STRATEGIC ENERGY INVESTMENT FUND

Activities for Fiscal Year 2020

prepared by: Maryland Energy Administration

VOLUME 1

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Volume 1

I. 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.

SEIF-funded programs can help reduce energy bills, minimize energy waste, address global climate change concerns, create jobs, improve reliability and resiliency, address energy access and equity issues, attract and retain businesses, and promote energy independence.

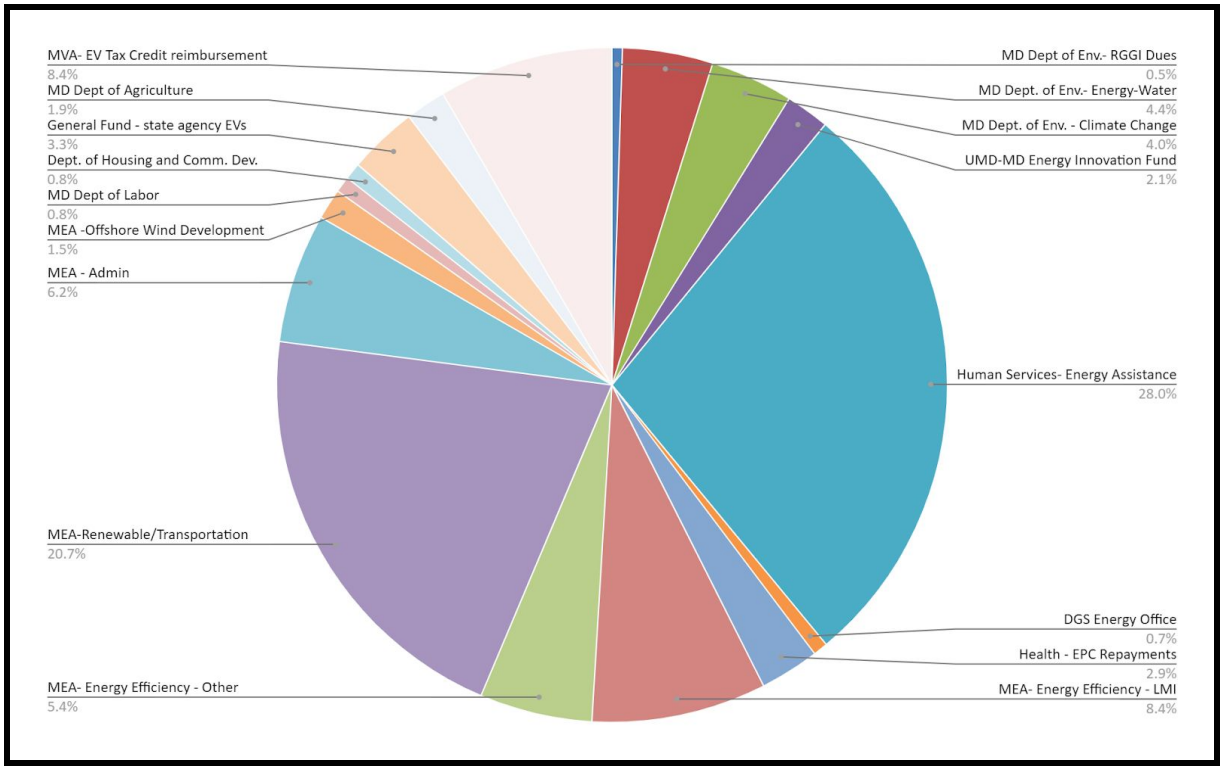
Background

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

A breakdown of the FY20 SEIF expenditures across all state agencies from all funding sources is provided in Chart 1. FY20 used SEIF income derived in prior years from Regional Greenhouse Gas Initiative (RGGI), the Exelon-Constellation merger proceedings, including the Offshore Wind Development Fund (OSWDF), Alternative Compliance Payments, the Pepco Most Favored Nation (MFN) payment, the AltaGas/Washington Gas merger proceeding, and a few other minor sources of funds.

Chart 1: FY20 Overall SEIF Expenditures by Agency



SEIF Proceeds

The main source of SEIF proceeds has historically been from RGGI auctions. While in recent years non-RGGI funds sources had been representing an increasing percentage of the overall SEIF, this trend did not continue in FY20. More than 94% of SEIF proceeds in FY20 were generated through RGGI.

Summary

In FY20, over $28 million, totaling approximately 40% of all FY20 SEIF funding, went to initiatives benefiting low-to-moderate income (LMI) Maryland residents. Multiple state agencies implement climate and energy-related programs and initiatives funded through SEIF. While MEA is the administrator of the SEIF, in FY20 programs implemented by MEA total only 42% of the overall SEIF budget.

