



STRATEGIC ENERGY INVESTMENT FUND

Activities for Fiscal Year 2021



VOLUME 1

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A. Introduction

The purpose of the Strategic Energy Investment program is to decrease energy demand and increase energy supply to promote affordable, reliable, and clean energy. On behalf of the state, the Maryland Energy Administration (MEA) administers the Strategic Energy Investment Fund (SEIF), implements SEIF-funded programs that support Maryland's energy policies, and monitors SEIF-funded programs being implemented by other state agencies.

Programs funded by SEIF can help reduce energy bills, minimize energy waste, create jobs, improve reliability and resiliency, address energy access and equity issues, attract and retain businesses, and promote energy independence.

Importantly, SEIF-funded programs also address global climate change concerns by decreasing carbon dioxide (CO₂) emissions. As an example, the FY21 SEIF-funded energy programs implemented by just MEA are anticipated to result in the avoidance of over 53,000 metric tons of CO₂ emissions per year¹ once fully installed, the equivalent of taking more than 11,600 passenger vehicles off the road for one year.

Background

Pursuant to Section 9-20B-12 of the State Government Article, MEA is required to prepare an annual report to the Governor, General Assembly, and the SEIF board members. This report, among other things, describes the expenditures of the SEIF; grants awarded by MEA; energy savings estimated; and programs, projects and activities conducted. The data in this report demonstrates achievements being made toward promoting affordable, cleaner and reliable energy for the benefit of all Marylanders.

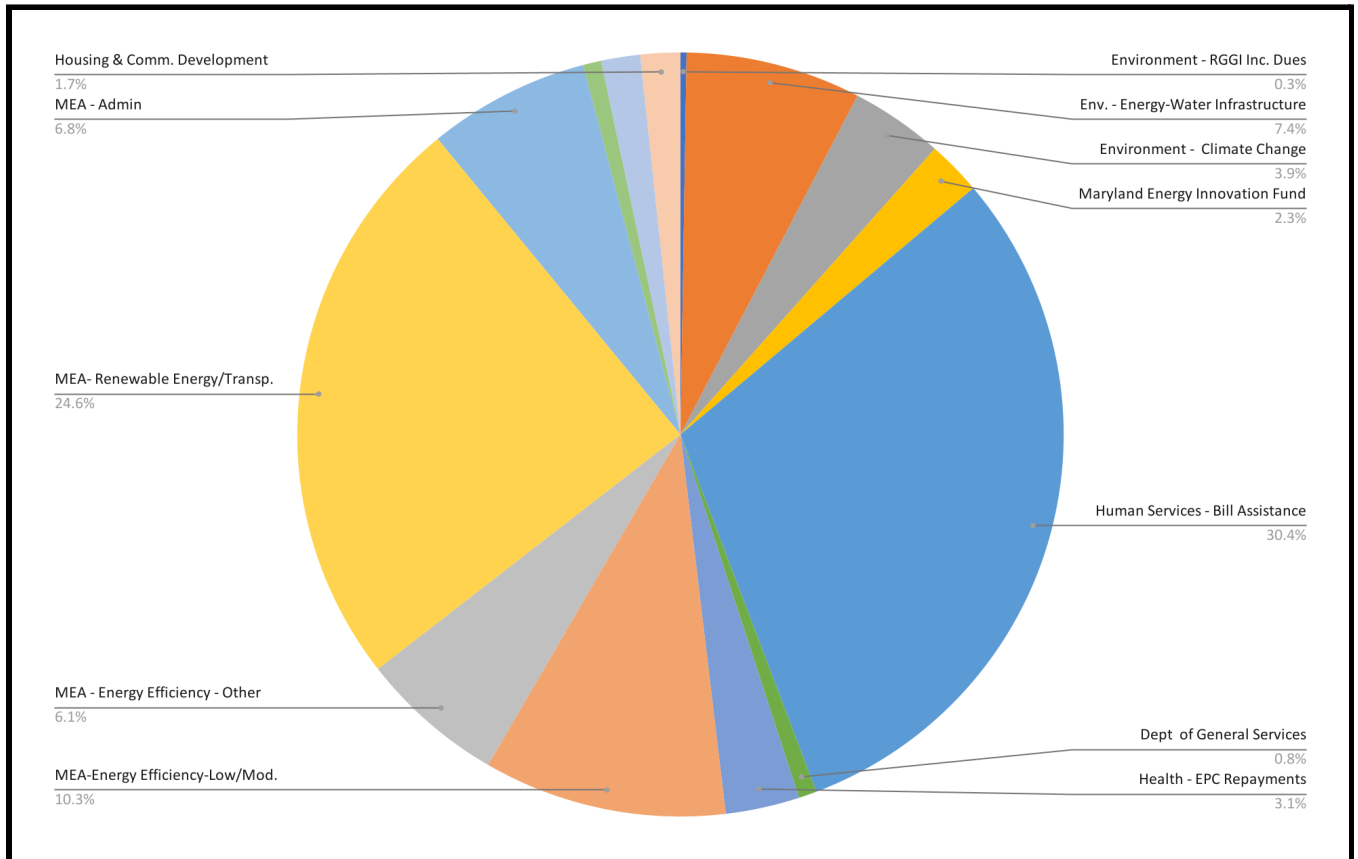
SEIF Expenditures and Commitments

A relative distribution of the FY21 SEIF expenditures and commitments across all state agencies from all funding sources is shown in Chart #1. In addition to programs implemented by MEA, SEIF funding in FY21 also went to the Maryland Department of the Environment (MDE), the Maryland Energy Innovation Fund at the University of Maryland, the Maryland Department of General Services (DGS), the Maryland Department of Human Services (DHS),² the Maryland Department of Health (MDH), the Maryland Department of Natural Resources (DNR), the Maryland Department of Budget and Management (DBM), and the Maryland Department of Housing and Community Development (DHCD). A breakdown of the SEIF expenditures and commitments for FY21 can be found in Appendix A, Chart #5.

¹ Anticipated greenhouse gas emissions are being reported in metric tons of CO₂. Greenhouse gas emissions can also be reported in metric tons of CO₂ equivalents, which would be a higher number as CO₂ equivalents capture the benefits of avoiding other, non-CO₂ greenhouse gases as well.

² The FY21 funds to the Department of Human Services will be transferred after the end of FY21, upon submission of a disbursement request.

Chart #1: FY21 Overall SEIF Expenditures and Commitments by Agency



SEIF Proceeds

The main source of SEIF proceeds has historically been from the Regional Greenhouse Gas Initiative (RGGI).³ This was true again in FY21, with over 95% of SEIF revenues resulting from the RGGI CO2 allowance auctions and another 3.8% resulting from the RGGI set aside CO2 allowance revenue.

A summary of overall revenues into the SEIF for the last three years can be found in Appendix A, Chart #6. Appendix A also contains Chart #7, which provides information on each RGGI allowance auction, the primary source of proceeds into the SEIF, and includes the number of allowances sold, allowance price, and total RGGI revenue by allowance auction.

Summary

In FY21, over \$29 million, totaling approximately 45% of all FY21 SEIF funding, went to initiatives benefiting low-to-moderate income Maryland residents. Within MEA, these initiatives included the Low-to-Moderate Income Energy Efficiency program, the Community Solar program, the Resiliency Hubs program, and the Grid Interactive Community Microgrid project;

³ rggi.org.

all of these initiatives are described in greater detail later in this report. External to MEA, SEIF funds were also used to enable energy bill assistance implemented by the DHS, and by the DHCD for the Energy Efficient Construction Loan program.⁴

Multiple state agencies implement climate and energy-related programs and initiatives funded through SEIF. While MEA is the administrator of the SEIF, in FY21 programs implemented by MEA total only 47.8% of the overall SEIF budget.

Energy resiliency continues to be a topic of increasing importance. A number of resiliency-centric, MEA-implemented energy programs received SEIF funding in FY21, with some funds being deployed for project construction (e.g., Combined Heat and Power, Resiliency Hubs) while other programs (e.g., Resilient Maryland) received funding for future project planning. SEIF funds directed toward energy resiliency initiatives in FY21 total over \$3.2 million.

Details describing activities funded through the SEIF in FY21 are provided in the narratives and charts that follow. Appendix B in Volume 2 of this report provides a list of FY21 grantees receiving multiple SEIF-funded awards from MEA, while Appendix C contains the name of the FY21 SEIF award recipient by MEA program.

⁴ This is a program from a prior fiscal year; the funds for this program were disbursed in FY21.

B. Low-to-Moderate Income Energy Efficiency Grant Program

SEIF Expenditures and Encumbrances: \$6.500 million

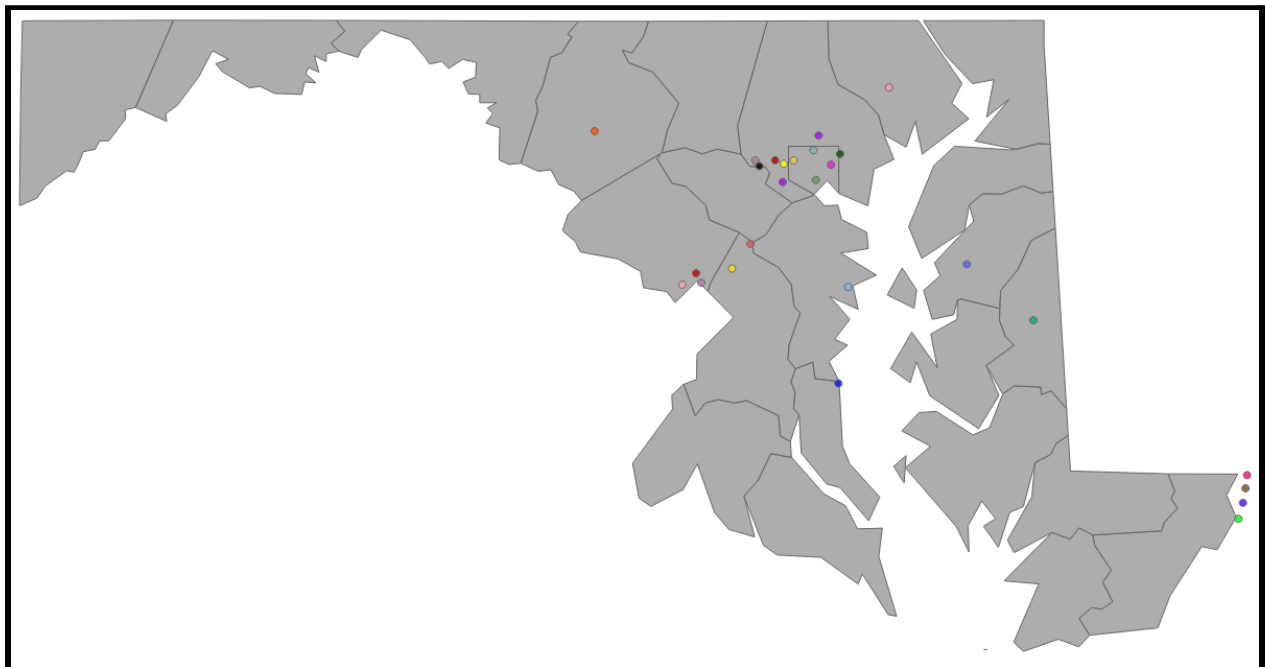
Beneficiaries

Nonprofit organizations and local governments can receive funding from this program to implement energy efficiency measures that benefit low-to-moderate income (LMI) Marylanders. Past awardees include nonprofit organizations, community action agencies, housing authorities, and county and local governments.

Description

Grants are awarded to projects that generate significant energy savings through energy efficiency, with the benefits of the energy savings being passed on to Maryland residents. Priority is given to projects that maximize energy savings and the number of residents that benefit from the measures. Applications are evaluated competitively on a regional basis, ensuring a fair distribution of funds across the state. Past projects include energy efficiency upgrades to residential and non-residential buildings that serve LMI Marylanders. Through the program, energy efficiency upgrades have been completed in previous years at community centers and homeless shelters, as well as on residential homes.

Map #1: FY21 Low-to-Moderate Income Energy Efficiency grantee locations



Grantee Name
Arundel Community Development Services - \$60,000
Building Change, Inc. - \$400,000
Building Change, Inc. - \$716,787
Choptank Electric Cooperative - \$300,000
City of Baltimore - \$226,029
Civic Works, Inc. - \$403,222
Civic Works, Inc. - \$656,820
Communities Together - \$62,400
County Commissioners of Queen Anne's County - \$134,000
Diversified Housing Development - Baltimore County - \$110,000
Diversified Housing Development - Baltimore County - \$220,000
Diversified Housing Development (DHD) - Baltimore County - \$220,000
Frederick County Government - \$400,000
Govans Ecumenical Development Corporation - \$28,815
Green & Healthy Homes Initiative - \$150,000
Green & Healthy Homes Initiative - \$200,000
Habitat for Humanity Metro Inc. - \$100,000
Habitat for Humanity Metro Inc. - \$150,000
Habitat for Humanity Susquehanna, Inc. - \$148,000
Healthy Neighborhoods, Inc. - \$208,842
SAFE Housing, Inc. - \$192,507
SAFE Housing, Inc. - \$239,558
SAFE Housing, Inc. - \$473,020
SAFE Housing, Inc. - \$500,000
Town of North Beach - \$100,000
Unity Properties, Inc. - \$100,000

Several of the grantees shown in Map #1 are working in more than one geographical area of the state. Map #1 typically depicts the grantee's office location; however, the majority of grant awards fund residential upgrades in multiple locations. As an example, while Safe Housing's awards are mapped to the location of the awardee's headquarters in Ocean City, the grantee's \$239,538 award will be used to implement residential energy efficiency measures in western Maryland.

FY21 projects are still being installed. For this reason, the anticipated total estimates for FY21 are based on results from previous fiscal years. Some energy measures may be benefitting from other leveraged funding sources. Actual energy and environmental benefits will not accrue until the individual projects have been completed.

Fiscal Year	FY21
# of grants issued	26
Anticipated annual kilowatt-hour (kWh) savings	2,180,000
Anticipated annual fuel savings in million British Thermal Units (MMBTU) ⁵	11,800
Anticipated annual CO2 avoided (metric tons CO2/year)	1,350

⁵ May include natural gas, propane, or #2 fuel oil.

