Green Schools</td>
<td>Schools</td>
</tr>
<tr>
<td>• Energy Savings Performance Contracting and Bond Financing</td>
<td>Public schools; government</td>
</tr>
<tr>
<td>• Annual SREC Procurement Auction</td>
<td>Homes; businesses; non-profits; schools; government</td>
</tr>
<tr>
<td>• Pre-weatherization Program</td>
<td>Low-income Home owners</td>
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<tr>
<td>• Community Energy Centers</td>
<td>Low-income Delawareans</td>
</tr>
<tr>
<td>• Faith Efficiencies Partnership</td>
<td>Houses of worship</td>
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<tr>
<td>• Energy Efficiency Investment Fund (EEIF)</td>
<td>Non-profits; local government</td>
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The flagship Home Performance with ENERGY STAR® program is going into its fourth year. A whole-house approach to improving comfort and safety in the home, 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 audit performed by certified contractors.

After the audit, homeowners can make energy-saving improvements and take advantage of rebates that make the energy improvements more affordable. Homeowners also receive these energy-saving items (up to a $160 value): LED light bulbs, shower heads, faucet aerators, pipe insulation and smart power strips. Qualifying homeowners may also receive special 5.99% financing for energy-saving home improvements, up to $25,000, through Renew Financial.

To support Delaware’s new Downtown Development District initiative, the Home Performance program offers $50 energy audits and higher rebates to property owners in the designated districts of Wilmington, Dover, Seafood, Georgetown, Harrington, Laurel, Milford and Smyrna.


Mark and Tracy Hagerty have lived in their home for 30 years. Both work from home, so having a comfortable, energy-efficient house is a priority. Their home’s aging HVAC and hot water systems were causing comfort problems during the winter.

Joe Turtoro, an energy advisor, connected the Hagertys with a contractor who performed diagnostic tests using state-of-the-art equipment. The tests revealed insufficient air sealing and insulation and an inefficient air conditioning system, water heater and flue.

“We had no idea how much energy we were losing,” said Mark. “We learned so much from the home energy audit. If we hadn’t scheduled one, we might’ve spent thousands replacing our windows, with minimal benefits to show for it.

“We noticed improved comfort right away,” continued Mark. “We also try to be conscious of the environment, so there’s an additional feeling of satisfaction that less energy is being wasted.”

- Mark and Tracy Hagerty

Green for Green $75,007 $1,500,140 2,428 48,552 305
Home Performance $247,734 3,715,704 9,752 154,943 951
Assisted Home Performance $1,947 48,293 213 3,965 17
Resolving Loan $343,514 6,870,280 16,418 328,351 1,268
Energy Performance Contracting $265,171 5,303,420 11,673 233,462 1,626
SREC Purchase NA NA 21,492 429,842 2,093
EEF® for Non-Profits NA NA 831 16,620 182
Solar Thermal & Geothermal $2,463 $49,257 199 3,972 11
Total Savings $956,836 $17,487,094 63,004 1,219,796 7,809

Energize Delaware Program Results Updated for 2016

Energy Audits for Non Profits $170,577 $3,411,540 10,444 208,875 1,254
Pathway to Green Schools $397,591 $7,953,820 40,087 801,738 6,774
Faith Efficiencies $23,334 $471,880 1,741 34,311 161
Total Savings $591,762 $11,835,240 52,271 1,045,424 8,189

*The emissions avoid include CO₂, SO₂, and NOx emissions.
As an important part of our strategy to assist communities in need, this program is designed to bridge the gap between Home Performance with ENERGY STAR® and the State of Delaware’s Weatherization Assistance Program. Assisted Home Performance with ENERGY STAR® provides increased incentives for income-qualified Delawareans.

Delaware residents that meet the program’s income requirements can take advantage of a Home Performance with ENERGY STAR® home energy audit at a reduced cost of $50 and increased rebates for energy efficiency upgrades. The program is available to income-qualified Delaware property owners and renters with their landlord’s permission.

Rebates up to $9,100 are available which can cover up to 75% of the cost of upgrades. Homeowners are responsible for paying the remaining 25% of the cost.

Assisted Home Performance with ENERGY STAR®

As a senior on a fixed income, Kent County resident Jim Napolitano recognized the value of boosting his home’s comfort and reducing his long-term energy use and costs. “I want to stay in this house as long as possible,” he said. “This program seemed like a great opportunity to see what was in working order and what needed to be upgraded.”

An energy audit of Napolitano’s home revealed the need for a new heating system and attic insulation. “The contractors Joe put me in contact with exceeded my expectations,” said Napolitano. “They were always professional, were always there when they said they would be and did a great job and within budget with rebates of $4,983.

“I try to do whatever I can to make my house more efficient and cost effective,” said Napolitano. “Thanks to Energize Delaware’s Assisted Home Performance with ENERGY STAR program, I can save a lot of money and live more comfortably, which allows me to spend my money on other things.”

- Jim Napolitano

American Legion Post 19

When the Laurel American Legion Post 19 decided to make some energy improvements to reduce costs and improve the lighting in their facility, they applied for an Energy Efficiency Investment Fund grant last year—only to learn their project was denied due to lack of program funding. Darryl Potteiger, Finance Officer, said “We were happy to learn that the Delaware Sustainable Energy Utility provided additional funds so our project could move forward!”