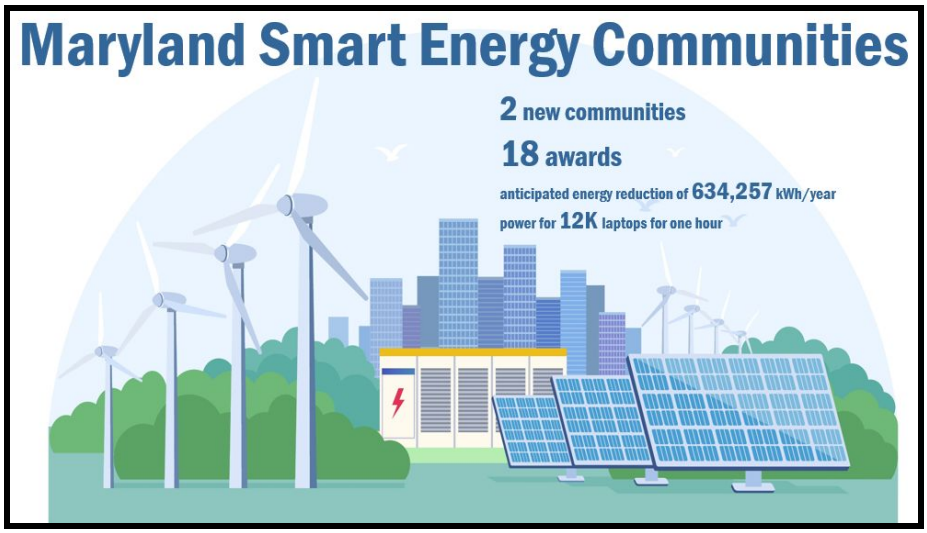
Appendix A details the sources of revenue received into the SEIF, along with an accounting of disbursements from the fund. This appendix also includes details on RGGI auctions, including the number of allowances sold, allowance prices and estimated future revenues.

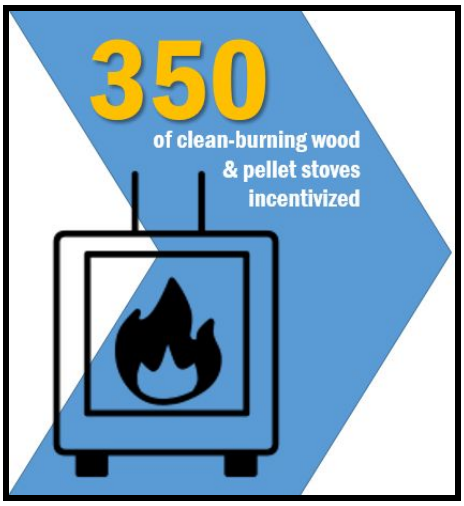
Details describing activities funded through the SEIF in FY20 are provided in the narratives and charts that follow. Appendix B provides a list of FY20 grantees receiving multiple SEIF-funded awards from MEA, while Appendix C contains the name of the FY20 SEIF award recipient by MEA program.[1]

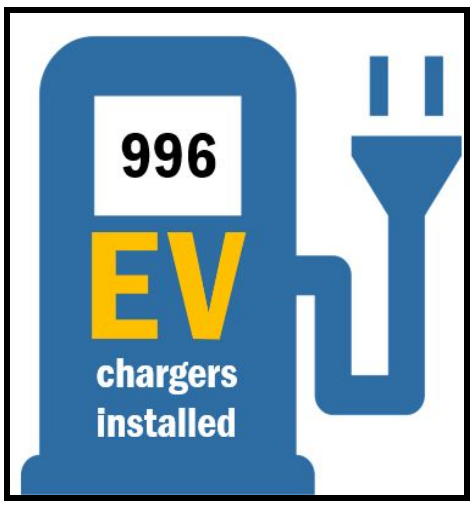
[1] In addition, MEA annually provides a report on all disbursements over $25,000 to the Department of Budget and Management (DBM), which publishes the data online.

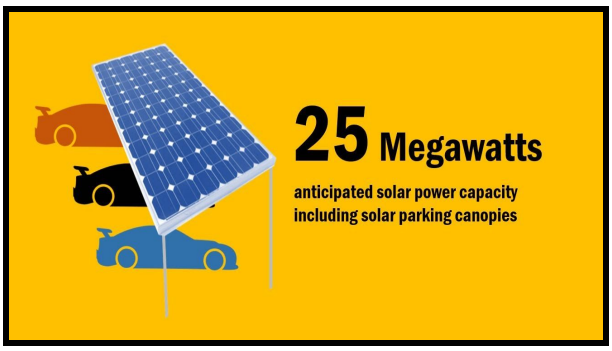
In FY20, SEIF funded several new programs, including a Resilient Maryland pilot program aimed at driving growth in the adoption of microgrids and other distributed generation energy systems. This program, and other new SEIF-funded initiatives, are in this report.

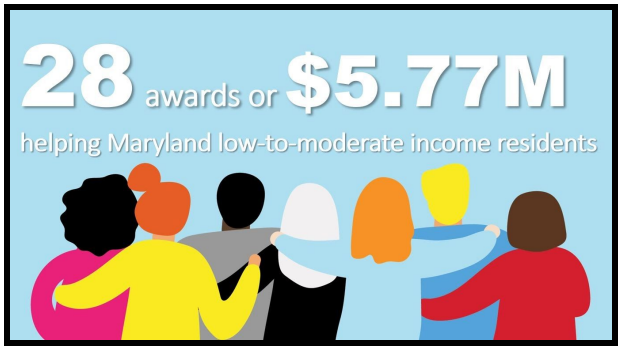
II. SEIF-funded programs implemented by MEA