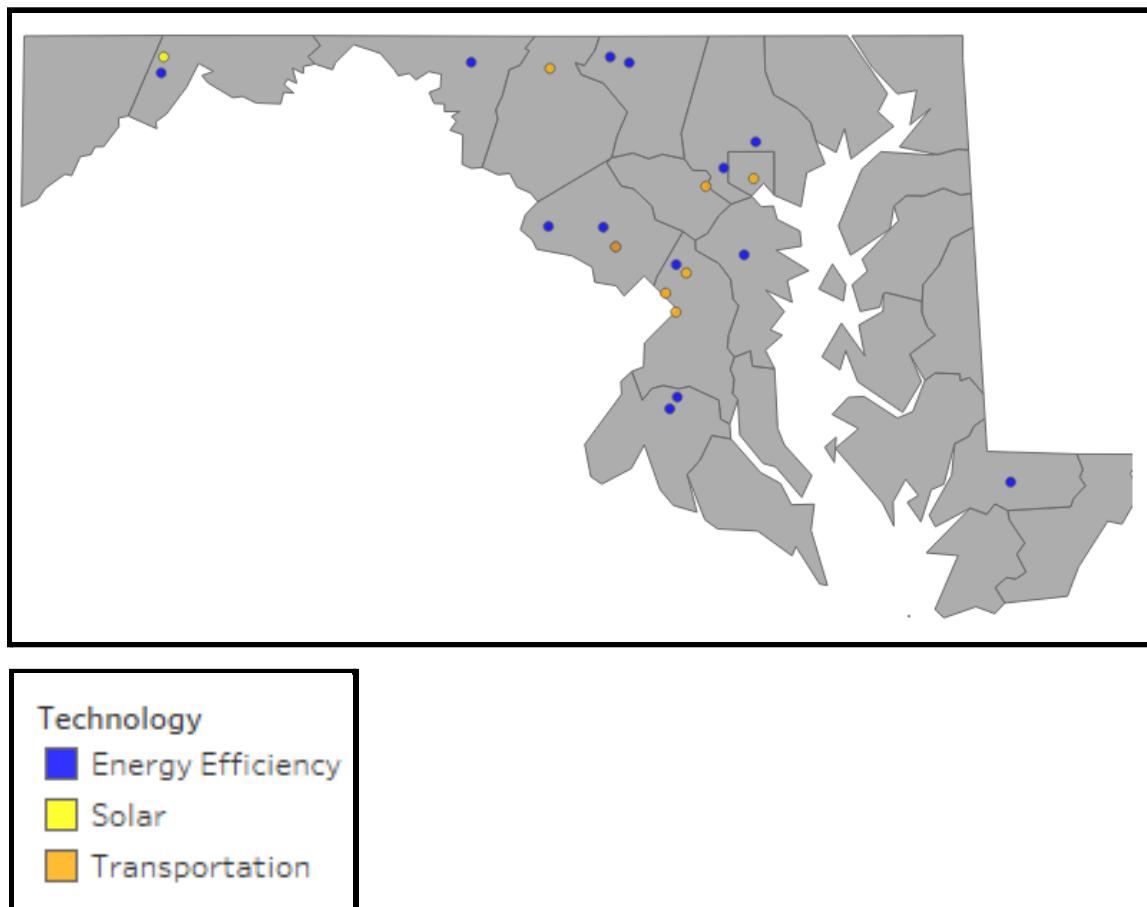
C. Maryland Smart Energy Communities Program

SEIF Expenditures and Encumbrances: \$0.759 million

Beneficiaries

This program benefits local incorporated governments (i.e., towns, cities, and counties) in Maryland. In FY21, the Maryland Smart Energy Communities (MSEC) program provided 16 awards. FY21 recipients include Baltimore City, Capitol Heights, Cottage City, Frostburg, Gaithersburg, Greenbelt, Hagerstown, Poolesville, Rockville, Salisbury, Taneytown, and Thurmont, as well as Anne Arundel, Charles, Howard, and Montgomery counties. Poolesville is participating in the MSEC program for the first time in FY21.

Map #2: FY21 Maryland Smart Energy Communities awardees



Description

The goal of the program is to support local governments as they adopt and commit to clean energy policies. Communities benefit from sustained reduction of energy usage, cost savings, and opportunities for renewable energy development. Once active in the program, a local government adopts energy goals and develops an energy baseline. After a MSEC participant has successfully adopted at least two out of three clean energy policies (i.e., energy efficiency, renewable energy, and transportation fuel reduction), it can leverage program funding to assist with projects toward achieving its energy goals. MSEC participants gain a better understanding of their government energy usage, enabling them to reduce energy costs, and contribute to the state's energy and environmental goals.

Program Details

Seventy-nine Maryland communities have participated in the program since 2013, including sixteen MSEC communities in FY21. Energy savings estimates shown below are based only on the FY21 awards to existing MSEC communities for energy projects identified in the respective grant agreements. Many projects are still being implemented. FY21 savings estimates below reflect initial savings projections, and may change.

Awardee	
■	Anne Arundel County - \$55,000
■	Baltimore City - \$20,187
■	Baltimore City - \$55,000
■	Baltimore City - \$55,000
■	Capitol Heights - \$15,000
■	Charles County - \$55,000
■	Charles County - \$55,000
■	Cottage City - \$3,750
■	Frostburg - \$16,777
■	Frostburg - \$55,000
■	Gaithersburg - \$55,000
■	Greenbelt - \$13,500
■	Greenbelt - \$40,880
■	Hagerstown - \$39,816
■	Howard County - \$34,000
■	Montgomery County - \$7,500
■	Poolesville - \$40,000
■	Rockville - \$35,000
■	Salisbury - \$55,000
■	Taneytown - \$28,965
■	Taneytown - \$8,811
■	Thurmont - \$15,000

MSEC Program	FY21
# of MSEC awards to municipal governments	11
# of MSEC awards to county governments (or county equivalent)	5
# of new MSEC communities	1
Estimated annual electricity reductions (in kWh)	1,652,814
Estimated kWh of annual solar generation	2,000
Estimated annual avoided transportation fuel (gallons) ⁶	6,461
Anticipated annual CO2 avoided (metric tons CO2/year)	610

⁶ Gasoline and diesel.

D. Commercial and Industrial Grant Program

SEIF Expenditures and Encumbrances: \$0.900 million

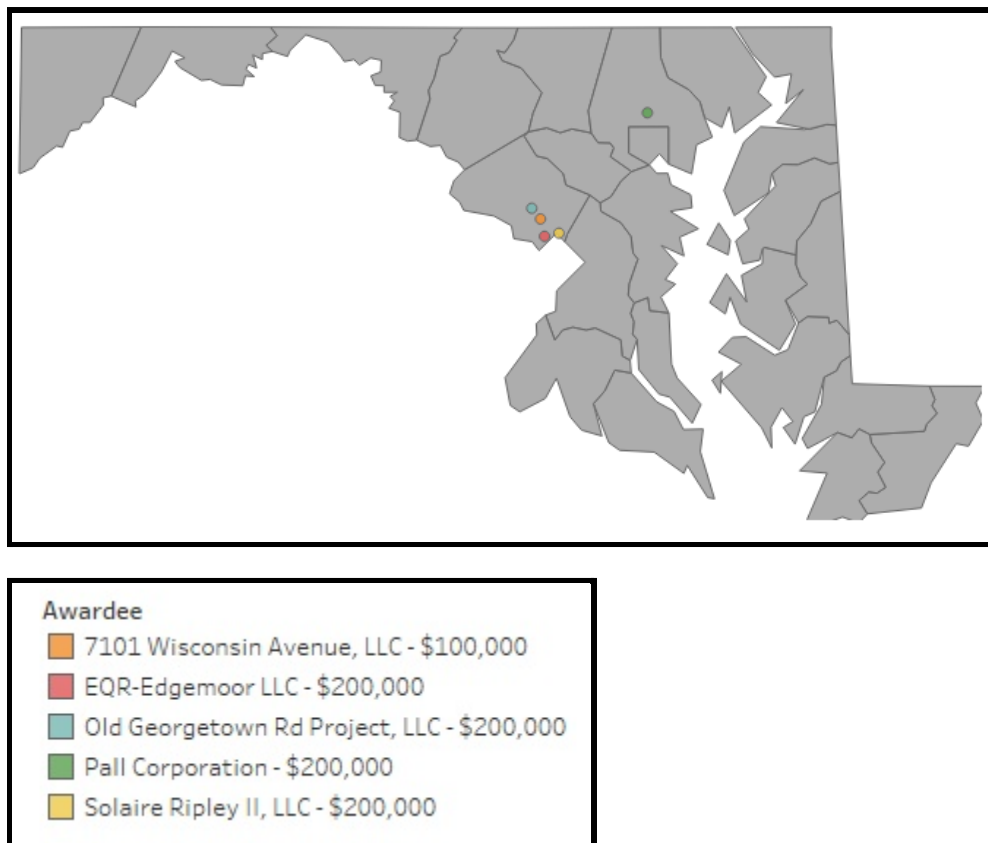
Beneficiaries

The Commercial, Industrial, and Agriculture (CI&A) Grant program offers financial incentives to Maryland's commercial, industrial, and agricultural sectors. In the past, agricultural awards were previously offered under a standalone agricultural program.

Description

The FY21 CI&A Grant program is providing five grants to enable energy efficiency measures that reduce targeted energy usage by at least 18%. In FY20, the program was expanded to allow for energy efficiency measures from all fuel sources. Grant awards are based on the percentage of energy reduction with higher incentives for deeper savings, covering up to 50% of net project cost, up to a cap, after utility incentives and any other leveraged funds are considered.

Map #3: FY21 Commercial, Industrial, and Agriculture Grant program awards



Program Accomplishments

Many projects have long lead times and therefore may still be being installed. FY21 annual savings estimates below reflect the initial projections of the electricity reductions anticipated to accrue from program-funded projects. The summary report below shows anticipated total project savings, including energy savings from any measures that may be benefitting from other funding sources, including utility incentives.

Fiscal Year	FY21
# of grant awards	5
Annual electricity savings (kWh)	7,193,239
Annual natural gas savings (therms)	26,998
Anticipated annual CO2 avoided (metric tons CO2/year)	2,539

E. Data Center Energy Efficiency Grant Program

SEIF Expenditures and Encumbrances: \$0.271 million

Beneficiaries

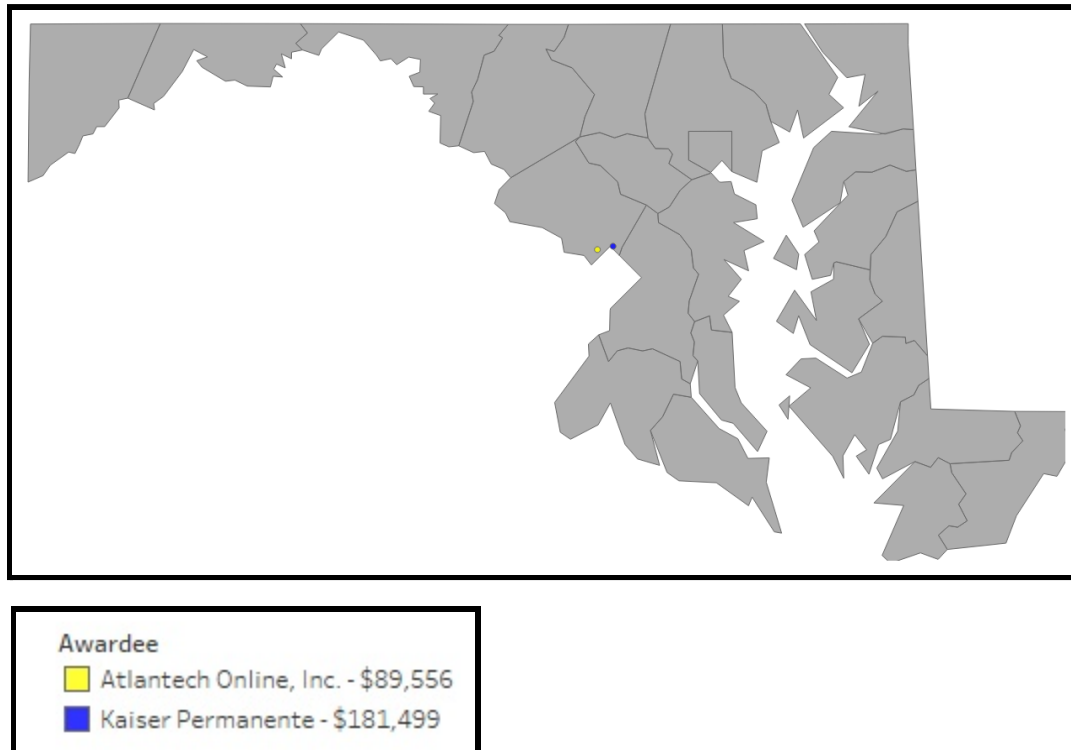
The Data Center Energy Efficiency Grant program offers financial incentives to Maryland's information technology sector. The program is open to any commercial, nonprofit, or state or local government organization data center located, or being constructed, within the State of Maryland.

Description

The program seeks innovative energy efficiency solutions to reduce electrical usage in new and existing data centers. In existing data centers, the program also aims to improve overall power usage effectiveness. The program provides competitive grants to eligible data centers for energy efficiency measures that include, but are not limited to, server virtualization, air flow optimization, aisle containment, lighting controls, variable frequency drives, and heating, ventilation, and air conditioning upgrades.

Two data center projects awarded grants in FY21 are underway.

Map #4: FY21 Data Center awards



The projects funded through this program have long lead times and therefore are still being installed. FY21 annual savings estimates below reflect the initial projections of the electricity reductions that are anticipated to accrue from program-funded projects.

The summary report below shows anticipated total project savings, including energy savings from any energy measures that may be benefitting from other funding sources, including utility incentives.

Fiscal Year	FY21
# of active projects receiving an award	2
Anticipated annual savings (kWh)	342,180
Anticipated annual CO2 avoided (metric tons CO2/year)	114

F. Combined Heat and Power Program

SEIF Expenditures and Encumbrances: \$3.30 million

Beneficiaries

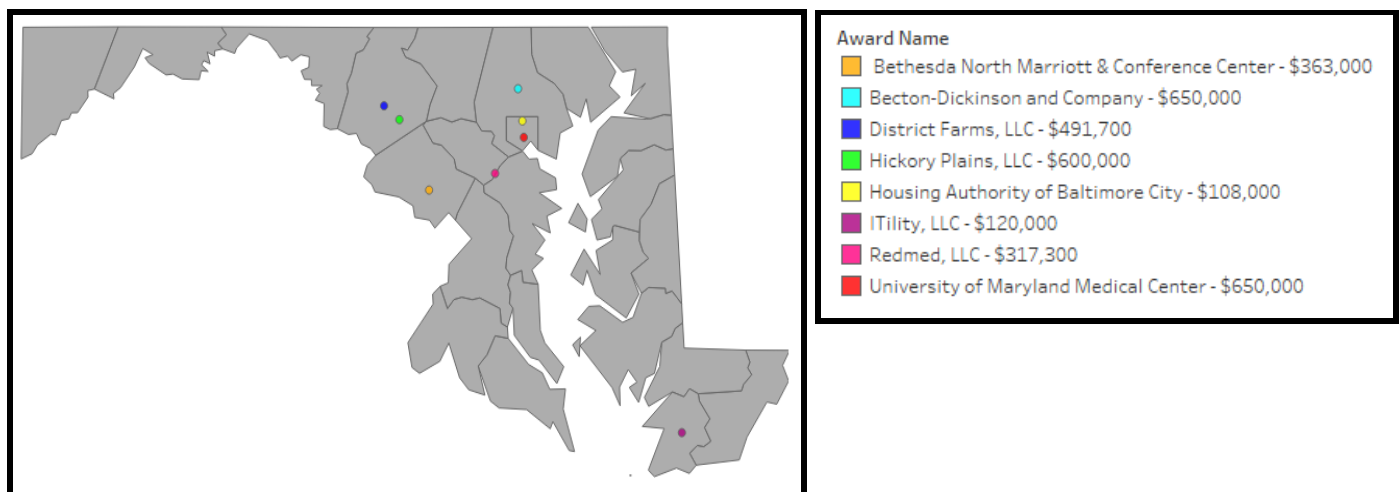
Maryland organizations with facilities that require relatively consistent thermal and electrical energy can potentially benefit from the simultaneous production of thermal and electrical energy from a combined heat and power (CHP) system.