“The new LED lights installed at our Post have saved us about 15 to 20% on our utility bills—even with increased activities and functions at the facility, and the new LED lights provide better quality lighting with more accurate dimming features.” Darryl also stated that their lighting contractor provided excellent customer service for the project. The Laurel American Legion Post 19 received over $3,700 to assist with the lighting improvements. Darryl also stated that other American Legion Posts across the State could benefit from this program too.

Program Start....................................................2016
2016 Participating Non-profits........................................3
Rebates/Incentives Awarded........................................$22,065
Annual Energy Savings Found..................................831 MMBTU
Tons of Air Emissions Avoided..................................182

Energy Efficiency Investment Fund

In 2016, the DESEU helped re-launch and expand DNREC’s Energy Efficiency Investment Fund (EEIF) by providing funding to the program to cover non-profit organizations, as well as local governments that were previously excluded if they did not pay the public utility tax.

Administered by DNREC’s Division of Energy & Climate, EEIF provides grants to Delaware businesses, local governments, and non-profits to help replace aging, inefficient equipment and systems with energy efficient alternatives.

Prescriptive grants are available for high efficiency natural gas heating and water heating equipment, energy efficient lighting and lighting control improvements, vending improvements, and more. The program also offers incentives for energy assessments, as well as custom incentives for unique energy efficiency projects that do not qualify for a prescriptive grant.

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Program Start....................................................2015
2016 Participating Households........................................15
Rebates/Incentives Awarded........................................$28,863
Annual Energy Savings Found..................................$2,947
Tons of Air Emissions Avoided..................................13

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JIM NAPOLITANO’S HOME

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“This program seemed like a great opportunity to see what was in working order and what needed to be upgraded.”

An energy audit of Napolitano’s home revealed the need for a new heating system and attic insulation. “The contractors Joe put me in contact with exceeded my expectations,” said Napolitano. “They were always professional, were always there when they said they would be and did a great job and within budget with rebates of $4,983.

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The Energize Delaware Revolving Loan Fund has a track record of providing low-interest loans for businesses, non-profits, school districts and local governments to reduce their energy bills by improving the efficiency of their operations. 2016 was another strong year, closing 6 loans totaling $6,363,994.

The program’s appeal is the attractive return on investment (ROI). The loans are structured to be cash positive from day one, eliminating the financial risk of making recommended upgrades. Savings over the life of the project must be greater than the investment including financing.

The program’s objective is to encourage the installation of end-user energy efficiency and customer-sited renewable generation and greenhouse gas reduction measures. The result is lower customer bills and reduced environmental impact.

When the Lewes Public Library Board determined that their community would support making their new library “Green,” they turned to the DESEU low-interest loan program. They financed solar panels, LED lighting, and a highly efficient Variable Refrigerant Flow HVAC system. The estimated energy savings from these measures was $47,500 annually. Their savings enabled them to receive a $415,000, ten-year loan from the DESEU which covered 50% of the outstanding costs related to the systems.

“The DESEU helped the Lewes Library Board achieve its goal of building a highly energy efficient building. The loan process that we went through was well explained and easy to complete. The loan enabled us to include the solar panels while the project was under construction and not have to wait until after the Library was completed. The loan money, together with the 40% net savings in our utility costs, allows us to leverage our funds in the best way possible for the new library.”

- Hugh Leahy, President, Lewes Library Board.

The program, implemented by Delaware Interfaith Power and Light (DeIPL), also serves the members of participating faith communities by offering Home Performance with ENERGY STAR® workshops and providing design assistance to establish Earth Care Displays to provide further energy education and resources.

“As an Earth Care Congregation, Westminster Presbyterian Church appreciates the Faith Efficiencies Program. Under the program, the church was audited this past summer at a nominal cost. The church is implementing recommendations beginning with lighting; the church estimates that lighting upgrades will reduce electric use by about 10,000 kWh annually with a rapid payback if it is successful in securing an incentive through the Energy Efficiency Investment Program.”

- Sally Buttner, Westminster Presbyterian Church
Solar Renewable Energy Credit Upfront Purchase Program

Funded by the DESEU, the SREC Upfront Purchase Program is open to all Delawareans who install new 50 kW or lower photovoltaic (PV) solar systems. This program provides an upfront payment of $0.45/watt ($450/kW) in exchange for the first 20 years of solar renewable energy credits (SREC’s) created by the system. This program was funded in 2014 at $1.5 million per year for two years in an effort to encourage small PV construction projects in Delaware that create local green jobs.

This program will end in 2017, after all committed funds are expended and will be replaced with a residential low-interest solar loan program.

“The SREC Upfront Purchase Program has been an effective funding source for my customers who don’t have all the ready cash, or who do not want to wait for SREC payments spread over 20 years. That represents about 20% of my customers. The requirements are straightforward, the program is well run, and the GreenGrantDelaware.com online application is easy to use. I am looking forward to this program transitioning into a loan program, as most of my customers will be interested in using the low-interest solar loan program for their homes. The SEU’s innovative programs continue to promote both renewable energy and energy efficiency across our state. The SEU’s nimbleness allows the program mix to be adjusted to meet the needs of the market.”