A. Low-to-Moderate Income Energy Efficiency Program[2]

SEIF Expenditures and Encumbrances: $5.773 million

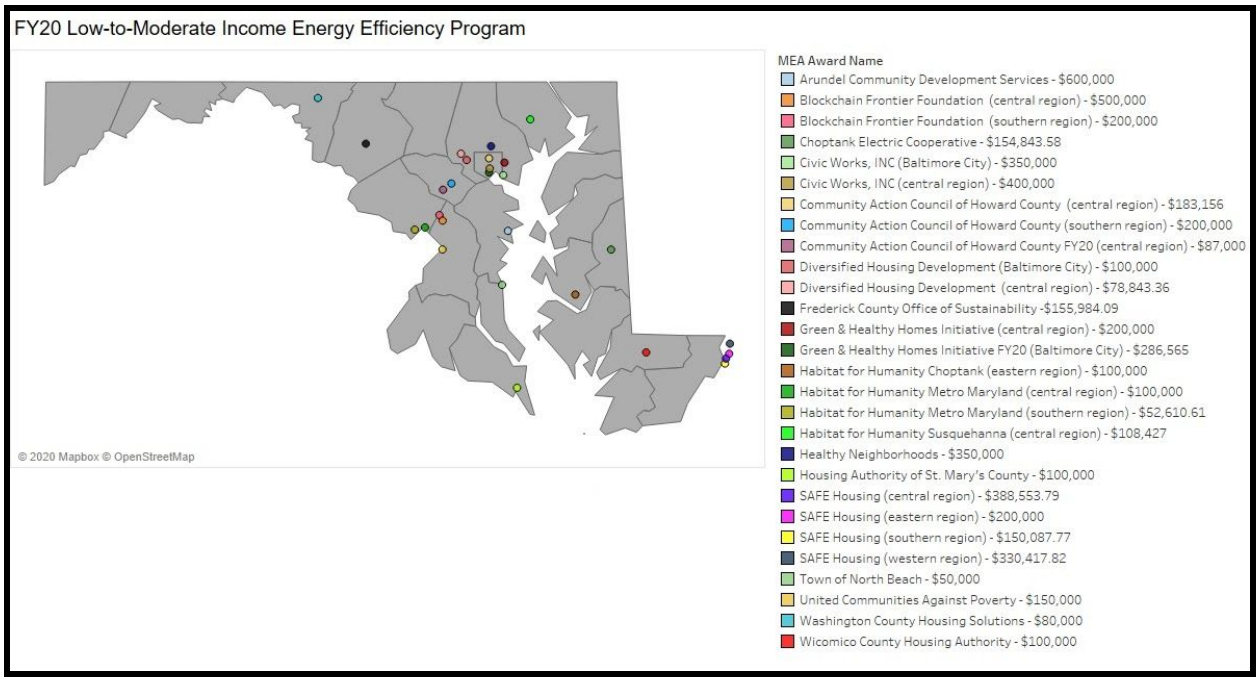
Beneficiaries

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

Grants were awarded to projects that generate significant energy savings through energy efficiency, with the benefits of the energy savings being passed on to Maryland's LMI residents. Priority was given to projects that maximize energy savings and the number of residents that benefit from the measures. Starting in FY19, MEA has allocated grant funds by formula on a regional basis (i.e., Baltimore City, as well as western, southern, central, and eastern Maryland).

Applications are then 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, homeless shelters, and training facilities, as well as on residential homes.

Map 1: FY20 Clean Energy Communities grantees



[2] energy.maryland.gov/govt/Pages/LMI2020.aspx

Several of the grantees listed 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 the SAFE Housing offices are located in Ocean City, SAFE Housing is actually completing work in western, southern, central, and eastern Maryland. For grantees working in multiple parts of the state, the region where work is occurring is included in the award name.

FY20 projects are still being installed. For this reason, the anticipated total estimates for FY20 are based on results from previous fiscal years. Some energy measures may be benefitting from other leveraged funding sources.

Program Accomplishments

Table 1

Fiscal Year	FY20
# of grants issued	29
Anticipated annual kWh savings	1,700,000
Anticipated annual fuel savings (MMBTU)[3]	10,000

[3] May include natural gas, propane, or #2 fuel oil.

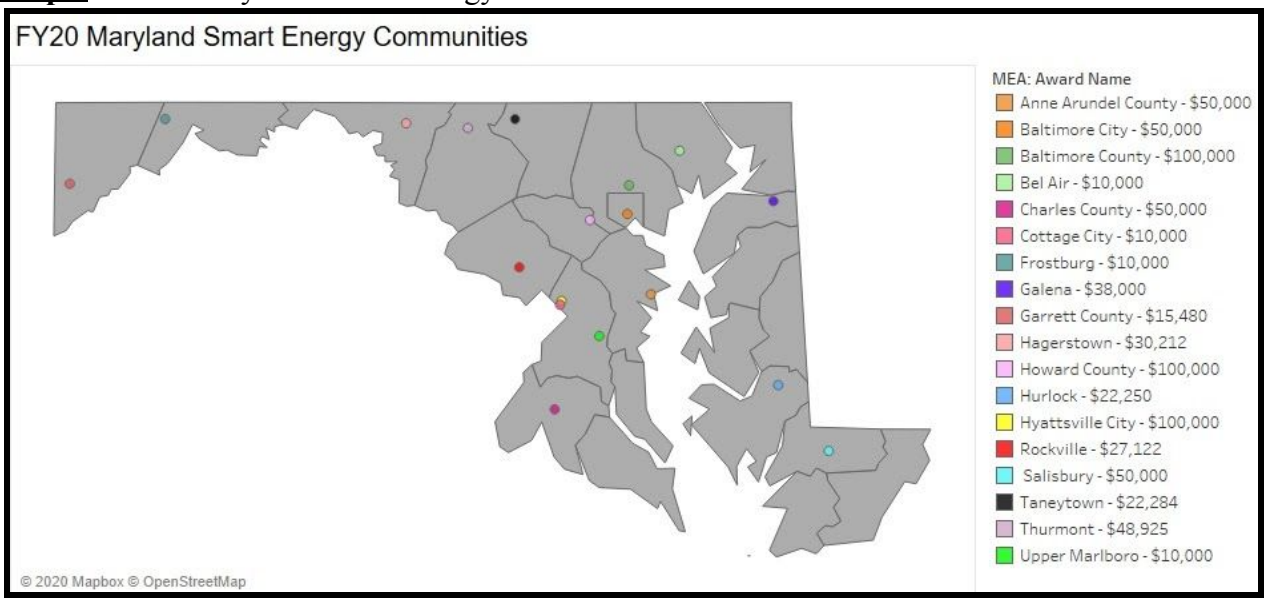
B. Maryland Smart Energy Communities[4]