Description

In FY15, MEA launched this program to encourage CHP development, initially targeting healthcare and publicly-owned wastewater treatment facilities because of their inherent requirement for enhanced electricity resiliency. The CHP program has since expanded to include critical infrastructure, fuel cells, and commercial, industrial, and institutional facilities. The program also targets projects that leverage biogas or biomass as fuel.

By generating electricity on site, CHP systems avoid electric line losses. Waste heat from the electricity generation process can be captured to help meet onsite thermal loads, improving overall building efficiency. The installation of CHP systems can help reduce greenhouse gas emissions, lower operational costs, and provide resiliency to crucial facilities or other organizations that value highly reliable power supply.

Map #5: FY21 Combined Heat and Power awards



Eight projects awarded FY21 funding are in progress. For this reason, the program accomplishments reflect estimated initial project metrics and benefits associated with FY21 grants.

Fiscal Year	FY21
# of projects receiving an award	8
Anticipated CHP capacity (MW)	12.614
Anticipated CHP generation (kWh/year)	64,826,000
Annual avoided utility fuel savings (MMBTU/year)	750,156
Avoided thermal fuel savings (MMBTU/year)	209,882
Anticipated annual CO2 avoided (metric tons CO2/year)	31,896

To date, 17 CHP projects from prior fiscal years have been completed, six of which were completed at hospital locations across Maryland. A number of CHP projects receiving awards from MEA since the program's inception are in various stages of design, installation, and commissioning. CHP systems are engineering-intensive projects with long lead times, and, depending largely on complexity and installation requirements, can require several years to complete.

G. Energy Efficiency and Air Ventilation Program

SEIF Expenditures and Encumbrances: \$0.300 million

Beneficiaries

This is a pass-through award to the Regional Manufacturing Institute of Maryland (RMI). RMI is providing energy services to Maryland manufacturers and commercial facilities⁷ that are the ultimate beneficiary of this effort.

Description

In an effort to attract more energy savings and help Maryland facilities weather the impacts of the COVID-19 pandemic, a grant has been provided to RMI to enable energy HVAC system checks using guidelines recommended by the American Society of Heating, Refrigerating and Air-Conditioning Certified Engineers. This audit program is based on Governor Hogan's COVID-19 Manufacturing Task Force Best Practices recommendations to increase ventilation rates and the percentage of outdoor air that circulates into the facility. The HVAC checks will help counterbalance the increased energy usage associated with the recommended ventilation and outside air circulation changes by identifying potential energy efficiency opportunities via HVAC system upgrades or operational adjustments.

⁷ The FY21 award is directed at parts of the state that are not eligible for similar services under a current RMI program. RMI currently has an award from a prior fiscal year that enables energy efficiency support for manufacturers in the Pepco and Delmarva Power service territories only.

H. Clean Energy Rebate Program

SEIF Expenditures and Encumbrances:

- \$3.02 million (residential)
- \$0.353 million (commercial)

Beneficiaries

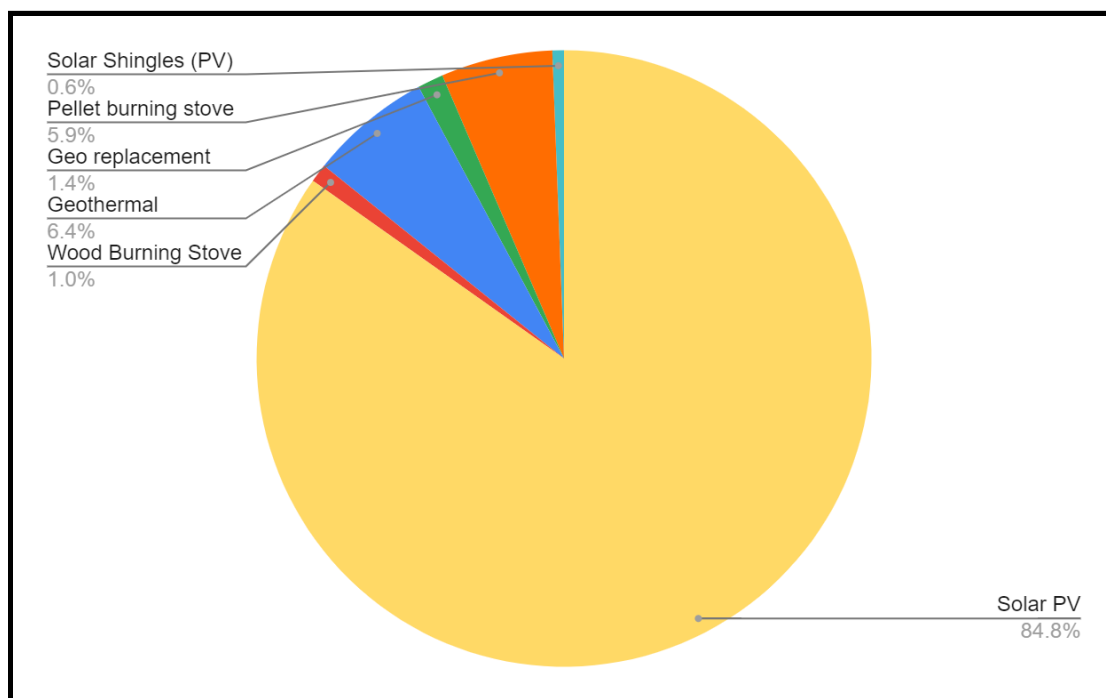
Beneficiaries can include homeowners, businesses, nonprofit organizations, and state and local government entities that install eligible renewable energy systems.

Description

The Clean Energy Rebate Program (CERP) was designed to support renewable energy installations across the state, and offers incentives for both residential and commercial projects. CERP initially provided incentives for solar photovoltaic (PV), solar water heating, geothermal heating and cooling, and wind energy systems. Residential wood and pellet stoves were later added as eligible technologies.⁸ In recent years, the PV category has expanded to also include solar shingles, where the solar technology is installed as part of a building's roof.

As shown in Chart #2, PV is the most popular technology by far, representing over 2,300 awards and almost 85% of CERP applications in FY21.

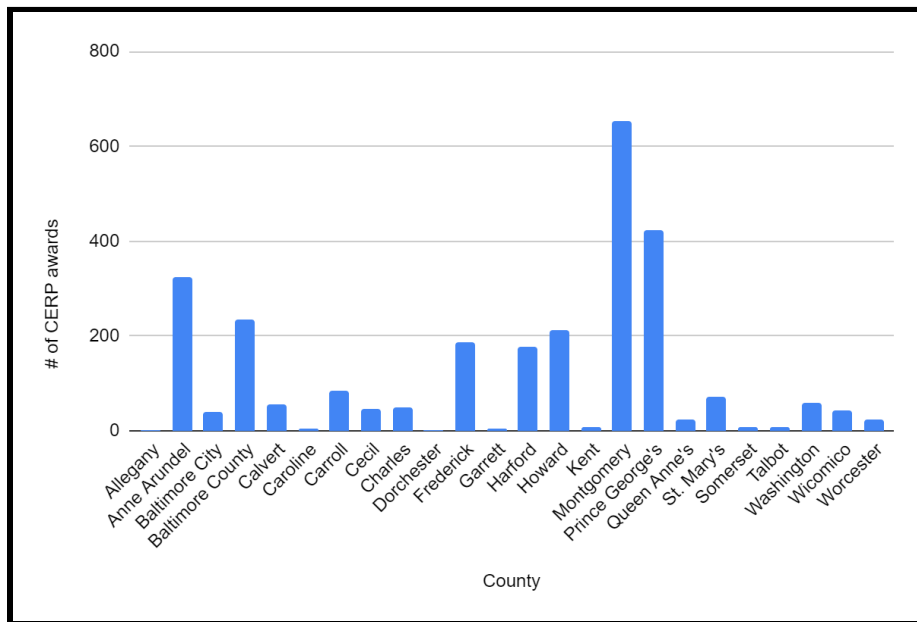
Chart #2: Distribution of Clean Energy Rebate Program Awards by Technology



⁸ energy.maryland.gov/residential/Pages/incentives/woodstoves.aspx

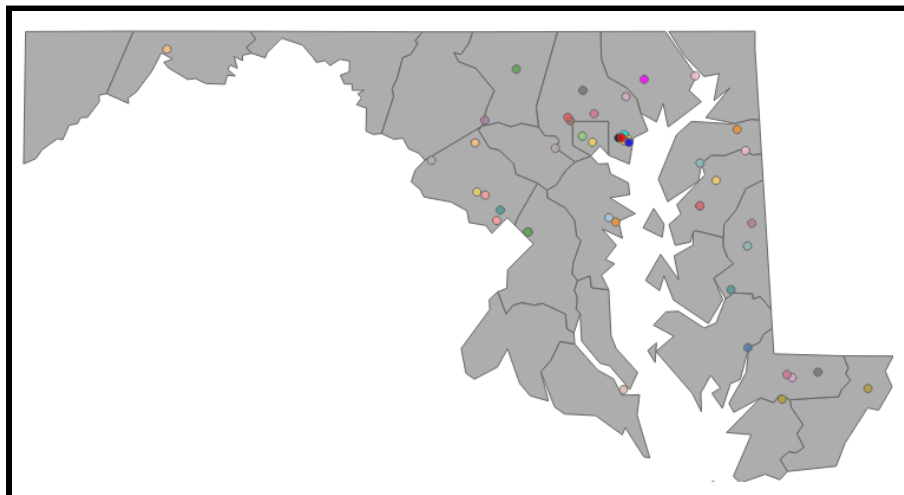
In FY21, residential CERP applications far exceeded commercial applications in both the number of awards made and total dollar amount of awards issued. The number of residential CERP rebates processed in FY21 highlights the popularity of the program. As shown below, participation in residential CERP came from every county (or county equivalent) in the state. The highest levels of residential participation came from Anne Arundel, Baltimore, Frederick, Harford, Howard, Montgomery, and Prince George's counties.

Chart #3: Number of Residential Clean Energy Rebate Program by County



There were also a total of 47 commercial CERP projects in FY21, all of which were for solar PV projects. In FY21, commercial projects occurred across the state, in 16 of Maryland's counties.

Map #6: Commercial CERP Project Locations



Residential CERP incentive levels are set at a prescribed amount per technology installation

while commercial incentive levels are calculated based on the size and type of renewable energy system. By offering incentives for multiple technologies, potential program participants have options to help suit their cost and the geographic requirements of the property where the system will be installed.

Some FY21 commercial projects are still underway. Estimates for these projects are included in the initial program details below.

Fiscal Year	FY21
Total awards	2,791
Residential CERP awards	2,744
Commercial CERP awards	47
Estimated new electricity generated or avoided that is incentivized by CERP (kWh/year)	32,750,000
Estimated MMBTU/year avoided due to projects receiving CERP incentives	4,300
Solar PV capacity (kW)	26,015
Solar thermal (sq. ft.)	0
Capacity of new geothermal systems installed (tons)	879
# of wood and pellet stove installations	191
Anticipated annual CO2 avoided (metric tons CO2/year) ⁹	10,905

⁹ From solar and geothermal technologies.

I. Solar Canopy Program

SEIF Expenditures and Encumbrances: \$1.603 million

Beneficiaries

Potential applicants include businesses, state and local governments, and nonprofit organizations

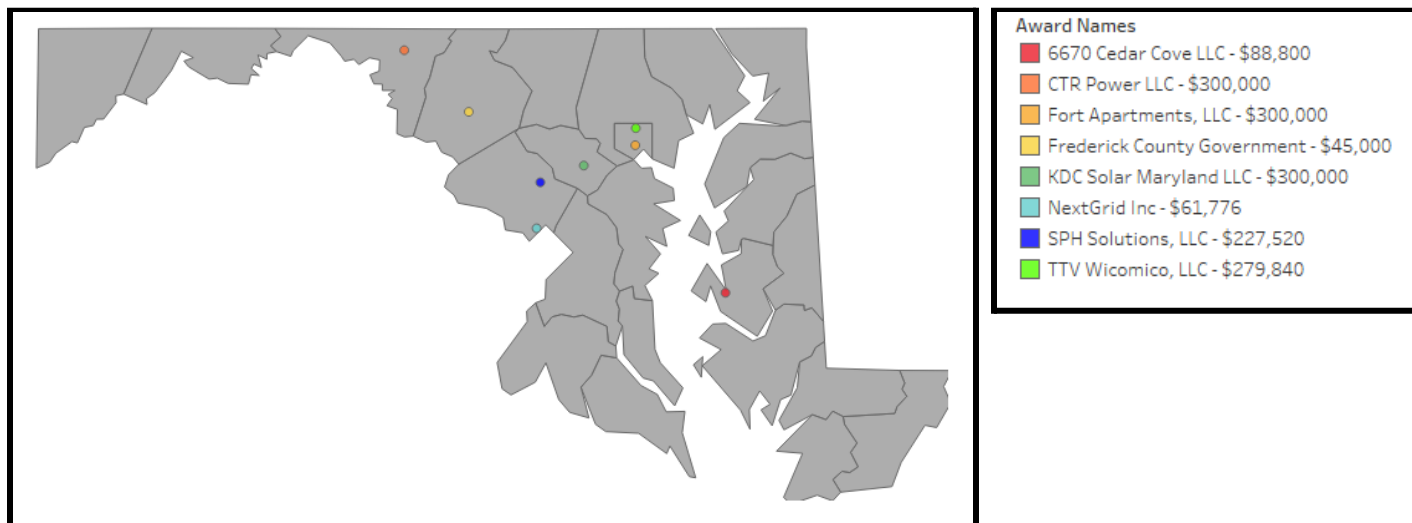
Description

This competitive program, previously referred to as the Parking Lot Solar Canopy with Electric Vehicle Charging program, has been offered by MEA since 2014.¹⁰ Eligible projects must consist of at least 75 kW of solar PV panels mounted on a canopy-type structure over a parking lot, and at least four Level 2 or Level 3 EV charging stations must be installed in conjunction with the canopy system. Participating parking lot properties can help support the state's Renewable Portfolio Standard (RPS), electric vehicle (EV) adoption, and greenhouse gas reduction goals all while performing the facility's primary function of providing parking access. As ancillary benefits of these projects, vehicles parked underneath the canopies are also protected during inclement weather and kept shaded, and thus cooler, during the summer months.