– Dale Davis, President CMI Solar

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<tr>
<td>Annual Tons of Air Emissions Avoided</td>
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<tr>
<td>Annual Solar Production</td>
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<tr>
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<td>Program Funds Reserved</td>
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Community Energy Centers

In November 2016, the DESEU launched the Community Energy Center Program through a partnership with the Energy Coordinating Agency of Philadelphia, who administers the program, and through contractual arrangements with First State Community Action Agency and Catholic Charities who manage the day to day operations at the Community Energy Centers.

With locations in Wilmington, Newark, Dover and Georgetown, the Community Energy Center program offers low-income Delawareans a one-stop-shop to access bill payment assistance, energy education, weatherization and related home repair services, energy and budget counseling, as well as referrals to other related programs and services.

While they have only been open a short time, the Community Energy Centers have received a tremendous response from the community, as well as from the state’s utilities, who view it as a welcome complement to their payment assistance programs. In addition to one-on-one counseling, the Centers also conduct Home Energy Workshops throughout the community. Attendees at workshops receive free weatherization kits, are taught how to install the materials provided, and learn other ways to reduce their energy bills.

I met with a client that wanted energy education because of high utility bills. The client and I sat down and figured out what new changes and habits were needed to help lower their utility bills. I provided several other resources that the client was able to use to get assistance with the electric bill and was happy. I also told them about the Weatherization Assistance Program and the client was excited to hear about the program.

– Vickie Bryant, Energy Advisor at the Dover Community Energy Center

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CMI SOLAR

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CMI SOLAR

“In the SREC Upfront Purchase Program has been an effective funding source for my customers who don’t have all the ready cash, or who do not want to wait for SREC payments spread over 20 years. That represents about 20% of my customers. The requirements are straightforward, the program is well run, and the GreenGrantDelaware.com online application is easy to use. I am looking forward to this program transitioning into a loan program, as most of my customers will be interested in using the low-interest solar loan program for their homes. The SEU’s innovative programs continue to promote both renewable energy and energy efficiency across our state. The SEU’s nimbleness allows the program mix to be adjusted to meet the needs of the market.”

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The program offered Delaware’s new home buyers rebates between $1,000 to $4,500 for homes upgraded to national standards for energy efficiency, water conservation, indoor air quality, building materials and other conservation-oriented, energy-saving features.

Average savings range from $21 to $47, or up to 36 percent on a monthly electric bill.

The program stopped accepting new applications in 2015, and the homes that were under construction at that time were completed and processed through the incentive program until June 30, 2016.

The results of the program are being used to develop a new program for residential new construction that incentivizes homes built above current residential energy codes and on a path toward net zero energy.

“We are the beneficiary of the Green for Green program that helps us build energy efficient houses by giving us the incentives necessary to offset the cost. We are very grateful to the State of Delaware, the Delaware Sustainable Energy Utility and the Homebuilders Association of Delaware who manages the program.”

- Jocelyn Tice, Interim Executive Director, Central Delaware Habitat for Humanity

The Pre-Weatherization program helps low-income families in Delaware prepare their homes to meet the requirements for weatherization help.

The program is designed to complement to the State of Delaware’s Weatherization Assistance Program (WAP) administered by Catholic Charities. Participants whose properties have been deferred by WAP for structural reasons are referred to the Pre-Weatherization program. Many potential clients cannot afford the structural home repairs needed to qualify the home, and therefore lose the ability to participate in weatherization assistance. The Pre-Weatherization Assistance Program will remedy issues that caused homes to be deferred from participating in the Weatherization Assistance Program, at no cost to the client. The DESEU provides funding to pay for the repair of the structural issues, such as leaky roofs, broken windows and doors, or moisture in crawl spaces. The Pre-Weatherization Assistance Program will inspect homes, hire contractors, schedule repair work, and perform a quality assurance post-inspection, then re-admit these units into the Weatherization Assistance Program.

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Energy Assessments for Non-profits and Government

Through its partnership with the University of Delaware’s award-winning Mid-Atlantic Industrial Assessment Center (IAC), the Delaware Sustainable Energy Utility funds energy assessments for large and medium size buildings operated by non-profits and local governments in Delaware. The DESEU pays 90% of the cost. The energy audits are done by University of Delaware graduate students under the supervision of IAC directors. The program offers energy savings solutions for a wide variety of buildings including senior centers, community centers, churches, municipal buildings and firehouses. Savings between 20% and 30% are typically found after the installation of recommended upgrades.

The DESEU manages the annual Solar Renewable Energy Credits (SREC) auction on behalf of Delmarva Power in accordance with rules set by the Delaware Public Service Commission. The auction provides a market for solar system owners to sell their SRECs through long-term contracts to Delmarva Power, protecting ratepayers from above market SREC pricing. Delmarva Power is the largest procurer of SRECs in Delaware.

The Wilmington Housing Authority (WHA) has had a long-term interest having solar energy on its property. They were able to take a major step forward toward that goal by partnering with Ecogy Delaware LLC (Ecogy) to develop a 1.15 MW ground mounted solar array on WHA property. Ecogy will own the project and sell electric from the system at a low cost to the Authority. Critical to the project was its successful participation in the annual Delaware SREC Auction operated by the Delaware Sustainable Energy Utility. The WHA project was one of only five large projects accepted into the auction. Revenue from the sale of the SRECs to DESEU will be passed along as energy savings to the WHA. In addition to participating in the SREC auction, the project will be financed with a DESEU low interest loan.