SEIF Expenditures and Encumbrances: $0.774 million

Participants

This program benefits local incorporated governments (i.e., towns, cities, and counties) in Maryland. In FY20, the Maryland Smart Energy Communities (MSEC) program provided 18 awards. FY20 recipients include Baltimore City, Bel Air, Cottage City, Frostburg, Galena, Hagerstown, Hurlock, Hyattsville, Rockville, Salisbury, Taneytown, Thurmont, and Upper Marlboro, as well as Anne Arundel, Baltimore, Charles, Garrett, and Howard counties.

Map 2: FY20 Maryland Smart Energy Communities awardees



Description

The goal of the program is to support local governments as they adopt and commit to 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 local government has successfully adopted at least two out of three energy policies (i.e., energy efficiency, renewable energy, and transportation), 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.

[4] energy.maryland.gov/govt/Pages/smartenergycommunities.aspx

Program Details

A total of 78 Maryland communities have participated in the program since 2013, including 18 MSEC awards made in FY20, two of which involve new communities.

Energy savings estimates shown below are based only on the FY20 awards to existing MSEC communities for energy projects identified in their respective grant agreements. Savings from other energy projects that contribute to the MSEC energy goals, but do not receive direct MSEC funding, are not included in the estimates below. Some projects have lead times and therefore are still being installed. FY20 annual savings estimates below reflect the initial projections. In addition, new MSEC communities participating in the FY20 program are still developing their specific energy projects so savings from these projects are not included below.

Table 2

MSEC Program	FY20
# of MSEC awards to municipal governments	12[5]
# of MSEC awards to county governments (or county equivalent)	6
# of new MSEC communities	2
# of new MSEC communities that have adopted the energy policies to date	1 of 2
Estimated annual reductions (in kWh) anticipated from projects for existing MSEC communities	634,257
Estimated kWh of annual solar generation	147,600
Estimated annual avoided transportation fuel	14,081 gallons of gasoline and 1250 gallons of diesel

FY20 New Maryland Smart Energy Communities
Charles County
Hurlock

Existing Maryland Smart Energy Communities		
Aberdeen	Annapolis	Anne Arundel County
Baltimore City	Baltimore County	Bel Air
Berlin	Berwyn Heights	Bladensburg
Boonsboro	Bowie	Brentwood
Calvert County	Cambridge	Capitol Heights
Cecilton	College Park	Colmar Manor
Cottage City	Cumberland	Denton
District Heights	Eagle Harbor	Easton

[5] While 13 municipal governments received MSEC awards in FY20, one FY20 MSEC participant decided to not move forward with their award after initially signing a grant agreement.

Edmonston	Emmitsburg	Fairmount Heights
Federalsburg	Forest Heights	Frederick
Frederick County	Frostburg	Gaithersburg
Galena	Garrett County	Glenarden
Goldsboro	Greenbelt	Greensboro
Hagerstown	Harford County	Highland Beach
Howard County	Hyattsville	Indian Head
Landover Hills	Laurel	Manchester
Middletown	Millington	Montgomery County
Mount Rainier	New Carrollton	North Beach
North Brentwood	Ocean City	Oxford
Prince George's County	Princess Anne	Ridgely
Riverdale Park	Rock Hall	Rockville
Salisbury	Seat Pleasant	Snow Hill
Somerset	Sykesville	Takoma Park
Talbot County	Taneytown	Thurmont
University Park	Upper Marlboro	Westernport
Westminster		