Many parking lot solar canopy projects are in fairly visible locations, helping increase the visibility of solar to the general public. This year canopy projects will be installed at a temple, an apartment complex, a private high school, and county government buildings in two counties.

FY21 projects are still being developed and are not yet installed. Anticipated system capacity estimates for these projects are included below.

Map #7: FY21 Solar Canopy program awards



¹⁰ In prior fiscal year SEIF reports, the Parking Lot Canopy program was reported as part of the Clean Energy Rebate Program.

Fiscal Year	FY21
# of canopy projects receiving an award	8
Canopy project solar capacity (kW)	3,574.76
Electric vehicle charging stations	35
Anticipated annual generation (kWh)	4,520,000
Anticipated annual CO2 avoided (metric tons CO2/year)	1,506

J. Community Solar Program

SEIF Expenditures and Encumbrances: \$0.907 million

Beneficiaries

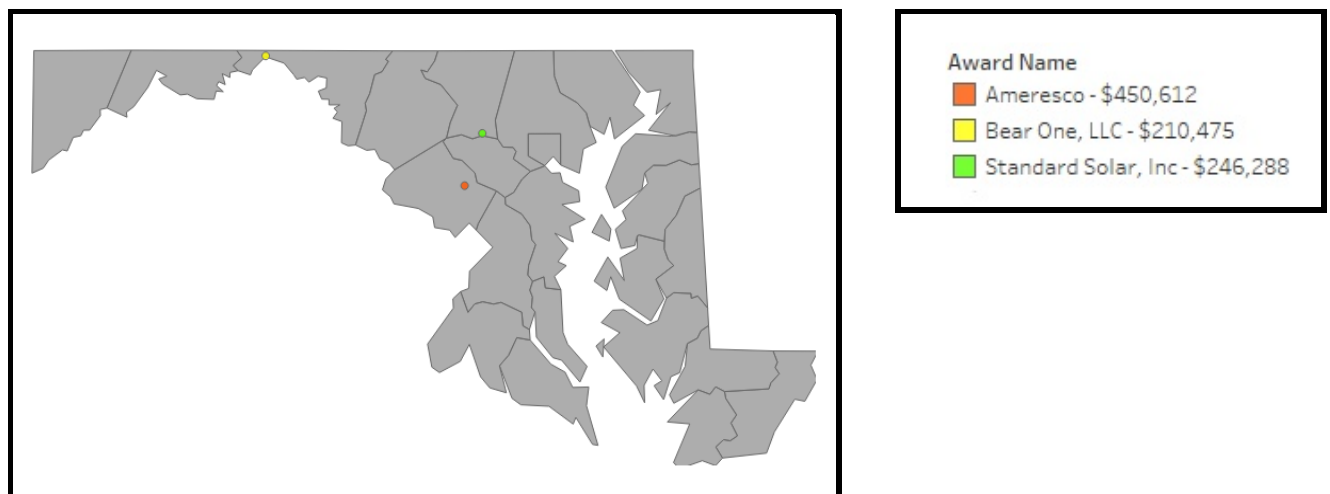
The ultimate beneficiaries of MEA's Community Solar program are LMI residents who are now more likely and able to participate in a community solar project in the Maryland Public Service Commission (PSC) pilot program.

Community solar helps improve energy equity by expanding the pool of Maryland residents who can potentially participate in solar projects. For example, community solar can provide access to solar to rental households that make up 33% of Maryland's housing units¹¹ as well as households who may not have the financial resources (e.g., upfront capital, credit history) to otherwise access solar technologies.

Description

Community solar allows Maryland residents to purchase subscriptions for electricity produced from local community solar arrays, thereby gaining some of the same economic advantages as having solar modules directly on a residence while avoiding possible obstacles to participation in solar that may exist (e.g., roof age, property ownership, roof orientation, or shading). The incentives offered by MEA are designed to help enable LMI Marylanders to participate in the larger, statutorily-created Community Solar pilot program being overseen by the PSC.

Map #8: FY21 Community Solar Locations



The community solar arrays incentivized in FY21 are power purchase agreement (PPA) projects, in which subscribers agree to purchase the electricity produced by the community solar project, rather than purchase a portion of the community solar array itself. In FY21, incentives for

¹¹ U.S. Census Bureau, data.census.gov/cedsci/table?q=maryland%20housing&tid=ACST1Y2019.S1101, accessed 12/11/2021.

subscriber organizations enable them to offer terms and conditions in their community solar subscription agreement (i.e., a contract by which a customer agrees to participate in a community solar project) that would increase cost savings for LMI residents.

FY21 projects are still being developed and are not yet installed. Initial generation and capacity estimates for these future installations are included below.

Fiscal Year	FY21
Total awards	3
Estimated total new electricity generation of all community solar projects receiving LMI incentives (kWh-ac/year) from MEA	12,171,000
Overall total capacity of community solar PV (kW) projects receiving LMI incentives from MEA	8,484
Estimated amount of new electricity generation from the incentivized community solar projects directed specifically to the LMI community (kWh-ac/year) ¹²	4,458,959
Anticipated CO2 avoided (metric tons CO2/year) attributed to the LMI portion of the community solar projects	1,485
Capacity of the incentivized community solar projects that is directed specifically to the LMI community (kW)	3,123
Estimated amount of new electricity generation from the non-LMI portions of the community solar projects (kWh-ac/year)	7,712,041
Anticipated annual additional CO2 avoided (metric tons CO2/year) from the non-LMI portions of the community solar projects	2,569
Capacity of the non-LMI portions of the community solar projects (kW)	5,361

¹² The generation capacity and corresponding electricity generation directed specifically to LMI participants is a subset of each participating community solar project.

K. Public Facility Solar Grant Program

SEIF Expenditures and Encumbrances: \$1.78 million

Beneficiaries

State, county, or municipal government entities

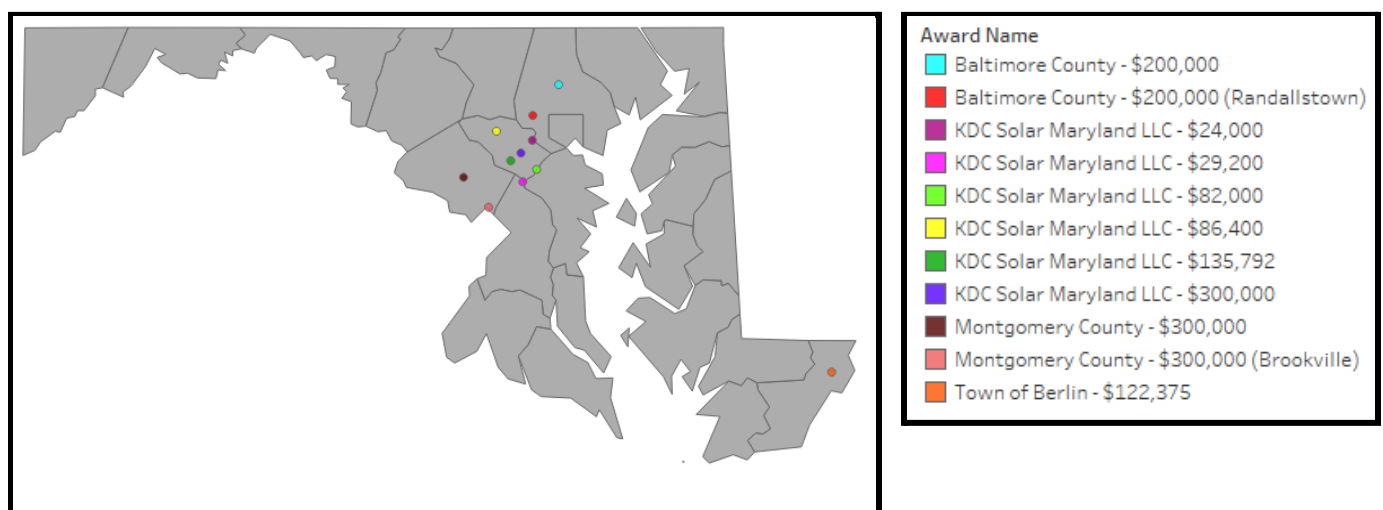
Description

Offered for the first time in FY21, this new program provides grant funding on a competitive basis to state, county, or municipal government entities to support planning and installation of solar arrays on existing infrastructure of public facilities. For this grant program, a public facility is a facility or building where the state or local government owns and controls the facility and uses the facility for its official purposes. Installation may occur through the direct purchase of solar modules by the public entity, or through a power purchase agreement with a third party for installation of a solar array on a public facility incorporated into the existing facility's infrastructure.

Government facilities receiving solar arrays through this program in FY21 include a community center, a courthouse, a bus depot, an animal shelter, and several public libraries. In some cases, the solar projects are being installed on or near public facilities via a power purchase agreement, where a solar developer owns the solar system and the county agrees to host the system and purchase the electricity.

FY21 projects are still being developed and are not yet installed. Anticipated system capacity and generation estimates for these projects are included below.

Map #9: FY21 Public Facility Solar Grant Program¹³



¹³ The six projects shown in Howard County involve a third-party power purchase agreement.

Fiscal Year	FY21
# of projects receiving an award	11
Solar capacity in kW(direct current (DC))	5,782
Anticipated annual solar generation (kWh/year)	6,331,621
Anticipated annual CO2 avoided (metric tons CO2/year)	2,109

L. Resiliency Hubs Program

SEIF Expenditures and Encumbrances: \$1 million

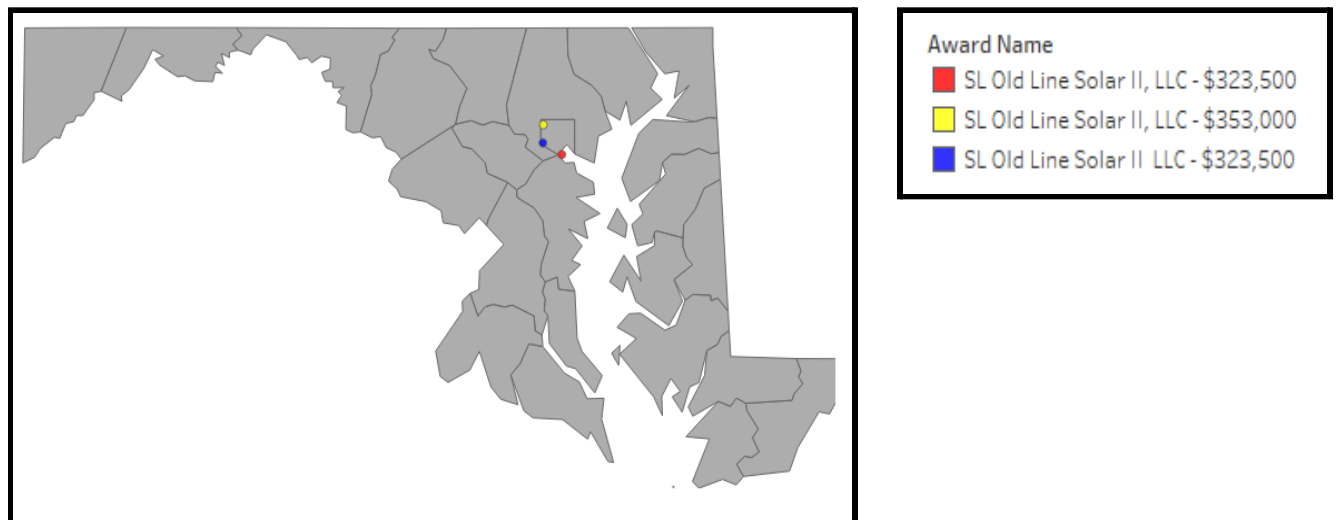
Beneficiaries

Incentives go to developers of resiliency hubs. If the resiliency hub developer is not the owner of the property where the hub will be located, the property owner must partner with the developer on the project. Downstream beneficiaries of MEA's Resiliency Hub program are LMI Maryland residents in the area near the proposed resiliency hub during periods of electrical grid outage. In addition, during normal grid operation, the solar and energy storage resources may be operated to reduce the cost of electricity to the hosting site.

Description

This program provides funding to partially compensate solar microgrid developers for costs incurred in the development and construction of combined solar and energy storage systems of 10 kW or larger. These systems can independently run and maintain electrical power even if power from the overall grid fails, to serve as resiliency hubs supporting neighborhoods with significant numbers of LMI residents. During periods of grid outage, the solar plus energy storage system (with or without an emergency generator) will be used to provide important needs for the surrounding community. A resiliency hub is envisioned as a venue where a solar plus energy storage system has been installed, with a system designed to provide electricity to meet important electricity needs, like emergency heating and cooling, refrigeration of medications, a temperature-controlled environment, and plug power for cell phone batteries. When the electric grid is operating properly, the solar plus storage system may be used to provide solar energy and peak reduction to the facility where the resiliency hub is located.

Map #10: FY21 Resiliency Hub projects



FY21 projects are still being developed and are not yet installed. Initial estimates for these future installations are included below.

While each of the direct awards went to an entity that will own both the solar energy systems and battery systems, the following sites will host the resiliency hubs and purchase the solar-generated electricity:

- City of Refuge
- Empowerment Temple
- Miracle City Church

Project partners that helped facilitate these projects included the City of Baltimore Office of Sustainability and Groundswell.