“The Wilmington Housing Authority will enjoy the long-term benefit of lower cost energy from the Ecogy Solar project over the next 20 years. More importantly, this project allows us to help make Wilmington a greener city by greatly reducing our dependency on fossil fuels. Without the Delaware SREC auction, our project would not have been possible.”

– Eugene Paddler, WHA Executive Director

LORELTON ASSISTED LIVING IN WILMINGTON

The Lorelton is an award-winning assisted living facility housed in a historic school building that was converted to apartments in the late 1980’s. Recognizing that its aging equipment would need to be replaced, the Lorelton requested an energy audit to identify improvements that would reduce their energy usage while improving building operations.

“As a non-profit assisted living community, providing high quality, affordable care for seniors is our primary concern. The IAC energy audit recommended a number of improvements to our building that would reduce their energy usage while improving building operations. Without the Delaware SREC auction, our project would not have been possible.”

– Richard Stat, President, The Lorelton Foundation

WILMINGTON HOUSING AUTHORITY

Program Start ........................................................2012
2016 Auction Bids Received ..........................187
SRECs Bid into Auction .................................14,022
Auction Bids Accepted .................................187
SRECs Accepted .........................................16,627

Value of all SREC Transactions..............$754,725.25/year
for the first 10 years; $396,966.50/year for the last 10 years (20 year contracts)

Annual SREC Procurement Auction
Energy Savings Performance Contracting Program

The DESEU has the authority to issue tax exempt bonds or low-interest loans to finance Energy Saving Performance Contracts (ESPC). Available to public agencies and schools, ESPC’s use utility cost savings to finance construction through pre-qualified Energy Services Companies (ESCO) that offer guaranteed energy savings.

In 2016, the Delaware Army National Guard received a loan of $4.5 million for energy efficiency and renewable energy capital improvements. Projected guaranteed savings will be more than $6 million over the next 20 years, and will reduce annual energy consumption by more than 38%.

Also in 2016, the DESEU continued to finalize the upcoming energy efficiency bond issue, which will move forward in 2017. The bond issue will finance a variety of energy savings projects for school districts and state agencies.

Program Start ......................................................2011
2016 Contracted State Agencies ...............................1
Overall Financing Interest Rate .........................2%
Bond (Loan) Term ..........................................20 years
Total Loan amount ....................................$4.5 million

Total Construction Value ................................$4.5 million
Guaranteed Annual Energy Savings ....................$265,171
Guaranteed Lifetime Energy Savings .................$5,303,420
Capacity of Solar PV Systems to be Installed..400 kW
Tons of Air Emissions Avoided ............................1,626

Pathways to Green Schools

In 2016, the Pathways program expanded its reach statewide, adding schools in Kent and Sussex County. Administered by the Delaware Valley Green Building Council, the Pathways program continues to assist schools to become energy efficient by providing mini grants for student eco-action and green team projects, free energy audits and assistance with energy benchmarking in ENERGY STAR Portfolio Manager.

Program Start ......................................................2014
2016 Participating Schools .....................................14
Schools Enrolled in Portfolio Manager .....................10
School Audits Complete .....................................9
Schools Received Awards .....................................6
Annual Energy Savings Found ......................$397,591
Lifetime Energy Savings Found ....................$7,951,820
Tons of Air Emissions Avoidance Found .............6,774
Total Program Funding ..................................$100,000

Pathways to Green Schools program has inspired the Wilmington Montessori School community to reach for higher goals related to green practices and awareness. Pathways to Green Schools has given our staff and students access to resources by way of high-quality professional development, a network of specialists and an abundance of good ideas. Through the Pathways program, Wilmington Montessori has also joined the Eco-Schools program, and we were honored as a 2016 U.S. Department of Education Green Ribbon School. These programs have allowed us to connect with schools in Delaware and the United States to learn what is possible. Most importantly, the students and staff are more engaged, more knowledgeable, and more committed to the school’s environmental stewardship and sustainability.

- Laura Z. Orsic, Assistant Head of School
Wilmington Montessori School

Wilmington Montessori School

DELAWARE NATIONAL GUARD

“Energy Savings Performance Contracting Program has been a win-win for everyone. The sheer size of our facility and our annual energy usage is enormous. The capital improvements to the base facilities will save us millions over time. The Delaware Sustainable Energy Utility has structured the terms of the loan to make it extremely attractive.”

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From left to right: Tony DePrima, Senator Harris McDowell, General Frank D Vavala, Richard Madeja, Col. Govt. Dr. John Byrne.
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$101,000 Total Program Funding

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“Energy Savings Performance Contracting Program”

DELAWARE NATIONAL GUARD

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2016 Participating State Agencies .....................................1
Overall Financing Interest Rate ..................................2%
Bond (Loan) Term ..........................................20 years
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The DESEU operates the program and plans to run at least one solicitation each spring as an online auction in order to fulfill Delmarva’s long-term SREC needs. Facilities may qualify for a 10% SREC bonus if built with Delaware labor.