C. Commercial and Industrial Grant Program[6]

SEIF Expenditures and Encumbrances: $1.131 million

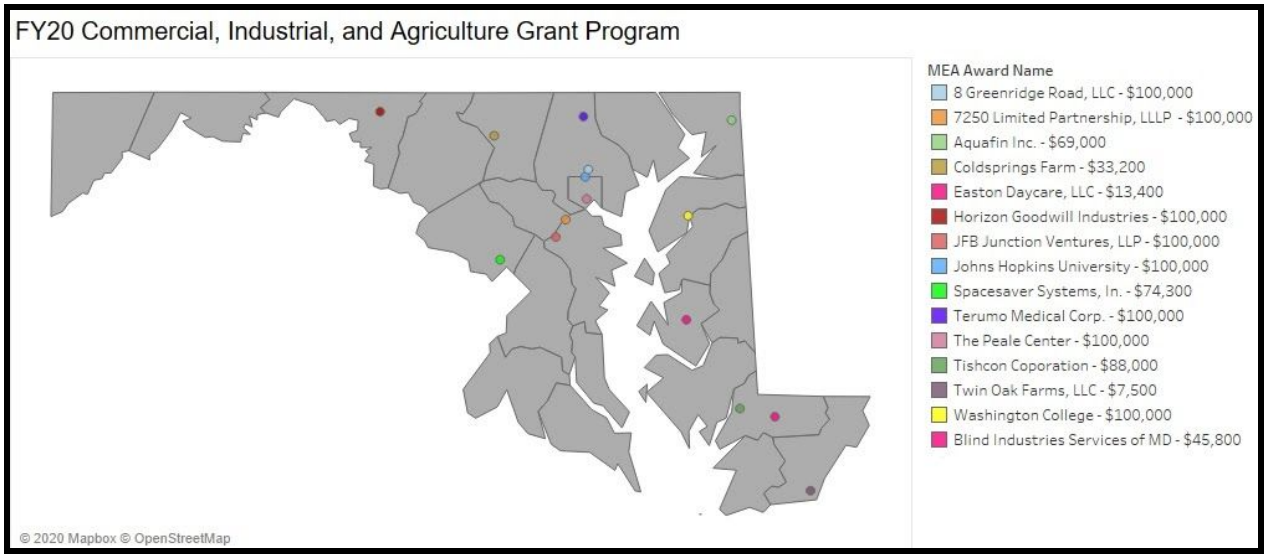
Beneficiaries

In FY20, the Commercial, Industrial, and Agriculture (CI&A) Grant program offers financial incentives to Maryland's commercial, industrial, and agricultural sectors.[7]

Description

This year the CI&A Grant program provided 15 grants to commercial, industrial, and agricultural applicants to install energy efficiency measures that reduce targeted energy usage by at least 20%. In FY20, the program was expanded to allow for energy efficiency measures from all fuel sources; previously the program focused solely on electricity reduction projects. Grant awards cover up to 50% of net project cost, up to a cap, after utility incentives and any other leveraged funds are considered.

Map 3: FY20 Commercial, Industrial, and Agriculture Grant program awards



Program Accomplishments

Many projects have long lead times and therefore are still being installed. FY20 annual savings estimates below reflect the initial projections of the electricity reductions that are anticipated to accrue from program-funded projects, but are subject to change. 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.

[6] energy.maryland.gov/business/Pages/incentives/empowermdcigp.aspx
[7] In the past, agricultural awards were previously offered under a standalone agricultural program.

Table 3

Fiscal Year	FY20
# of grants awarded	15
Annual electricity savings (kWh)	10,055,286
Annual natural gas savings (therms)	59,623
Annual propane reduction (gallons)	510

D. Data Center Energy Efficiency Grant Program[8]

SEIF Expenditures and Encumbrances: $0.677 million

Beneficiaries

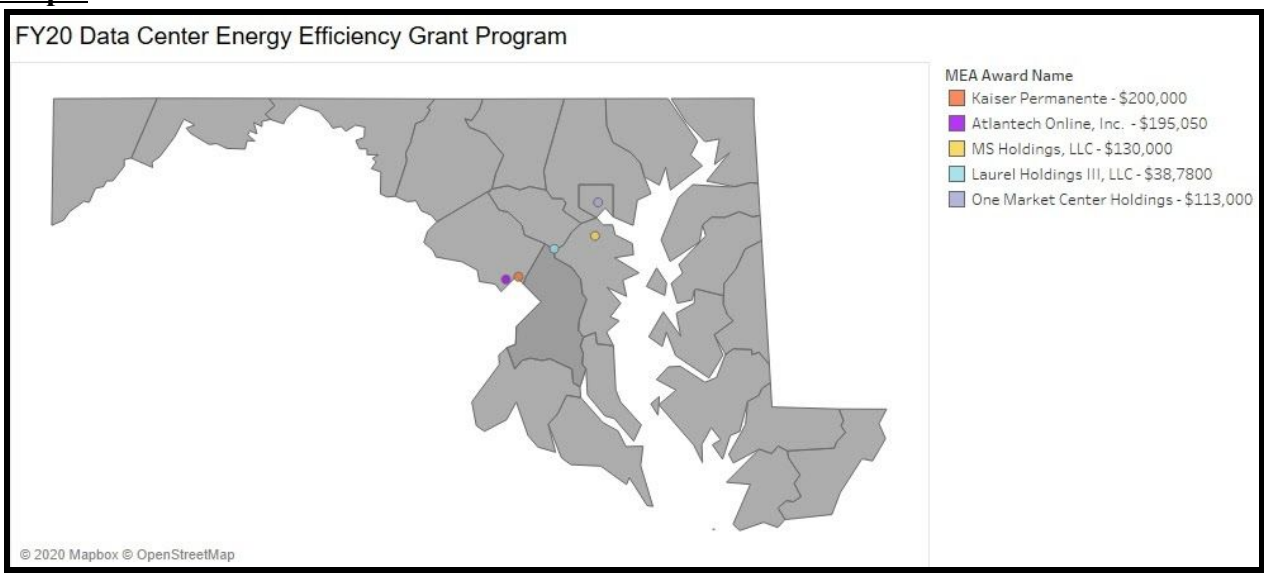
The Data Center Energy Efficiency Grant program offers financial incentives to Maryland's information technology sector. The program is open to any commercial, state/local government, or nonprofit organization data center located, or being constructed, within the State of Maryland with an overall data floor facility size of at least 2,000 square feet.

Description

The program sought 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.

Five data center projects awarded grants in FY20 are underway.

Map 4: FY20 Data Center awards



Program Accomplishments

The projects funded through this program have long lead times and therefore are still being installed. FY20 annual savings estimates below reflect the projections of the electricity reductions that are anticipated to accrue from program-funded projects, but are subject to change.