Fiscal Year	FY21
# of projects receiving an award	3
Total PV capacity associated with the resiliency hubs (kW)	340
Anticipated annual solar generation (kWh/year)	429,248
Anticipated energy storage capacity (kWh)	1,300
Anticipated annual CO2 avoided (metric tons CO2/year)	143

M. Resilient Maryland Program

SEIF Expenditures and Encumbrances: \$0.566 million

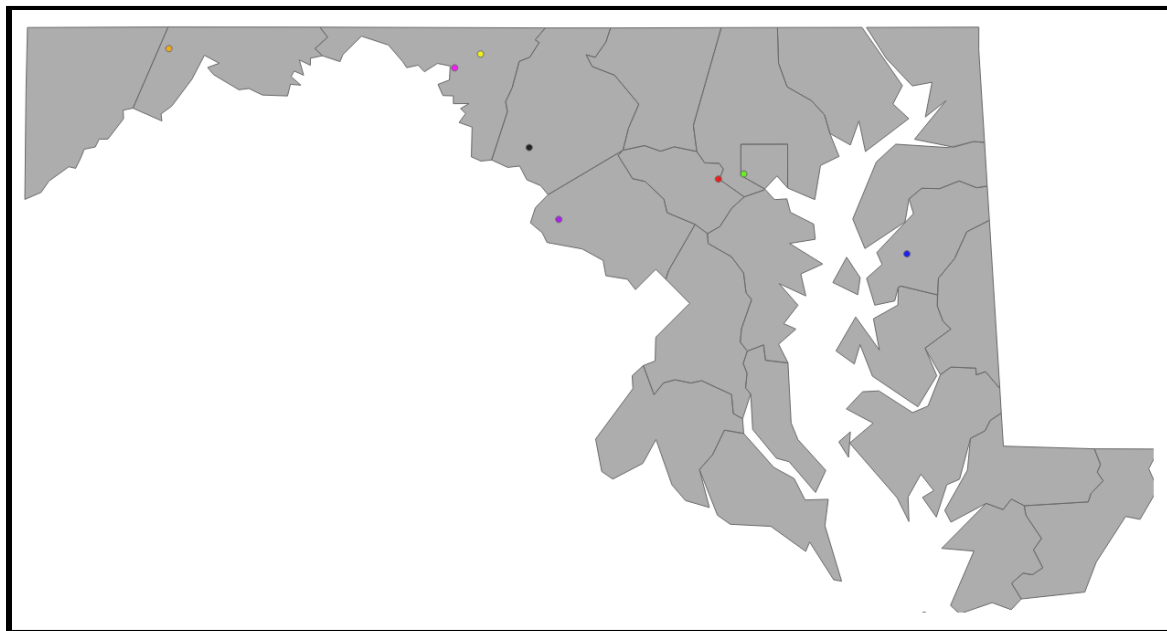
Beneficiaries

Applicants can include businesses, business development districts, critical infrastructure facilities, local governments with essential services, nonprofit organizations, regional planning organizations, state agencies, utilities, agricultural operations, and others.

Description

MEA launched this pilot program in FY20. Resilient Maryland is aimed at driving growth in the adoption of microgrids and other distributed energy resource (DER) systems, which will provide cleaner, more affordable, and reliable power to key entities across the state. Solar, advanced CHP, energy storage systems, grid-interactive energy efficiency technologies, and many other DERs can be strategically combined to provide long-term affordable energy and resilient power solutions that bolster essential infrastructure, vulnerable communities, and businesses and organizations sensitive to energy disruption.

Map #11: FY21 Projects funded through Resilient Maryland



MEA Award Name

- City of Frostburg - \$100,000
- Jefferson Ruritan Club - \$22,000
- Little Chicks, LLC - \$20,000
- Mayor and City Council of Baltimore - \$100,000
- Meritus Medical Center, Inc. - \$100,000
- Town of Poolesville - \$24,000
- Town of Williamsport - \$100,000
- University of Maryland - \$100,000

The program provides funds to help organizations offset the costs for producing feasibility analyses, preliminary financial projections, plans, designs, and other preconstruction planning deliverables that clearly outline the scope of the project and detail the project's economics, anticipated greenhouse gas reduction benefits, and potential barriers to project

implementation to be mitigated. In this way, project decision-makers, as well as possible capital providers that may help finance the projects, can clearly understand the project and reduce overall risk. Projects incentivized by the Resilient Maryland program are designed to provide resilient and efficient energy; bolster local governmental essential services; provide high-quality power to businesses, multifamily housing communities, hospitals and medical institutions; and identify projects that are replicable and scalable. Targeted investment in this critical early project stage is essential to encourage marketable solutions and attract private capital with competitive financing rates into the DER space.

The Resilient Maryland program is envisioned to be a stepping stone to future projects within other MEA energy programs, including, but not limited to, CHP, solar, and energy storage programs. MEA has already seen this progression from planning to project with two FY20 applicants. One returned in FY21 with an application for a CHP project, after completing project planning using a FY20 Resilient Maryland award. The other received an award from MEA to help offset the costs of installing its innovative, grid-interactive residential microgrid for which a FY20 Resilient Maryland award enabled feasibility analysis and initial planning.

Fiscal Year	FY21
# of projects receiving an award	8

N. Offshore Wind Programs

SEIF Expenditures and Encumbrances: *\$1.025 million*

Non-SEIF Expenditures and Encumbrances: *\$0.400 million*¹⁴

Beneficiaries

This program provides funds to emerging businesses; nonprofit organizations; and state, local, and municipal governments and their agencies and institutions.

Description

The Offshore Wind program includes both the Offshore Wind Development Fund (OSWDF) within the SEIF and the Offshore Wind Business Development Fund (OSWBDF), which is outside of the SEIF. Respectively, these funds are used for the research efforts of offshore wind projects and the creation of a supply chain in Maryland.

The OSWDF has historically been used for research initiatives, including environmental surveys and wind resource characterization campaigns. The OSWDF is also being used to enable Maryland to participate in a national consortium funded by the U.S. Department of Energy and other participating states to focus on offshore wind technology challenges in the United States.

The OSWBDF is used to help prepare Maryland's workforce and emerging businesses, including minority-owned emerging businesses, to enter the offshore wind industry. In FY21, the OSWBDF was used to offer the Maryland Offshore Wind Capital Expenditure program and the Maryland Offshore Wind Workforce Training program.

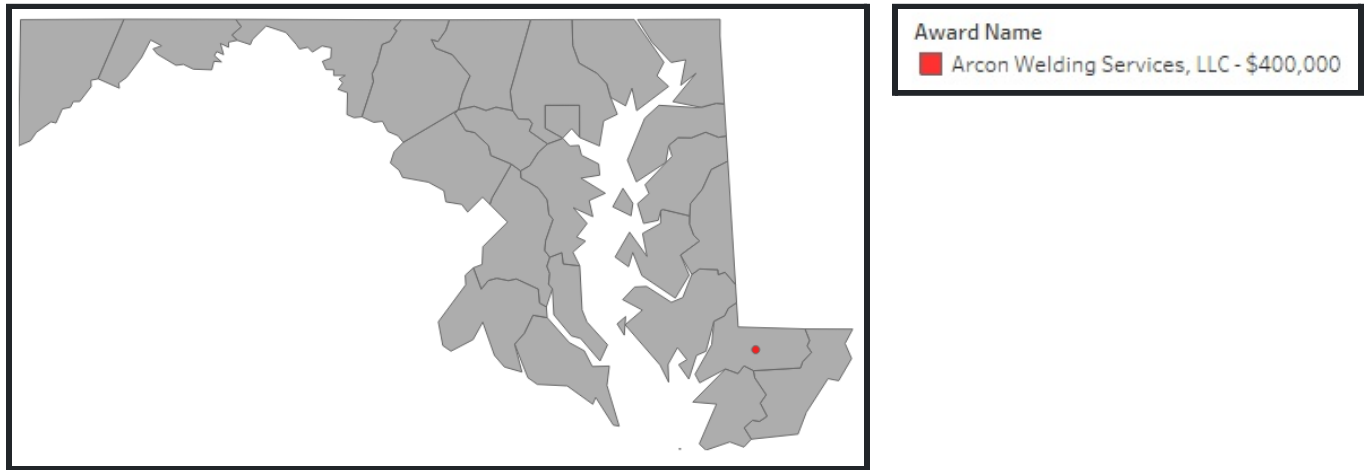
- The Maryland Offshore Wind Capital Expenditure program supports emerging Maryland businesses that are interested in participating in the global offshore wind industry.
- The Maryland Offshore Wind Workforce Training program provides funding to ensure Maryland has a ready and able workforce capable of contributing to the construction, installation, and operations and maintenance of an offshore wind energy project.

In FY21, funds were again used for the National Offshore Wind Research and Development Consortium to provide competitive grant funding for research and development projects focused on addressing offshore wind technology advancement; wind power resource and physical site characterization; installation, operations and maintenance; and supply chain technology.

In FY21, one award was made through the OSWBDF for the workforce program. This award will support a training center in Salisbury to become a certified training provider of the Global Wind Organization's Basic Technical Training Standard.

¹⁴ The Maryland Offshore Wind Energy Act of 2013 created the OSWBDF outside the SEIF. MEA has included expenditures from the OSWDF in annual SEIF reports in the past. For consistency, MEA is including this information again for FY21.

Map #12: FY21 Offshore Wind Business Development Fund Award



O. Electric Vehicle Supply Equipment Rebate Program

SEIF Expenditures and Encumbrances: \$1.799 million

Beneficiaries

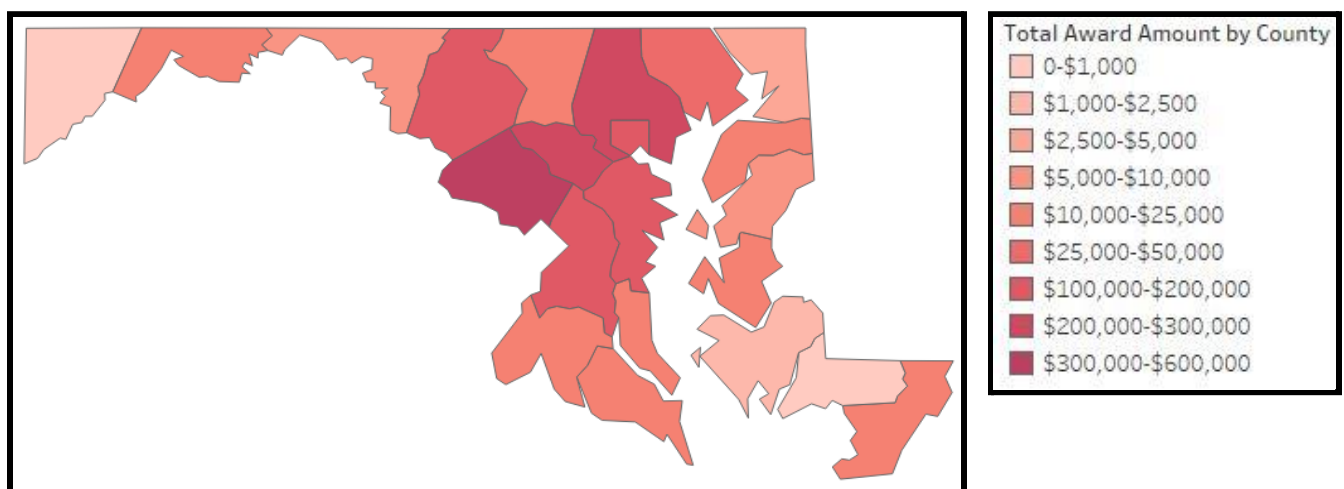
Electric Vehicle Supply Equipment (EVSE) Rebate program participants can include homeowners, businesses, nonprofit organizations, and state and local government entities that install eligible EV charging equipment. Entities purchasing and installing EVSE for non-exclusive individual use in a multi-unit dwelling development (e.g., apartments, condominiums, homeowners associations, etc.) can also participate.

Description

The EVSE program aims to reduce the financial burden of acquiring and installing EV charging stations, in order to increase EV adoption in support of Maryland's deployment and greenhouse gas reduction goals.

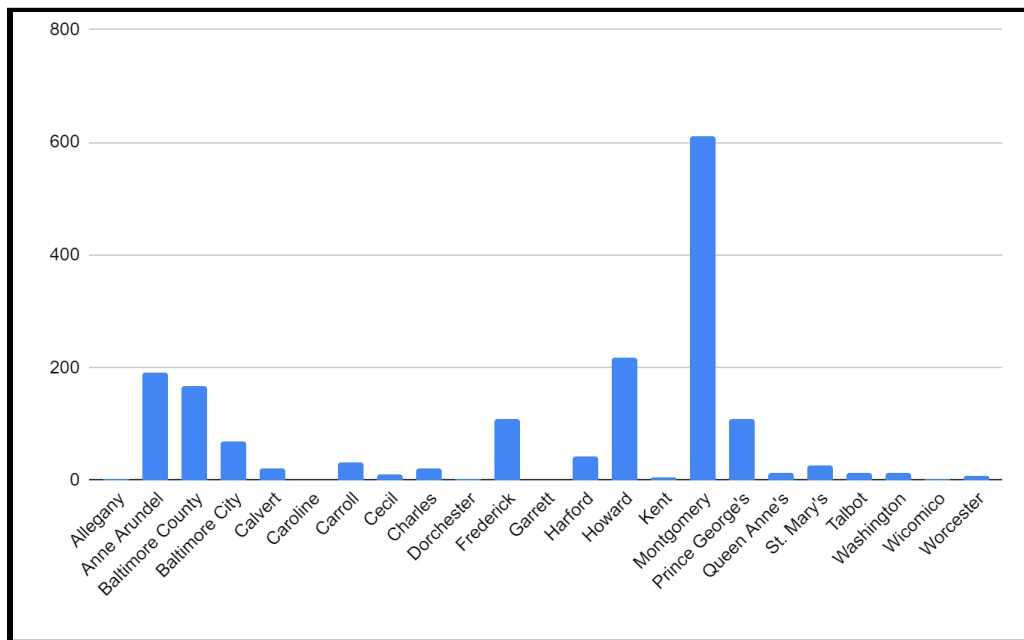
A total of 1,683 EVSE awards were funded through SEIF in FY21, which includes both residential and commercial installations. While each residential EVSE award typically corresponds to one charger, the commercial EVSE program allows for rebates for multiple chargers to be included on the same award application, thus resulting in larger award amounts.¹⁵ In aggregate, the FY21 EVSE awards provided rebates for a total of 1,878 EV chargers. In FY21, 84% of overall EVSE rebates, by number, went to Maryland residents while the remaining 16% of rebates went to commercial entities. From a budget perspective, approximately half of the overall EVSE budget went to residential awards, while the remaining 50% went to eligible businesses, nonprofit organizations, or state and local government entities.

Map#13: FY21 EVSE Award Funding by County



¹⁵ The SEIF report provides a list of participants at the awardee, rather than individual rebate, level. With this in mind, a commercial EVSE participant receiving multiple rebates as part of the same application is listed as one award.

Chart #4: FY21 EVSE Awards by County



As illustrated by Map #13 and Chart #4, it can be seen that the highest levels of program participation in FY21 occurs in the counties along the I-95 corridor, or that contain a portion of the Baltimore or Washington beltways. In addition, Frederick County also had a high level of program participation. In FY21, EVSE awards were made to applicants in 23 of Maryland's 24 counties (or county equivalents).

In addition to numerous Maryland residents, FY21 EVSE commercial program participants include shopping centers, apartment complexes, condominium associations, a municipal government, and a county government. Commercial awards in FY21 have also gone to entities, such as the Electric Vehicle Institute and Volta Charging, working to build out the public EV charging network in the state.