The Wilmington Housing Authority ( WHA) has had a long-term interest in having solar energy on its property. They were able to take a major step forward toward that goal by partnering with Ecogy Delaware LLC (Ecogy) to develop a 1.15 MW ground mounted solar array on WHA property. Ecogy will own the project and sell electric from the system at a low cost to the Authority. Critical to the project was its successful participation in the annual Delaware SREC Auction operated by the Delaware Sustainable Energy Utility. The WHA project was one of only five large projects accepted into the auction. Revenue from the sale of the SRECs to DESEU will be passed along as energy savings to the WHA.

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“The Lorelton and IAC first worked together in 2016 to identify cost-effective energy solutions and IAC helped guide the implementation of those solutions. We are excited to work with DESEU again in 2017 to maximize the energy savings from the IAC audit and to improve the Lorelton’s sustainability practices.”

– Richard Stat, President, The Lorelton Foundation

Annual SREC Procurement Auction

Program Start........................................................2012
2016 Auction Bids Received......................................187
SRECs Bid into Auction...........................................14,032
Auction Bids Accepted .............................................187
SRECs Accepted....................................................10,627
Value of all SREC Transactions..................................$754,725.25/year for the first 10 years; $396,966.50/year for the last 10 years (20 year contracts)

Lifetime Energy Savings Found ..............................$3,411,540
Tons of Air Emissions Avoidance Found.........................1,254
Total Program Funding ...........................................$106,000

LORELTON ASSISTED LIVING IN WILMINGTON

Program Start......................................................2013
2016 Participating Non-profits ..................................9
Annual Energy Savings Found.................................$170,577

WILMINGTON HOUSING AUTHORITY
Green for Green Program

Developed jointly with the Home Builders Association of Delaware, this rebate program was available for new homes in Delaware’s designated growth areas and applied for by a participating home builder. The program offered Delaware’s new home buyers rebates between $1,000 to $4,500 for homes upgraded to national standards for energy efficiency, water conservation, indoor air quality, building materials and other conservation-oriented, energy-saving features.

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- from a satisfied customer

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CENTRAL DELAWARE HABITAT FOR HUMANITY

Program Start ......................................................2013
Annual Energy Savings ...................................$75,007
2016 Participating Households ...............................70
Lifetime Energy Savings ................................$1,500,142
Home Builders ............................7 Profit; 1 Non-Profit
Tons of Air Emissions Avoided ...............................305
Rebates/Incentives Awarded ........................$206,200

INCOME QUALIFIED HOMEOWNERS

Celebrating the groundbreaking for the Moore Family’s house in Dover.
In November 2016, the DESEU launched the Community Energy Center Program through a partnership with the Energy Coordinating Agency of Philadelphia, who administers the program, and through contractual arrangements with First State Community Action Agency and Catholic Charities who manage the day to day operations at the Community Energy Centers. With locations in Wilmington, Newark, Dover and Georgetown, the Community Energy Center program offers low-income Delawareans a one-stop-shop to access bill payment assistance, energy education, weatherization and related home repair services, energy and budget counseling, as well as referrals to other related programs and services. While they have only been open a short time, the Community Energy Centers have received a tremendous response from the community, as well as from the state’s utilities, who view it as a welcome complement to their payment assistance programs. In addition to one-on-one counseling, the Centers also conduct Home Energy Workshops throughout the community. Attendees at workshops receive free weatherization kits, are taught how to install the materials provided, and learn other ways to reduce their energy bills.

I met with a client that wanted energy education because of high utility bills. The client and I sat down and figured out what new changes and habits were needed to help lower their utility bills. I provided several other resources that the client was able to use to get assistance with the electric bill and was happy. I also told them about the Weatherization Assistance Program and the client was excited to hear about the program.

- Vickie Bryant, Energy Advisor at the Dover Community Energy Center

Funded by the DESEU, the SREC Upfront Purchase Program is open to all Delawareans who install new 50 kW or lower photovoltaic (PV) solar systems. This program provides an upfront payment of $0.45/watt ($450/kW) in exchange for the first 20 years of solar renewable energy credits (SREC’s) created by the system. This program was funded in 2014 at $1.5 million per year for two years in an effort to encourage small PV construction projects in Delaware that create local green jobs.

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The Energize Delaware Revolving Loan Fund has a track record of providing low-interest loans for businesses, non-profits, school districts and local governments to reduce their energy bills by improving the efficiency of their operations. 2016 was another strong year, closing 6 loans totaling $6,363,994.

The program’s appeal is the attractive return on investment (ROI). The loans are structured to be cash positive from day one, eliminating the financial risk of making recommended upgrades. Savings over the life of the project must be greater than the investment including financing. The program’s objective is to encourage the installation of end-user energy efficiency and customer-sited renewable generation and greenhouse gas reduction measures. The result is lower customer bills and reduced environmental impact.

When the Lewes Public Library Board determined that their community would support making their new library “Green,” they turned to the DESEU low-interest loan program. They financed solar panels, LED lighting, and a highly efficient Variable Refrigerant Flow HVAC system. The estimated energy savings from these measures was $47,500 annually. Their savings enabled them to receive a $415,000, ten-year loan from the DESEU which covered 50% of the outstanding costs related to the systems.