[8] energy.maryland.gov/business/Pages/incentives/DCEEG.aspx

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.

Table 4

Fiscal Year	FY20
# of active projects receiving an award	5
Anticipated Annual savings (kWh)	1,851,353

E. Combined Heat and Power Program[9]

SEIF Expenditures and Encumbrances: $1.460 million

Beneficiaries

Maryland facilities that can benefit from onsite electricity generation and have onsite thermal loads.

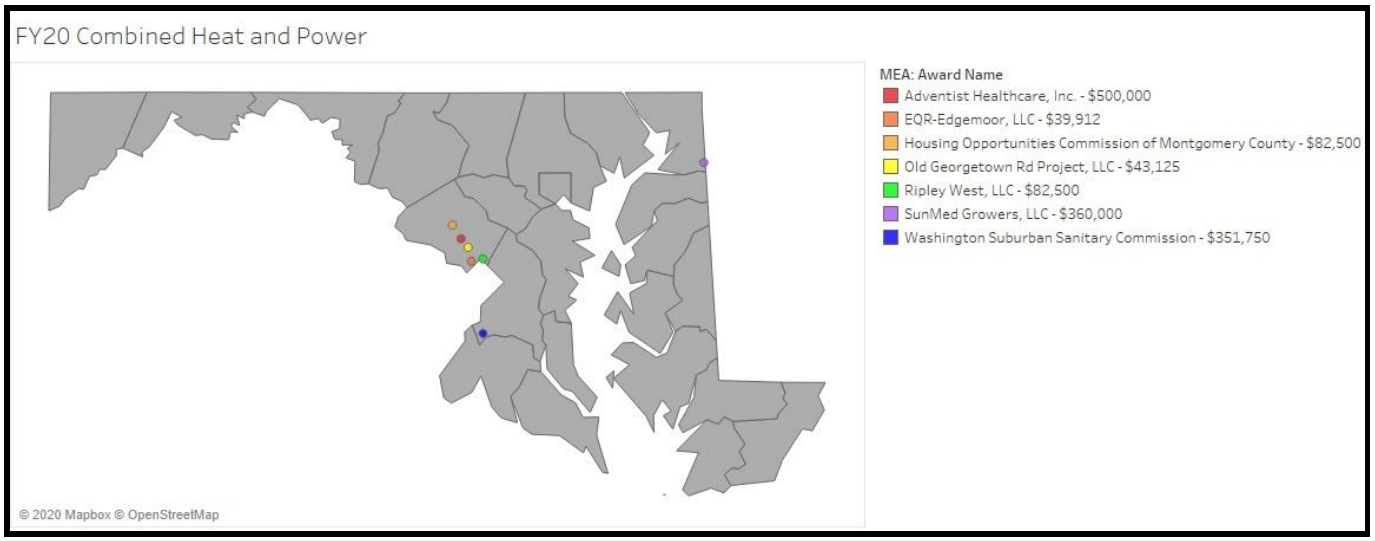
Description

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

The commissioning of CHP systems can improve building efficiencies and reduce greenhouse gas emissions. It can also result in lower operational costs and provide resiliency to crucial facilities or other organizations that value highly reliable power supply.

Seven projects awarded FY20 funding are underway. Projects awarded grant funds in FY20 are still in progress. For this reason, the program accomplishments reflect estimated project metrics and benefits associated with FY20 grants, which are subject to change.

Map 5: FY20 CHP Projects



[9] energy.maryland.gov/business/Pages/MEACHP.aspx

Program Accomplishments

Table 5

Fiscal Year	FY20
# of active projects receiving an award	7
Anticipated CHP capacity (kW)	6,600
Estimated annual energy savings (MMBTU/year)	195,275

To date, 10 CHP projects from prior fiscal years have been completed, five 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 imposed by local jurisdictions and utilities, can require several years to complete.

F. Resilient Maryland[10]

SEIF Expenditures and Encumbrances: $1.030 million[11]

Beneficiaries

Potential applicants include businesses, business development districts, critical infrastructure facilities, local governments with essential services, nonprofit organizations, regional planning organizations, State of Maryland agencies, utilities, agricultural operations, and others.

Description

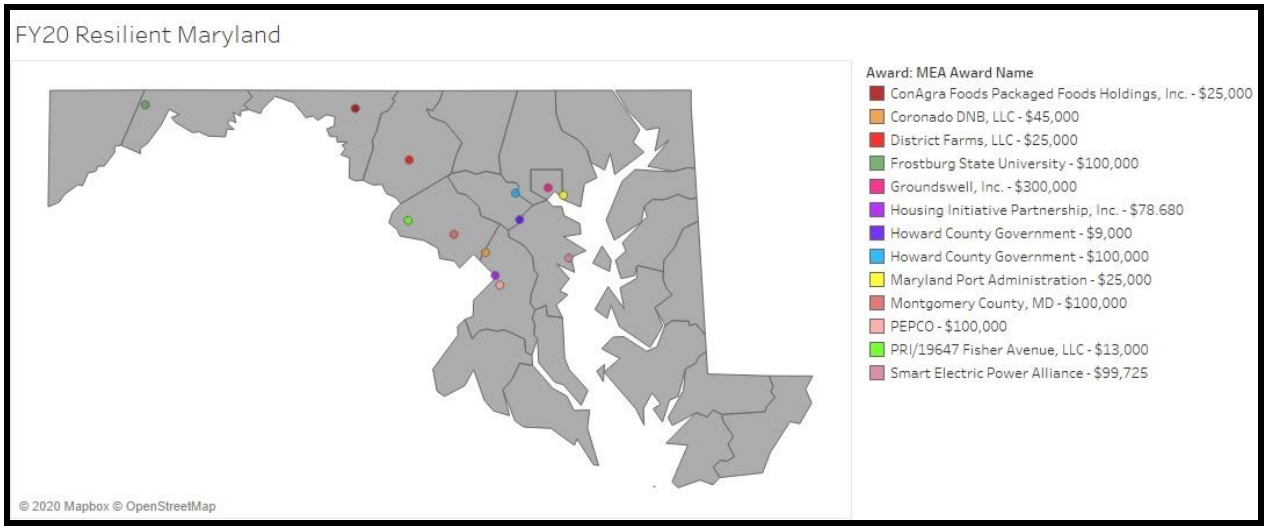
MEA launched this pilot program in FY20. Resilient Maryland is aimed at driving growth in the adoption of microgrids and other distributed energy resource (DER) systems, which will provide cleaner, more affordable, and reliable power to key entities across the state. Solar photovoltaics (PV), advanced 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.