Fiscal Year	FY21
# of total EVSE rebate awards made	1,683
# of residential EVSE awards	1,578
# of commercial EVSE awards	105
Total # of EV chargers receiving a rebate	1878

P. Clean Fuels Incentive Program

SEIF Expenditures and Encumbrances: \$1.374 million

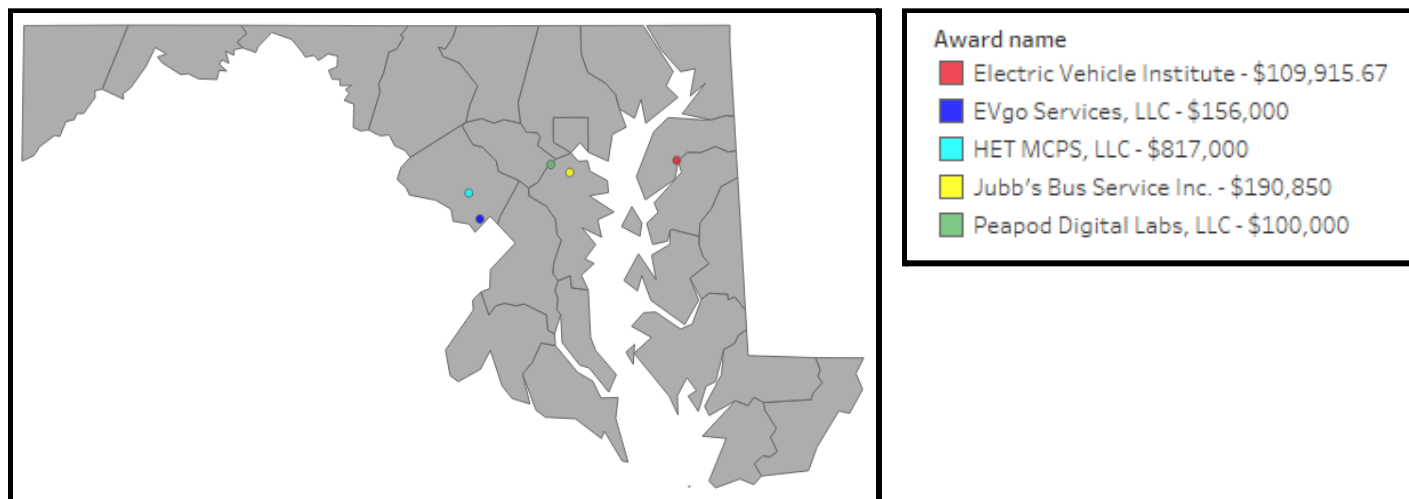
Beneficiaries

Potential applicants must be a fleet vehicle operator or a fleet vehicle purchaser interested in pursuing alternative fuel vehicles or infrastructure. Eligible applicants for clean fuel vehicle incentives include school districts, municipal authorities, local governments, businesses, and nonprofit organizations; eligible applicants for clean fuel infrastructure incentives are limited to just businesses. An applicant could participate in either the vehicle program or the infrastructure program, but not both.

Description

This competitive program provides financial assistance for the purchase of new and converted alternative fuel fleet vehicles registered in the state of Maryland. Specifically, the program provides funding to support the incremental cost to purchase alternative fuel fleet vehicles, or to convert new fleet vehicles to utilize alternative fuel. The program establishes a maximum grant award per new vehicle, based on the different types of alternative fuel (i.e., all electric, natural gas, propane, biodiesel, and hydrogen) and vehicle class. The program also offers financial assistance for the purchase and installation of publicly accessible alternative fuel infrastructure.

Map #14: Clean Fuels Incentive Program Award Locations



Fiscal Year	FY21
# of projects receiving an award	5
# of anticipated EVs incentivized	21
# of anticipated propane buses incentivized	11
# of public EV fast chargers installed	6
Anticipated, avoided gallons of petroleum	113,733
Anticipated annual CO2 avoided (metric tons CO2/year)	430

Q. Grid Interactive Community Microgrid Award

SEIF Expenditures and Encumbrances: \$0.200 million

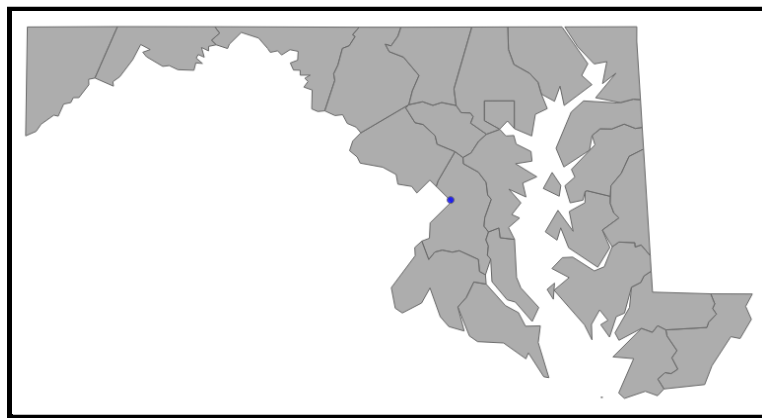
Beneficiaries

This project will benefit the residents of the subdivision described below while also providing insights into how to make affordable, sustainable, and resilient new housing more accessible to Maryland's LMI population.

Description

This award builds on efforts catalyzed by a prior award from MEA's Resilient Maryland program for design and feasibility funding in FY20. The award is going to the Housing Initiative Partnership, a nonprofit affordable housing developer in Prince George's County, to construct a new residential microgrid that will power a small subdivision of new "net zero" single family homes in Fairmount Heights. This project will support community solar and a battery energy storage system for six LMI households. This innovative pilot project, which received design and feasibility funding from MEA in 2020, will enable the new homeowners to generate their own energy independent of the public electrical grid.

Map #15: Grid Interactive Community Microgrid Award



Award Name:

■ Housing Initiative Partnership, Inc. - \$200,000

Fiscal Year	FY21
# of projects receiving an award	1
# of low-to-moderate income homes in the microgrid community	6

R. Communications and Marketing

SEIF Expenditures and Encumbrances: \$0.074 million

Beneficiaries

All Marylanders.

Description

In FY21, the funds under the Communications and Marketing budget were used to promote MEA energy programs and awareness to Maryland residents, businesses, nonprofits and local governments. Communications and marketing activities funded in FY21 include:

- Advertising via Maryland Public Television, Maryland Jewish Media, and public radio sponsorships.
- Sponsorship of the Montgomery County Energy Summit.

S. Administration

SEIF Expenditures and Encumbrances: \$4.460 million

Beneficiaries

All Marylanders benefit from the efforts that occur under the SEIF.

Description

In order to help the state meet its energy goals, MEA helps develop energy policy and implements numerous energy programs and initiatives.

Program Accomplishments

Funding under the Administration program enabled:

- MEA to execute the state's energy programs described throughout this report;
- When possible and consistent with the current state guidelines, limited travel in support of the execution of the SEIF and the state's energy goals, such as visits to grant-funded project sites and participation at Maryland Association of Counties events;
- Energy policy and planning activity, many of which involve legislative-style hearings before the PSC, to support policy efforts including, but not limited to:
 - EmPOWER Maryland;
 - Public Conference 44 focused on electric distribution system planning;
 - community solar regulations;
 - carbon pricing; and,
 - the Federal Energy Regulatory Commission (FERC) Minimum Offer Price Rule (MOPR)

Further, during FY21, MEA participated in various collaborative efforts such as the Zero Emission Electric Vehicle Infrastructure Council, the Maryland Green Buildings Council, the National Offshore Wind Research and Development Council, the Maryland Clean Energy Center Executive Board, the Maryland Commission on Climate Change, and the Chesapeake Bay Subcabinet.

Nationally, MEA has participated in events organized by the National Association of State Energy Officials, National Governors Association, National Conference of State Legislators, PJM, Inc., American Wind Energy Association, Offshore Wind Business Network International Policy Forum, Midwest Regional Carbon Initiative, and the Southern States Energy Board.

T. Energy Technical Support

SEIF Expenditures and Encumbrances: \$0.723 million

Beneficiaries

Maryland residents, businesses, nonprofit organizations, and local governments.

Description

MEA funds technical analysis that support the state's energy efficiency, renewable energy, and energy-related transportation initiatives, as well as improve energy reliability and resiliency.

Energy programs that received support from FY21 funding include the:

- LMI Energy Efficiency program;
- Data Center Energy Efficiency program; and,
- Animal Waste-to-Energy program, in the form of a third-party evaluation of an installed project from several years ago.

In addition, MEA also funded several studies and data analyses in FY21. SEIF funds were used to identify resources that could assist MEA with policy analyses, and were then used for policy analyses related to carbon pricing and the FERC MOPR proceeding. Funding was used for a natural gas economic impact study, and to enable a deep-dive analysis into Maryland jobs data related to energy and the impacts of COVID-19 on energy jobs.

SEIF Programs Implemented by Entities Outside of MEA

U. Maryland Department of the Environment - Climate Change Program

FY21 Appropriation: \$3.100 million

FY21 Expenditures and Encumbrances: \$2.715 million

Program Beneficiaries and Participants

The State of Maryland.

Description

As required by §9-20B-04 of the State Government Article, monies are provided from SEIF to the Clean Air Fund managed by MDE. SEIF is used to fund the costs of MDE's programs to reduce or mitigate the effects of climate change. Uses of SEIF by MDE include, but are not limited to, funding staffing and operating costs related to air quality planning, climate change, mobile sources, the Air and Radiation Administration Director, air monitoring, permits, compliance, and legal support.

SEIF is also used by MDE to pay bi-annual dues for Maryland's membership in RGGI, Inc. RGGI, Inc. is a regional organization that assists member states with the operational aspects of the program. The member states are required to pay dues to RGGI, Inc. for their share of the operational costs of the auction platform, as well as for other implementation costs.

V. Maryland Department of the Environment- Energy-Water Infrastructure Program

MDE awards made during FY21 that utilize SEIF from prior fiscal years: \$1.333 million¹⁶

SEIF funds transferred in FY21 to MDE: \$4.829 million¹⁷

Beneficiaries

Maryland water and wastewater treatment plant owners.

Description

The Energy-Water Infrastructure program (EWIP) provides capital grant funds to water and wastewater treatment plant owners to develop energy efficient and resilient projects, including CHP systems and renewable energy sources, and for replacement of aging equipment with newer, more energy efficient technologies.

In FY21, MDE reports awarding prior fiscal year funding to three projects.¹⁸ Projects include:

- Martingham Utilities Cooperative (Talbot County) - Upgrading existing pumps that currently operate 24-hours a day to a new pump skid that will utilize energy efficient pumps with variable frequency drives and a pressure tank to enable the pumps to shut off, when possible, at the water treatment plant (WTP).
- City of Fruitland - Construction of a solar panel system to generate renewable energy at the WTP.
- Town of Pittsville - Construction of a solar panel system to generate renewable energy at the WTP.

¹⁶ All of these projects are reported as having been allocated or awarded funds from prior fiscal year appropriation, rather than FY21 appropriation as is typically listed in this report.

¹⁷ Unlike the majority of other SEIF-funded programs in this report, MDE's EWIP is a capital program with multiple year funding appropriation. All EWIP funding was appropriated in previous fiscal years (i.e., FY17, FY18 and FY19).

¹⁸ As reported by MDE to MEA in quarterly reports.

W. Maryland Energy Innovation Institute

SEIF FY21 Transfers to the Maryland Energy Investment Fund: \$1.5 million

Summary

As required by Section 3 of Chapter 365 of the Acts of the General Assembly of 2017, \$1.5 million in SEIF funds were transferred to the Maryland Energy Innovation Fund (MEIF) in FY21. The Maryland Energy Innovation Institute (MEII) that manages the MEIF has produced an annual report of FY21 MEII activity.¹⁹ The Maryland Clean Energy Center (MCEC), which in previous years received funding from the SEIF, now receives funding from the MEIF through MEII.

In MEII's Annual Report FY21, MEII reports an FY21 budget of \$623,425 with actual expenditure of \$597,615.²⁰

Based on communications with MEII, the remaining \$876,575 in FY21 funds transferred to MEII from the SEIF were provided to MCEC.

Use of SEIF funds transferred to the MEIF	FY21
MEII	41.6%
MCEC	58.4%

¹⁹ Maryland Energy Innovation Institute Annual Report FY2021, energy.umd.edu/sites/energy.umd.edu/files/SB313Article10-839MSAR11205-FY2021.pdf.

²⁰ Maryland Energy Innovation Institute Annual Report FY2021, Appendix 1, page 37.

X. Department of Human Services- Electric Universal Service Program Bill Assistance

SEIF FY21 Budget Appropriation: \$19.850M

SEIF FY21 Expenditures²¹: \$19.850M

SEIF FY21 Disbursements to date: \$0 million

Beneficiaries

The Office of Home Energy programs (OHEP) within DHS provides electric utility payment assistance to eligible low-income households.²²

Description

SEIF funds are used for Electric Universal Service program (EUSP) bill assistance and arrearage retirement assistance program benefits. Bill assistance benefits make ongoing electric bills more affordable by paying part of a household's monthly electric bill. Funds generated through the EUSP utility ratepayer service charge provide the majority of funding for bill assistance, with SEIF funds providing benefits when ratepayer funds are exhausted.

Electric arrearage retirement assistance benefits retire past due bills up to \$2,000. An arrearage retirement benefit is available once every 5 years, with certain exceptions for vulnerable populations. Benefits are paid directly to electric utilities on behalf of the program applicant.

The EUSP bill assistance and electric arrearage retirement assistance benefits administered by OHEP prevent and resolve utility disconnections. The electric arrearage retirement assistance benefit directly prevents or resolves disconnections that may result in life-threatening health and safety concerns, or result in households becoming homeless. Bill assistance keeps bills at an affordable level so that customers do not end up in a utility crisis in the first place.

FY21 Outcomes²³	Households Served	Total Benefits Paid	SEIF Benefits Paid
Bill assistance	80,013	\$ 40,292,239	\$ 5,435,307
Arrearage retirement assistance ²⁴	16,624	\$ 17,327,969	\$ 14,416,249
Total	80,013	\$ 57,620,208	\$ 19,851,556

²¹ As reported by DHS to MEA.

²² Eligibility requires income equal to or less than 175% of the federal poverty level.

²³ The outcomes reflect benefits reported by DHS for FY21 EUSP funding originating from SEIF. However, no EUSP funds have been requested yet by DHS for FY21; therefore, no FY21 SEIF funds have been disbursed to DHS.

²⁴ Arrearage recipients are a subset of EUSP Bill Assistance recipients.

Y. Department of General Services

SEIF FY21 Appropriated Budget: \$0.500 million

SEIF FY21 Expenditures: \$0.500 million

Beneficiaries

State agencies and Maryland taxpayers benefit from this program.

Description

Within DGS, the Office of Energy and Sustainability (Energy Office) provides professional, managerial and technical services to reduce energy consumption and costs by identifying state agency energy reduction opportunities. Some of the initiatives being undertaken by the DGS Energy Office include energy performance contracting (EPC), energy use tracking, renewable energy sourcing and demand response.