“The DESEU helped the Lewes Library Board achieve its goal of building a highly energy efficient building. The loan process that we went through was well explained and easy to complete. The loan enabled us to include the solar panels while the project was under construction and not have to wait until after the Library was completed. The loan money, together with the 40% net savings in our utility costs, allows us to leverage our funds in the best way possible for the new library.” - Hugh Leahy, President, Lewes Library Board.

The Faith Efficiencies program provides a wide range of energy resources including energy audits, remediation strategies, funding options and ongoing cost-saving energy education to faith communities throughout the State. The program, implemented by Delaware Interfaith Power and Light (DeIPL), also serves the members of participating faith communities by offering Home Performance with ENERGY STAR® workshops and providing design assistance to establish Earth Care Displays to provide further energy education and resources.

“As an Earth Care Congregation, Westminster Presbyterian Church appreciates the Faith Efficiencies Program. Under the program, the church was audited this past summer at a nominal cost. The church is implementing recommendations beginning with lighting; the church estimates that lighting upgrades will reduce electric use by about 10,000 kWh annually with a rapid payback if it is successful in securing an incentive through the Energy Efficiency Investment Program.” - Sally Buttner, Westminster Presbyterian Church
As an important part of our strategy to assist communities in need, this program is designed to bridge the gap between Home Performance with ENERGY STAR® and the State of Delaware’s Weatherization Assistance Program. Assisted Home Performance with ENERGY STAR® provides increased incentives for income-qualified Delawareans.

Delaware residents that meet the program’s income requirements can take advantage of a Home Performance with ENERGY STAR® home energy audit at a reduced cost of $50 and increased rebates for energy efficiency upgrades. The program is available to income-qualified Delaware property owners and renters with their landlord’s permission.

Rebates up to $9,100 are available which can cover up to 75% of the cost of upgrades. Homeowners are responsible for paying the remaining 25% of the cost.

When the Laurel American Legion Post 19 decided to make some energy improvements to reduce costs and improve the lighting in their facility, they applied for an Energy Efficiency Investment Fund grant last year—only to learn their project was denied due to lack of program funding. Darryl Potteiger, Finance Officer, said “We were happy to learn that the Delaware Sustainable Energy Utility provided additional funds so our project could move forward!”

“The new LED lights installed at our Post have saved us about 15 to 20% on our utility bills—even with increased activities and functions at the facility, and the new LED lights provide better quality lighting with more accurate dimming features.” Darryl also stated that their lighting contractor provided excellent customer service for the project. The Laurel American Legion Post 19 received over $3,700 to assist with the lighting improvements. Darryl also stated that other American Legion Posts across the State could benefit from this program too.

JIM NAPOLITANO’S HOME

As a senior on a fixed income, Kent County resident Jim Napolitano recognized the value of boosting his home’s comfort and reducing his long-term energy use and costs. “I want to stay in this house as long as possible,” he said. “This program seemed like a great opportunity to see what was in working order and what needed to be upgraded.”

An energy audit of Napolitano’s home revealed the need for a new heating system and attic insulation. “The contractors Joe put me in contact with exceeded my expectations,” said Napolitano. “They were always professional, were always there when they said they would be and did a great job and within budget with rebates of $4,983. “I try to do whatever I can to make my house more efficient and cost effective,” said Napolitano. “Thanks to Energize Delaware’s Assisted Home Performance with ENERGY STAR program, I can save a lot of money and live more comfortably, which allows me to spend my money on other things.”
The flagship Home Performance with ENERGY STAR® program is going into its fourth year. A whole-house approach to improving comfort and safety in the home, 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 audit performed by certified contractors. After the audit, homeowners can make energy-saving improvements and take advantage of rebates that make the energy improvements more affordable. Homeowners also receive these energy-saving items (up to a $160 value) at no additional cost: LED light bulbs, shower heads, faucet aerators, pipe insulation and smart power strips. Qualifying homeowners may also receive special 5.99% financing for energy-saving home improvements, up to $25,000, through Renew Financial.

To support Delaware’s new Downtown Development District initiative, the Home Performance program offers $50 energy audits and higher rebates to property owners in the designated districts of Wilmington, Dover, Seaford, Georgetown, Harrington, Laurel, Milford and Smyrna.

Mark and Tracy Hagerty have lived in their home for 30 years. Both work from home, so having a comfortable, energy-efficient house is a priority. Their home’s aging HVAC and hot water systems were causing comfort problems during the winter.

Joe Turtoro, an energy advisor, connected the Hagertys with a contractor who performed diagnostic tests using state-of-the-art equipment. The tests revealed insufficient air sealing and insulation and an inefficient air conditioning system, water heater and flue.

“We had no idea how much energy we were losing,” said Mark. “We learned so much from the home energy audit. If we hadn’t scheduled one, we might’ve spent thousands replacing our windows, with minimal benefits to show for it.

“We noticed improved comfort right away,” continued Mark. “We also try to be conscious of the environment, so there’s an additional feeling of satisfaction that less energy is being wasted.”

- Mark and Tracy Hagerty
2016 saw the DESEU and Energize Delaware programs represented in a variety of ways across print, radio and digital platforms.