The program provides funds to help organizations offset the costs for producing plans and designs that clearly outline the scope of the project and detail the project's economics. In this way, project decision-makers, as well as possible capital providers that may help finance the projects, can clearly understand the project and have fewer perceived risks. Projects incentivized by the Resilient Maryland program are designed to provide resilient and efficient energy; bolster local governmental essential services; attract new industries to economic development districts; provide resilient and efficient energy to academic organizations; 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.

[10] energy.maryland.gov/business/Pages/ResilientMaryland.aspx
[11] Encumbrances and expenditures as of the end of the fiscal year.

Map 6: FY20 Projects funded through Resilient Maryland



Program Accomplishments

Table 6

Fiscal Year	FY20
# of projects receiving an award	13[12]

[12] An additional project received an award but the grantee ultimately decided not to proceed.

G. Clean Energy Rebate Program

SEIF Expenditures and Encumbrances: $3.995 million

Beneficiaries

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

Description

MEA's Clean Energy Rebate Program (CERP)[13] was designed to support renewable energy installations across the state. The program 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.[14] Recently, MEA has started to receive applications for residential projects utilizing solar shingles, a fairly new solar PV option. Starting in FY14, the program added incentives for commercial-scale solar canopy systems installed over parking lots that include charging locations for plug-in electric vehicles (PEVs).[15]

In FY20, residential CERP applications far exceeded commercial applications in both the number of awards made and total dollar amount of awards issued. As shown below, participation in the residential CERP came from every county (or county equivalent) in the state. While the highest number of overall participants in FY20 came from Montgomery, Anne Arundel, Prince George's, Baltimore, Howard, and Harford counties, the highest level of participation on a population-weighted basis came from Calvert County.

[13] energy.maryland.gov/residential/Pages/incentives/CleanEnergyGrants.aspx and energy.maryland.gov/business/Pages/Incentives/CleanEnergyGrants.aspx

[14] energy.maryland.gov/residential/Pages/incentives/woodstoves.aspx

[15] energy.maryland.gov/business/Pages/incentives/PVEVprogram.aspx

Chart 2: Participation by County in the Residential Clean Energy Rebate Program

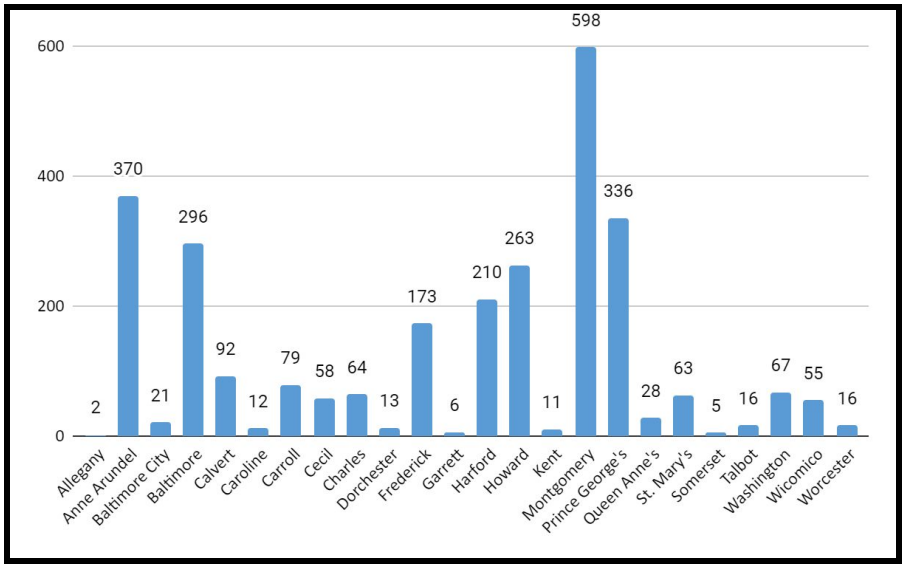
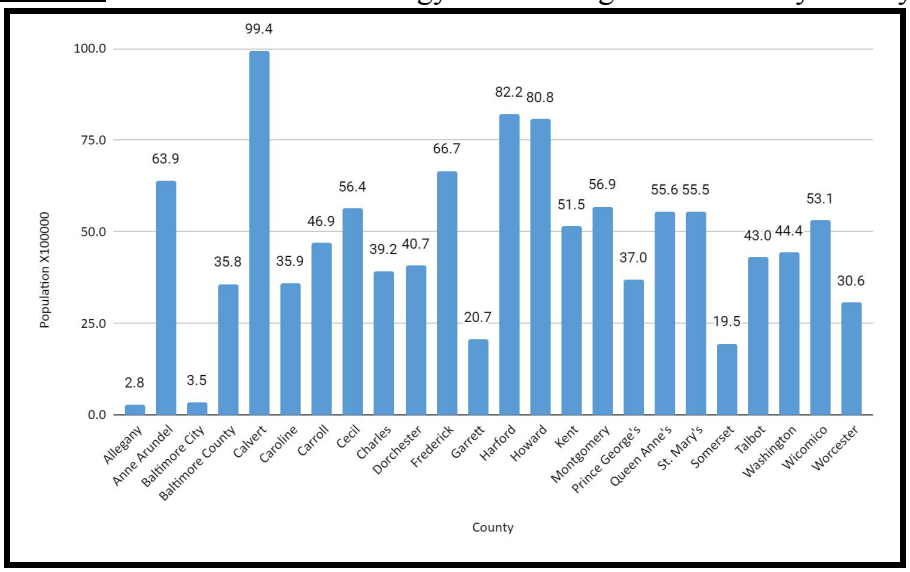