The DGS Energy Office uses SEIF funds²⁵ to:

- Support the state's EPC program currently providing \$24.90 million in guaranteed utility and maintenance savings to the state;
- Support staff time to work on Governor Hogan's Executive Order entitled *Energy Savings Goals for State Government*; and,
- Improve and update data in the statewide utility database.

During FY21, the DGS Energy Office oversaw activity associated with early stage work on three new EPCs and issued a procurement to hire a third-party measurement and verification firm to help develop energy baselines and review annual measurement and verification reports on current energy projects. The DGS Energy Office also oversaw the installation of over 10,000 LED fixtures, along with controls, in the Annapolis Capital Complex.²⁶

Efforts on the statewide utility database in FY21 included developing an energy baseline for the *Energy Savings Goals for State Government* Executive Order. The DGS Energy Office is also working with the database contractor to add additional functionality to the database to make it a more useful tool for tracking and analyzing energy consumption on a per building basis, and to accept submeter data.

²⁵ SEIF funds were used to subsidize staff time to manage these projects.

²⁶The Annapolis Capital Complex lighting project was initially funded by a loan from MEA's Jane E. Lawton Conservation Loan program. DGS has sought utility rebates for the Annapolis lighting project, and DGS indicates the resulting rebates will allow additional lighting fixtures to be upgraded.

Z. Department of Health Energy Performance Contract Repayments

FY21 SEIF Transfer: \$2.038 million

Description

MEA notes that this annual expenditure draws down resources that would otherwise be used to reduce energy usage and greenhouse gas emissions.

To lower energy bills, many state agencies participate in EPC agreements. EPC repayments are obligations intended to be self-funded with the state borrowing funds to pay for the energy improvements, and the annual energy savings from those improvements are expected to be more than enough to repay the borrowed funds. However, some MDH EPC payments have been paid by SEIF instead of by energy savings, after those savings were transferred to the General Fund in prior years.

AA. Department of Commerce

FY21 SEIF appropriation: \$0.200 million

FY21 SEIF committed funding: \$0 million

Program Description

For FY21 through FY28, section §9-20B-05 of the State Government Article requires monies from the SEIF, in prescribed annual amounts, to be provided as funding for access to capital for small, minority, women-owned, and veteran-owned businesses in the clean energy industry. As required by statute, \$0.2 million in SEIF was committed to the Department of Commerce (Commerce) for FY21 via a memorandum of understanding between MEA and Commerce.

Program Outcomes

In the annual report submitted by Commerce to MEA regarding the use of SEIF funds, Commerce indicated that there was no program activity during the fiscal year. Commerce further indicates that it “does not expect to utilize any of the SEIF Funds” and that “Commerce has not received any inquiries from the business sector regarding the SEIF Funds”.²⁷

²⁷ Annual Financial Status Report, Fiscal Year 2021, Submitted by Commerce to MEA, June 30, 2021.

BB. Department of Labor- EARN Maryland Green Jobs

SEIF FY21 Appropriated Budget: \$0.450 million

SEIF FY21 Expenditures and Encumbrances by the Department of Labor: \$0

Beneficiaries

Maryland businesses and workers.

Program Accomplishments

In FY21, the Department of Labor (Labor) did not make new awards under the Employment Advancement Right Now (EARN) Maryland Green Jobs Initiative.²⁸

However, three grantees awarded funds in FY20 continue to implement programming:

- The Solar Installation Training Partnership, led by Civic Works, is delivering training to unemployed, underemployed and incumbent workers. Entry-level training focuses on foundational technical skills, certifications, and job readiness skills while incumbent training includes solar installer training and leadership skills. More than 80 incumbent workers have completed training and 26 individuals have obtained employment.
- Led by Power52, the Clean Energy Training Partnership works with nearly 30 employer partners to provide training to unemployed and underemployed Marylanders with barriers to employment in preparation for employment in the renewable energy industry. Following classroom instruction, in which participants earn Occupational Safety and Health Administration (OSHA) certifications and are prepared for the North American Board of Certified Energy Practitioners certification, participants receive hands-on field training in the installation of solar panels and battery storage. To date, more than 90 individuals have obtained employment.
- On the Eastern Shore, employers are in dire need of skilled welders and metal fabricators. To meet this need, Wor-Wic Community College and Arcon Welding led efforts to form the Wor-Wic Welding Partnership. The partnership offers two training tracks. The first is an 18-week welding course that teaches stick, flux core, metal inert gas (MIG), and (tungsten inert gas) TIG welding. The newly-implemented 14-week metal fabrication course prepares students to earn up to 10 OSHA certifications. To date, the partnership has placed more than 50 individuals into employment as a result of the SEIF investment.

²⁸ The Clean Energy Jobs Act, which passed during the 2019 Legislative Session, will ultimately provide up to eight million dollars over multiple years to Labor, starting in FY21. This funding is to be used to support clean energy job development through the utilization of registered apprenticeships, pre-apprenticeships, and youth apprenticeships via the Clean Energy Workforce Account. Labor indicates that a Solicitation for Implementation Grants was released in July 2020. In response, Labor received two proposals; however, neither applicant had a Project Labor Agreement in place, which Labor indicates is a requirement of the legislation. Thus, no SEIF funds were awarded in FY21.

CC. Department of Natural Resources

FY21 Appropriation: \$0.500 million

FY21 Transfer from SEIF: \$0.500 million

Description

Section 7-714 of the Maryland Public Utility article required the DNR Power Plant Research Program (PPRP) to conduct a study of the RPS.²⁹ §7-714(f) of the same article was later added, requiring PPRP to complete and submit a supplemental study by January 1, 2024 assessing the overall costs and benefits of increasing the RPS to a goal of 100% renewable energy by 2040. The cost of this supplemental study was funded with SEIF in FY21.

²⁹ The final report was due on December 1, 2019.

DD. Department of Budget and Management- State Fleet Electric Vehicle Program

FY21 SEIF appropriation: \$2.250 million

FY21 SEIF committed funding: \$1.075 million

FY21 SEIF funds disbursed to date: \$0³⁰

Description

Beginning in FY20, SEIF funds are being used to purchase plug-in hybrid electric and fully EVs for state agencies.³¹

In FY21, the purchase of the electric state fleet vehicles was coordinated by DBM. A total of 40 EVs were ordered in FY21.

³⁰ Funds have not yet been transferred as the EVs are ordered, but not all vehicles have been delivered.

³¹ The use of SEIF for this purpose in FY20 was required by Chapter 565 of 2019.

EE. Department of Housing and Community Development

FY21 SEIF appropriation: \$0

FY21 SEIF Transfers to the Department of Housing and Community Development for activities funded in a prior fiscal year: \$1.1 million

Summary

SEIF funds were disbursed to the Energy Efficient Construction Loan Program that enables low-interest loans for the construction of “low energy” and “net zero” homes rented to limited income families.

DHCD reports that nine high performance housing units were built using the SEIF funding transferred in FY21. The new units are ENERGY STAR certified, as well as U.S. Department of Energy (DOE) Zero Energy Ready certified. As constructed, the new units have modeled net annual usage of -3,117 kWh/year, with energy generation exceeding usage.³²

³² As reported by DHCD to MEA in the final report.

FF. SEIF Planning

Introduction

§9-20B-12 of the State Government article requires MEA to annually report on the status of SEIF expenditures during the current fiscal year, as well as provide an update on the possible or expected program initiatives and changes in future years. Consistent with §9-20B-12, this section of the FY21 SEIF report constitutes MEA's planning update for SEIF in future fiscal years.

Background on SEIF

Historically, SEIF primarily has been funded through RGGI proceeds. RGGI-derived SEIF proceeds fluctuate with the RGGI auction prices, which are impacted by many external factors. SEIF has also received funding from non-RGGI sources further described in Appendix A, Chart #6. The majority of non-RGGI contributions to SEIF to date have come by order of the PSC, and in most cases were not known in advance and thus are/were not predictable. Funds from these PSC proceedings came with strictly prescribed allowable uses that, in some cases, were similar to the prescriptive uses of funds derived from the RGGI auctions. In addition, funds from PSC proceedings have typically been restricted to distinct purposes or geographic areas of the state.

In the past, it has sometimes been necessary to supplement traditionally RGGI-funded programs with non-RGGI proceeds in order to avoid contraction or elimination of programs, where the allowable use of funds from the PSC proceeding overlaps with the parameters of the existing energy program. For example, some solar programs have had eligible projects funded with funding from a PSC proceeding that can be used to create new RPS Tier 1 eligible resources. However, many of the funding sources from PSC proceedings have now been drawn down, meaning that existing energy programs will now be more reliant on RGGI proceeds than in prior years.

Looking forward, long-term SEIF proceed forecasting over multiple years is extremely challenging. Forecasting RGGI-derived proceeds several auctions out is difficult, as the RGGI auction price is market-based and thus dynamic, similar to a stock price. Additionally, MEA cannot forecast future PSC directives.

Beyond the forecasting of SEIF proceeds, certain legislative initiatives have also made forecasting future SEIF-funded programs more challenging.

In the 2021 legislative session, a myriad of proposals were put forth that would, if passed, have resulted in insufficient renewable energy and climate change RGGI-derived funds remaining in the SEIF fund balance to fund the FY22 programs as proposed in the budget. In addition to the renewable energy and transportation programs implemented by MEA using that RGGI funding category (e.g., the residential Clean Energy Rebate Program for renewable energy technologies), funding from the renewable energy and climate change RGGI funding category was also budgeted in FY22 for MDE's Climate Change programs and the state fleet EV fleet purchase initiative so a shortfall in this funding category could impact programs implemented by both MEA and other SEIF-receiving agencies. As new uses of SEIF funds are contemplated, the

existing uses of SEIF also need to be considered to ensure existing energy programs effectively serving Maryland are not adversely affected.

With these considerations in mind, MEA provides the following discussion of funding source availability and forecasts of potential future SEIF programming. All future SEIF uses must be consistent with the SEIF statute, and SEIF may not be used for the general obligations of government. An update on the status of the SEIF Advisory Board is also provided at the end of this section.

Fund Sources and Budgeting

Regional Greenhouse Gas Initiative

Revenues from RGGI auctions have historically been volatile, sensitive to both market fundamentals and changes in local and national policy. Since the first auction, auction clearing prices have varied from \$1.86 to \$13 per allowance.³³ All the while, the CO2 allowance budget has decreased from 188.1 million allowances in CY09³⁴ to 100.7 million allowances in CY21.^{35,36} Of note, the overall CO2 allowance budget increased between CY20 and CY21, coinciding with the entrance of Virginia into RGGI in CY21.

As a result of the dramatic drop of clearance prices and revenues that followed RGGI Auction #30 in December 2015, MEA adopted a conservative approach to the projection of RGGI revenues in the state's budget. Under this approach, auction revenues were projected at the auction floor price, assuming all available allowances sold. Auction #50, which occurred on December 2, 2020, had a floor price of \$2.32/allowance; starting with Auction #51 on March 10, 2021, the floor price for CY21 auctions rose to \$2.38/allowance. This conservative approach built a definitive revenue base in the face of RGGI volatility and allowed for the proper budgeting of revenue over the auction floor price in a subsequent budget cycle. Proceeds received above the auction floor price were then budgeted in a future fiscal year cycle.

Proposed Change

While the conservative budgeting approach outlined above had merit in ensuring budgets were developed based on realized RGGI proceeds, this methodology also resulted in fund balances accruing in the SEIF while awaiting the next budget cycle, if the RGGI auction price was higher than the floor. The last time the RGGI clearing price was near the CY21 floor price of \$2.38 was Auction #36 in June 2017, when the floor price was \$2.53. Since auction #36, the RGGI clearing price has fluctuated between \$3.79 and \$13 per allowance, with the \$13 per allowance clearing price occurring in the December 2021 auction. With this in mind, MEA is amending the RGGI proceeds budgeting process to be

³³ rggi.org/Auctions/Auction-Results/Prices-Volumes.

³⁴ rggi.org/sites/default/files/Uploads/Allowance-Tracking/2009_Allowance-Distribution.xlsx. This number has been updated from the FY20 report, to reflect the 2009 value reported on this spreadsheet.

³⁵ rggi.org/sites/default/files/Uploads/Allowance-Tracking/2021_Allowance-Distribution.xlsx.

³⁶ For CY21, the CO2 allowance adjusted budget is being reported, reflecting the third adjustment for banked allowances communicated on March 15, 2021.

based on a rolling average of the clearing prices of the two most recent fiscal year RGGI auctions. With this new methodology, the budget forecasts will be based on more recent RGGI activity and should generally allow a greater share of RGGI proceeds to be budgeted more quickly, while still in a fairly judicious manner based on the average auction price results of the last two years.

RGGI Formula

§9-20B-12 of the State Government article requires MEA to report on recommendations for changes to the allocation of RGGI-derived SEIF funds. As the goal of the RGGI initiative is to reduce greenhouse gas emissions, MEA supports the use of RGGI funds for energy projects that enable greenhouse gas emission reductions, while also supporting state energy goals and investments. Using information obtained from the *Investments of RGGI Proceeds in 2019*,³⁷ in comparison to other RGGI states, Maryland has made a significantly lower level of cumulative RGGI investments in energy efficiency; 20.5% by Maryland versus 54% by all RGGI states in aggregate. The main reason for this difference is that Maryland has instead dedicated a higher cumulative percentage of RGGI proceeds to energy bill assistance; with 52% by Maryland versus 15% by all RGGI states in aggregate.

Energy efficiency is a critical element in reducing demand on the grid and in reducing greenhouse gas emissions. Energy efficiency can also help make energy more affordable in the first place. After the economic impacts of the COVID-19 pandemic have been mitigated, reconsideration of the RGGI revenue allocation formula set forth in §9-20B-05 may be warranted in order to better optimize the use of RGGI funds toward the state's economic, energy and environmental goals.

§9-20B-05 of the State Government article requires 20% of the RGGI proceeds to be budgeted for energy efficiency, of which at least half needs to be targeted to the low- and moderate-income energy efficiency account. The Low-to-Moderate Income Energy Efficiency program, implemented by MEA, is funded through Maryland's low-and-moderate income SEIF account. In FY21, the Low-to-Moderate Income Energy Efficiency program received \$9.14 million in funding requests for an available grant budget of \$6.5 million, demonstrating the high level of interest in the program. This program enables local government and nonprofit organizations throughout Maryland to make energy efficiency upgrades that benefit low and moderate income Maryland residents, assisting individual homeowners, housing authorities, senior housing facilities, and other similar facilities and organizations. In this way, funded projects decrease energy costs and help with energy affordability, while also improving comfort. With this opportunity in mind and to help to address energy equity concerns, Maryland should consider increasing the percentage of funds allocated to the energy efficiency account, ultimately allowing MEA to commit greater resources to the Low-to-Moderate Income Energy Efficiency program and making Maryland in-step with other RGGI states.