### PROGRAMS

**2016 ENERGIZE DELAWARE PROGRAM LIST**

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<td>• Energy Efficiency Investment Fund (EEIF)</td>
<td>Non-profits; local government</td>
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### Telling Our Story

In Print

We ran a series of full page ads in the Delaware Business Times that featured our business, government, non-profit, and renewable energy programs.

On the Air

A four week long spring radio ad campaign on WDSD, WDOV and WILM also featured a series of on air interviews about the DESEU and three of its programs, Home Performance with Energy Star, Faith Efficiencies, and Pathways to Green Schools.

Online

In July, 2016 we launched our first e-newsletter. Delivered quarterly, this newsletter will feature our favorite news items, tips and stories from our portfolio of programs. At the end of the year we revealed a new look and feel to the EnergizeDelaware.com website. This more modern look is matched by exciting behind the scenes changes that increase the functionality and security of the site.

Personnel

In the fall we hired our first full-time Marketing and Communications Manager, Kate Bayard. Having Kate onboard will allow us to increase our marketing and community outreach efforts, so you will see more about the DESEU and Energize Delaware in print, on the radio and online in 2017.
The Delaware Sustainable Energy Utility (DESEU) and its Energize Delaware programs have a proven track record of providing energy savings for Delaware’s homes, businesses, non-profits and schools. These programs make more money available for expansion and job growth through energy savings projects that reduce operating costs and lower greenhouse gas emissions. Many of our programs are designed to be cash positive from the point of implementation.

We are proud of the progress we’ve made during the 2016 calendar year. We’ve established new partnerships to broaden our program inventory, making energy savings programs accessible to even more Delawareans. We are now positioned as the one-stop-shop for energy saving and clean energy programs in Delaware. Here are some of our 2016 accomplishments:

- **Standards for Excellence Recognition**: After completing a thorough review, staff at the Standards for Excellence Institute concluded that we comply with the basic principles of the Standards for Excellence code, and awarded Standards Basics recognition as acknowledgment that the DESEU is a well-managed, responsibly governed organization.

- **Expanded DNREC’s Energy Efficiency Investment Fund**: Originally planned for 2016, the bond issue will move forward in 2017, and is expected to be as high as $35 million.

- **Zero Net Energy Regular Housing (ZNEH) Program** – A unique housing option being developed for low and moderate income Delawareans, these modular homes produce as much energy through solar panels as they use annually. Berachah Homes in Greenwood, Delaware is manufacturing the homes, and we expect to have two models completed by June 2017. We will be deploying these homes through a partnership with the Milford Housing Development Corporation.

- **Energize Delaware Affordability Multi-Family Housing Program** – This program is designed to help owners and tenants of multifamily housing save energy and utility costs through a combination of incentivized auditing, technical assistance, rebates, and low-interest loans. Our goal is to roll this program out in the summer of 2017 in conjunction with our partners at New Ecology and DeWitt Energy.

- **Solar Resiliency Pilot Program** – This program is planned for deployment in 2017 through pilot locations at three fire houses and a school in community center. Initially at each location will be a solar system with a battery backup that can support the facility during electric outages. A third party solar developer will own the systems, with the DESEU providing incentives and low-interest loans so that the solar electric can be provided to the host facilities at a lower electric cost for net zero usage.

- **StandSafe Energy Savings Database** – In cooperation with the State of Delaware Division of Energy and Climate and the DESEU’s Energy Efficiency Advisory Council, the DESEU has agreed to develop and manage a StandSafe Energy Savings Database. When it is deployed in the summer of 2017, agencies and utilities can report energy savings to a centralized database so that statewide energy saving goals can be tracked and reported.

- **Energize Delaware Farm Program** - In late 2016, we launched this program and it will be fully functional in 2017. Through a combination of energy audits, technical assistance, incentives, and low-interest loans, the program’s goal is to help Delaware farmers save energy and utility costs.

- **Quick Home Energy Check-Up** - This program is planned to complement the Home Performance with Energy Star Program by offering lower cost, quicker and simpler energy assessments that can help homeowners decide which is best path toward energy savings. This program will also be an option for Delawareans who live in apartments and condominiums, which will make it a valuable addition to our Community Energy Center program. Our goal is to launch in fall of 2017.

- **Property Assessed Clean Energy (PACE) Legislation** – PACE allows for voluntary clean energy financing through commercial property assessments. Similar PACE programs in other states have been successful in increasing the number of commercial energy efficiency and renewable projects completed. The DESEU and the Delaware Division of Energy and Climate drafted legislation in 2016, and is working on building enough support for its adoption in 2017.

A number of new Energize Delaware initiatives are in the works for 2017:

- **Energy Efficiency Bond Issue** - Throughout 2016, DESEU worked with state agencies and school districts to develop Energy Saving Performance Contracts (ESPC) to be funded with an Energy Efficiency Bond Issue. There are three state agencies and two school districts participating in the program, with the potential for a third school district joining. Originally planned for 2016, the bond issue will move forward in 2017, and is expected to be as high as $300 million.

- **Zero Net Energy Regular Housing (ZNEH) Program** – A unique housing option being developed for low and moderate income Delawareans, these modular homes produce as much energy through solar panels as they use annually. Berachah Homes in Greenwood, Delaware is manufacturing the homes, and we expect to have two models completed by June 2017. We will be deploying these homes through a partnership with the Milford Housing Development Corporation.

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Looking Forward
Dear Delawareans,

Throughout 2016, the Delaware Sustainable Energy Utility continued to build on its many successes by expanding existing programs and introducing new ones. Overall, the DESEU continues its track record of providing real value to the State of Delaware through its energy efficiency and clean energy programs.

Our third Annual Report includes a page dedicated to each of our energy saving programs with supporting data and testimonials. We are especially proud to have launched two programs for those Delawareans who are most financially vulnerable and are making considerable progress toward launching several others in 2017. This report includes our annual financial statement, annual energy savings chart, several pages that highlight new initiatives, as well as what we are looking forward to in 2017.

The DESEU has achieved several ambitious accomplishments for 2016, including:

- Recognized by the Standards for Excellence Institute® for completing the requirements for their Standards Basics program
- Finalized participants for the 2017 Bond Issue
- Closed on a $4.5 million loan with the Delaware Army National Guard
- Launched two programs for low to moderate income families: Pre-Weatherization Program and Community Energy Centers
- Provided grants to non-profits for energy efficiency measures through DMER’s Energy Efficiency Investment Fund
- Upgraded our website with a new look and more functional and secure back-end
- Hired Kate Bayard as Marketing and Communications Manager

Created new program alliances with:
- New Ecology and Elevate Energy
- First State Community Action Agency
- Catholic Charities
- Milford Housing Development Corporation

The Delaware Sustainable Energy Utility is excited to continue serving Delaware businesses, non-profits, state agencies, local governments and residents through our Energy Delaware programs. We are dedicated to the goals of reducing energy consumption via energy efficiency, creating green jobs, reducing greenhouse gas emissions and pollution, all while saving our customers money and reducing our dependence on foreign oil.

With our array of funding mechanisms, we will continue to add more sustainable energy programs in 2017. We thank all Delawareans for our success!

Sincerely,

Sen. Harris B. McDowell III
Chairman

Tony J. DePrima
Executive Director

Delaware Sustainable Energy Utility Financial Statement

Below are comprehensive financial statements excerpted from the DESEU fiscal year (ending June 2016) audit performed by the accounting firm of Whisman, Giordano & Associates LLC, Certified Public Accountants, Newark, Delaware. Complete audited statements are available at www.energizedelaware.org.

DESEU Executive Director Tony DePrima

A LETTER FROM THE CHAIRMAN AND EXECUTIVE DIRECTOR

State Senator Harris B. McDowell III

“Provided grants to non-profits for energy efficiency measures through DMER’s Energy Efficiency Investment Fund”

“Upgrade our website with a new look and more functional and secure back-end”

“Hired Kate Bayard as Marketing and Communications Manager”


“We are especially proud to have launched two programs for those Delawareans who are most financially vulnerable.”

Tony DePrima
Executive Director
Delaware Sustainable Energy Utility Vision Statement

The Delaware Sustainable Energy Utility (DESEU) will be the leading organization in the State of Delaware that offers cost-effective opportunities for energy savings, creates new markets for customer-sited renewable energy generation and reduces environmental impacts of energy production and use.

The DESEU’s efforts will build jobs in Delaware, improve our national security, support the local economy, improve energy reliability and protect Delaware from the damaging effects of volatile energy prices. The DESEU will accomplish this by utilizing both its authority granted by the State of Delaware and private sector entrepreneurial strategies.

Respected as an accountable, transparent, effective and nimble non-profit organization, the DESEU operates at the highest standards recognized in its industry.

Delaware Sustainable Energy Utility Mission Statement

Delaware Sustainable Energy Utility, a 501 (c) 3 non-profit organization, serves Delawareans by promoting the use of affordable, reliable clean energy and energy efficiency initiatives. The DESEU operates as the premier one-stop-shop for connecting and empowering energy consumers with the resources to reduce costs, improve the environment and ensure energy independence for future generations.

The DESEU develops and implements energy efficient solutions, clean energy and air pollution reduction programs. These programs include funding, financing, and educational programs. In addition, we provide highly valuable technical and financial services to our clientele so that they can make informed decisions regarding their energy future.

The DESEU offers our programs by fully utilizing the authority granted by the State of Delaware to issue tax-exempt bonds, use Regional Greenhouse Gas Initiative (RGGI) funds, bank solar renewable energy credits (SRECs). The DESEU also utilizes private sector entrepreneurial strategies.

The DESEU focuses on building relationships with residents and businesses so that they are motivated to use less energy, generate clean energy and reduce harmful emissions. We serve people of all incomes and housing styles. We serve businesses, industries and institutions from all sectors. We apply our programs to new construction projects, the rehabilitation of existing buildings, transportation projects and innovative technologies.
The Sustainable Energy Utility and Energize Delaware

The Delaware Sustainable Energy Utility is a unique non-profit organization offering a one-stop resource through its Energize Delaware programs to help residents, businesses, non-profits and government save money through clean energy and efficiency. The DESEU was created in 2007 by the State of Delaware to foster a sustainable energy future.