³⁷ rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2019.pdf.

Other SEIF sources from Prior Years

Fund balances from several non-RGGI fund sources originating in prior years remain in the SEIF; as mentioned earlier, these non-RGGI sources are listed in Appendix A, Chart #6. These funds will continue to be programmed moving forward, consistent with the respective funding source's allowable use(s) and subject to all necessary concurrences and approvals by the Governor and the General Assembly.

Potential Alternative Compliance Payments Resulting from the Clean Energy Jobs Act

Under Maryland's RPS, electricity suppliers can comply with the requirements of the RPS by either purchasing renewable energy credits (RECs) or paying the alternative compliance payment (ACP) established by statute for each compliance year. Any ACP payments that accrue get deposited into the SEIF for the creation of new Tier 1 renewables, with ACP payments for shortfalls in solar energy going towards the creation of new Tier 1 solar. Historically, RPS compliance has been primarily met almost entirely through RECs, as REC prices have been at values lower than the statutorily-established ACP. To date, ACP proceeds into SEIF from the RPS have been fairly minimal; using compliance year 2020 as an example, required ACP payments into SEIF totaled only \$52,240.³⁸

Chapter 757 of 2019 increased the required percentage for Tier 1 renewable energy sources under the RPS, as well as increased the required percentage that must be derived from solar energy tied to Maryland's distribution grid. At the same time, Chapter 757 of 2019 also lowered the ACP amounts moving forward and added a requirement that all ACP now be used to support the creation of Tier 1 renewable energy resources that are owned by or directly benefit low income residents. However, in the 2021 legislative session, Chapter 673 reduced the overall RPS goals for CY22-29, including significant reductions in the solar energy requirements.

Historically, REC and solar REC (SREC) prices have been lower than the statutorily-established Tier 1 non-solar and Tier 1 solar ACP. While this situation continues, significant amounts of ACP will not accrue until there are insufficient RECs available to meet the RPS. Tier 1 solar, as well as several other Tier 1 non-solar renewable sources (i.e., geothermal, waste-to-energy, poultry litter, and refuse-derived fuels)³⁹ have to be connected to Maryland's distribution grid; however, other Tier 1 eligible sources can come from PJM or PJM adjacent areas. Due to the large geographical area from which some types of Tier 1 resources can be sourced, including from as far away as North Dakota, there is unlikely to be a shortfall of Tier 1 non-solar RECs; thus, MEA anticipates that any future shortfall in RECs would be related to SRECs due to the requirement that solar generators be connected to Maryland's distribution grid. As of December 2021, over 1.9 million SRECs⁴⁰ remained available for purchase for RPS compliance.

³⁸ psc.state.md.us/wp-content/uploads/CY20-RPS-Annual-Report_Final.pdf, page 8.

³⁹ psc.state.md.us/wp-content/uploads/CY20-RPS-Annual-Report_Final.pdf, page 5.

⁴⁰ gats.pjm-eis.com/gats2/PublicReports/RPSEligibleReportingYear, as of 12/22/2021, SRECs remaining available from compliance years 2019, 2020, and 2021.

MEA recommends that it is premature to budget for any significant increase in SEIF funds originating from ACP until the funds actually accrue via ACP payments. ACP payments for REC and SREC shortfalls would typically occur in the spring, as RPS compliance reports from electric suppliers are due to the PSC by April 1. Should ACP proceeds actualize in spring 2022, MEA suggests that a budget amendment could be an appropriate mechanism to deploy these funds in a timely manner in FY23.

For any solar ACP that may accrue, the current limitations placed on the deployment of solar ACP funds may not be the most impactful use of those funds, and it may not be the best way to serve low-income Marylanders. Expenditures from ACP can now *only* be used to support low-income solar projects. ACP resources with the new funding restriction are anticipated to likely be more difficult to deploy than ACP that accrued in the past, due to certain realities affecting low-income Marylanders (e.g., aging housing that may be unable to support solar installations without significant updates or repairs). The ACP limitations do not appear to allow for beneficial and more economical measures such as weatherization and energy efficiency that, following energy best practices, are typically completed before the installation of new renewable energy systems to minimize the needed solar PV system size. Otherwise, the benefits from a solar system may be negated by air leaks, uninsulated walls, and inefficient heating systems. To expand the pool of potential low-income households that can participate, MEA recommends that the permissible use of solar ACP be expanded to first allow eligible households to receive solar-enabling energy efficiency and structural repairs, as needed and according to energy best practices.

Additionally, some low-income housing projects may use U.S. Department of Housing and Urban Development (HUD) criteria when determining eligibility. HUD criteria is normally based on area median income rather than the federal poverty level. As such, a low income housing project that uses HUD eligibility criteria may be currently ineligible for solar ACP funds if some residents exceed the 175% of federal poverty level definition of low income specified in § 9-20B-05(i)(1) of the State Government Article. MEA observes that more low income residents could potentially be served by solar ACP funded projects by expanding the eligible population to align more closely with HUD.

In the interim, MEA is preparing for potentially higher levels of solar-related ACP by implementing a small, low-income solar pilot program in FY22 with existing SEIF funds that are available for solar projects. Through this pilot, MEA aims to learn key lessons about how to effectively deliver solar to meet the needs of low-income households. Should higher levels of ACP be realized, MEA intends to run this program, or a similar program, on a larger scale. In addition, MEA's existing Community Solar program, which is already enabling low-and-moderate income Maryland residents to successfully take advantage of solar-generated energy, could also be further expanded if increased levels of ACP accrue.

Current SEIF-Funded Energy Programs (FY21)

Maryland Energy Administration

In FY21, MEA is offering a number of energy programs funded through SEIF that focus on energy efficiency, renewable energy, alternative transportation fuels, or energy resiliency. Depending on the nature of the program and the incentivized technology, some programs are implemented competitively while other programs are first-come, first-served. These programs are outlined in greater detail in the beginning of this report.

During FY21, many of the programs offered by MEA were impacted in some way by the ongoing impacts of COVID-19 and supply-chain challenges. MEA continues to support program participants as they deal with equipment availability delays, staffing challenges, and other pandemic-related impacts.

SEIF-Funded Programs Implemented by other State Agencies

State agencies other than MEA also implement initiatives funded through SEIF. Other Maryland state agencies allocated SEIF in FY21 include DHS, DGS, MDE, Commerce, and Labor. SEIF funds were also committed to DBM for use in providing the incremental costs for EV purchases for the state fleet. Additionally, \$1.5 million in SEIF funds was transferred, as required by statute, to the MEIF for the MEII at the University of Maryland, College Park; the MEII is statutorily required to then use the MEIF to fund the administrative and operating costs of the MCEC.

Information on FY21 expenditures and FY22 appropriations to other state agencies can be found in Appendix A, Chart #5.

Future SEIF Programs

Looking forward, the existing portfolio of MEA programs outlined above is generally anticipated to continue serving all sectors of the economy and providing benefits across communities in Maryland. The types of energy programs being offered by MEA are highly dependent on the overall magnitude of funding available, as well as the allowable uses of each fund source. Due to the volatile nature of the various SEIF revenue streams outlined in this document and the volume of proposed legislative initiatives in recent years that could divert SEIF funding, it is challenging to make exact forecasts of SEIF programming in future fiscal years.

With that in mind, MEA sees an opportunity to potentially bundle energy programs under “umbrella” or “portfolio” programs, to help with program marketing and help interested parties find their relevant programs more quickly and easily. As an example, all of MEA’s solar-related programs could possibly be grouped together under one larger program to enable “one stop shopping” for interested parties by technology or topic.

MEA also sees an opportunity to potentially expand some energy-related technical assistance initiatives into incentive programs, now that groundwork for these programs has already been completed. An example of such a program includes a possible incentive program for

locally-owned streetlight energy efficiency upgrades. Through a federal award from DOE, MEA has been able to assist interested local governments in analyzing their streetlight opportunities; a new program could offer incentives to help the local governments implement these projects for locally-owned streetlighting, thereby reducing local government energy consumption. MEA has previously had success with this staggered program model of technical assistance, followed by financial incentives to help enable project implementation, with the Resilient Maryland Program.

Over the last few months, MEA has had an opportunity to work more closely with the Interagency Commission on School Construction (IAC), as part of the activities related to Chapter 608 of the Acts of the Maryland General Assembly in 2021 focus on school district energy use. MEA is already participating in a working group with IAC and several local education agencies (LEAs) that considers school district energy use reporting options and possible elements that could be included in a LEA's respective energy policy. MEA is therefore considering potential future initiatives that could enable an ongoing partnership with the IAC and interested LEAs to improve school energy efficiency and renewable energy deployment, where possible.

Finally, MEA recognizes that the energy landscape is rapidly evolving, and there needs to be a mechanism for considering innovative energy-related initiatives for potential funding in a timely manner. With this in mind, MEA envisions potentially executing a process to enable energy projects that are consistent with the state's energy and greenhouse gas reduction goals, but may not fit well within the existing program portfolio in a given fiscal year, to be considered for potential SEIF funding, if available, through an extra-programmatic process. The process, to include the criteria by which proposals will be evaluated, could be outlined via an funding opportunity announcement on the MEA website, and be open to private organizations, as well as state and local government entities, with new or unique energy initiatives that advance the state's goals.

In addition to construction-related financial incentives and technical support, SEIF is also used to fund critical energy-related plans and studies necessary to keep Maryland at the forefront of the rapidly evolving energy landscape, both at a state and national level. Future planning efforts by MEA may focus on topics including, but not limited to, emergency fuel planning, carbon pricing, carbon capture and sequestration, the locational value of distributed generation assets, and legal and regulatory considerations for small modular reactors.

SEIF Board Update

A Strategic Energy Investment Advisory Board (Board) was created to advise the MEA on the uses and expenditures of the SEIF under § 9-20B-07 of the State Government Article. MEA continues to meet with the Board regularly to inform that body on the status of RGGI and MEA energy programs.

Additionally, MEA is in the process of expanding its efforts to incorporate a diversity, equity, and inclusion (DEI) lens into its programs and operations. Historically, statute has mandated the use of income level as the default metric for DEI within the Strategic Energy Investment Program. Under State Government Article § 9-20B-05, at least 60% of RGGI proceeds within SEIF are utilized in programs for LMI Marylanders, including utility bill payment assistance and

targeted energy efficiency measures. However, other non-income related DEI metrics are absent from the statute. MEA has plans to work with the Board to consider other metrics and approaches to grow its DEI efforts within program design and implementation.

Conclusion

In conclusion, MEA envisions that the SEIF will continue to be used to enable energy efficiency, renewable energy, alternative transportation fuels, and energy resiliency programs and initiatives. MEA continues to work to develop the most impactful programs, leverage new technologies, and track national trends as well as emerging federal opportunities. As in past years, MEA intends to continue to evaluate energy programs for both efficacy and affordability. All potential programmatic activity is subject to all necessary concurrences and approvals by the Governor and the General Assembly.

Appendix A

Chart #5: SEIF Expenditures and Active Commitments for FY21 with FY22 Appropriations

	FY21 Actual	FY22 Appropriation ⁴¹
Maryland Department of the Environment - RGGI Inc. Dues	165,338	400,000
Maryland Department of the Environment - Energy-Water Infrastructure Program	4,828,943	0
Maryland Department of the Environment - Climate Change	2,550,000	2,550,000
University of Maryland (Maryland Energy Innovation Fund)	1,500,000	2,100,000
Department of Human Services - Energy Bill Assistance ⁴² (low income)	19,850,329	31,947,519
Department of General Services	500,000	3,500,000
Department of Health - Energy Performance Contracting Repayments	2,037,973	2,036,843
Maryland Energy Administration - Energy Efficiency - Low-to Moderate Income	6,699,988	14,750,000
Maryland Energy Administration - Energy Efficiency - Other	3,992,527	11,800,000
Maryland Energy Administration - Renewable Energy, Transportation, and Resiliency	16,070,725	55,796,132
Maryland Energy Administration - Admin	4,459,650	5,014,026
Department of Commerce	0	500,000
Department of Labor	0	1,000,000
Department of Natural Resources	500,000	0
Department of Budget and Management - State agency EVs	1,075,232	2,250,000
Motor Vehicle Administration - Electric Vehicle Tax Credit reimbursement	-	8,185,070
Department of Housing and Community Development (low income)	1,100,000	
TOTAL	65,330,705	141,829,590

⁴¹ Reflects a budget amendment.

⁴² While DHS indicates an intention to draw down FY21 funding, an invoice for FY21 funding has not yet been submitted to MEA

Chart #6: SEIF Revenues by Source

Source	FY19	FY20	FY21
RGGI Auction Revenue	51,388,456	54,804,407	77,812,461
RGGI Set Aside Allowance Revenue	3,520,000	2,963,293	3,096,825
Cove Point Settlement	8,000,000	0	0
Alternative Compliance Payment Revenue	68,869	41,089	52,240
Fund Interest Revenue	3,844,103	3,077,621	728,892
AltaGas Merger Revenue	30,320,000	0	0
TOTAL	97,141,428	60,886,410	81,690,418

Chart #7: RGGI Results & Projections by Auction and Fiscal Year

RGGI Auction	Allowances Sold	Allowance Price	Total RGGI Revenue	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023
49	2,314,790	\$6.82	\$15,786,868	\$15,786,868		
50	2,359,501	\$7.41	\$17,483,902	\$17,483,902		
51	2,870,129	\$7.60	\$21,812,980	\$21,812,980		
52	2,851,783	\$7.97	\$22,728,711	\$22,728,711		
53	2,851,783	\$9.30	\$26,521,582		\$26,521,582	
54	3,401,257	\$13	\$44,216,341		\$44,216,341	
55	2,591,783	\$6.50	\$16,846,590		\$16,846,590	
56	2,591,784	\$6.50	\$16,846,596		\$16,846,596	
57	2,591,784	\$6.50	\$16,846,596			\$16,846,596
58	2,591,784	\$6.50	\$16,846,596			\$16,846,596
59	2,401,689	\$6.50	\$15,610,979			\$15,610,979
60	2,401,689	\$6.50	\$15,610,979			\$15,610,979
			RGGI Auction Revenue	\$77,812,461	\$104,431,108	\$64,915,149
			RGGI Set Aside Allowances Revenue	\$3,096,825	\$3,575,067	\$3,520,605
			Total	\$80,909,286	\$108,006,175	\$68,435,754

Appendices B and C

To help make the file size of the FY21 SEIF report more manageable, Appendix B and Appendix C of the FY21 SEIF report are published separately in a second document. This second document will be referred to as Volume 2. Volume 2 of the FY21 SEIF report will include Appendix B, which lists awardees and addresses receiving multiple awards in FY21, and Appendix C, which lists all FY21 grantees by name and award amount.