Chart 3: Residential Clean Energy Rebate Program Awards by County per 100,000 residents[16]

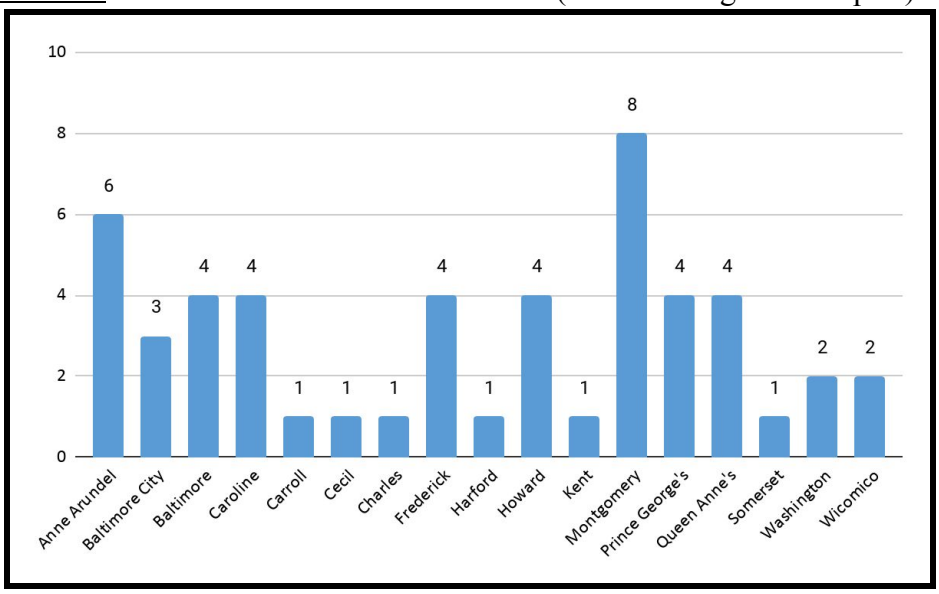


Residential CERP incentive levels are set at a prescribed amount per technology installation while commercial incentive levels are calculated based on the size and type of renewable energy system. The number of residential rebates processed as part of the CERP highlights the popularity of the program. Of the eligible technologies, MEA received the most applications for residential solar PV in FY20, followed by wood and pellet stove (in aggregate), and then geothermal systems. By offering incentives for multiple technologies, potential program participants have options to help suit their cost and/or geographical requirements.

[16] Population data was obtained from census.gov/quickfacts/MD, population estimates are for July 1, 2019.

There were a total of 51 commercial, non-canopy CERP projects that received an award in FY20. All but one of these commercial projects involved solar PV technology, with the remaining project being a geothermal project.

Chart 4: FY20 Commercial CERP awards (not including PV canopies)



Solar canopies installed over parking lots are a specific type of commercial solar PV installation. Installation of a canopy structure enables renewable energy production from solar while also providing a secondary use of a parking lot, encouraging solar deployment in already developed areas. Vehicles parked underneath the canopies are also protected from weather. To encourage this technology, MEA offers a targeted incentive for solar canopies installed over parking lots in conjunction with PEV chargers. Two awards were made in FY20 for solar canopy projects.

Some FY20 commercial solar projects, particularly solar canopies, are still underway. Project estimates are included in program details below, but are subject to change.

Program Accomplishments

Table 7

Fiscal Year	FY20
Total # of awards	2,907
Estimated new electricity generated or avoided incentivized by CERP (kWh/year)	25,653,552
Estimated MMBTU/year avoided due to projects receiving CERP incentives	6,865
Overall Solar PV (kW)	25,216
Solar Thermal (sq. ft.)	51
Capacity of new Geothermal installed (Ton)	1,164

Solar PV Canopy (kW)[17,18]	571.6
Total wood and pellet stoves	350

[17] While solar PV canopy capacity is noted separately in the chart above, it is also included in the overall solar PV metric.

[18] One of the solar canopy projects is facing uncertainty that may preclude the project from proceeding. While the project is listed in this report for completeness, the energy benefits from this project were not included in the program accomplishments above.

H. Community Solar[19]

SEIF Expenditures and Encumbrances: $2.78 million

Beneficiaries

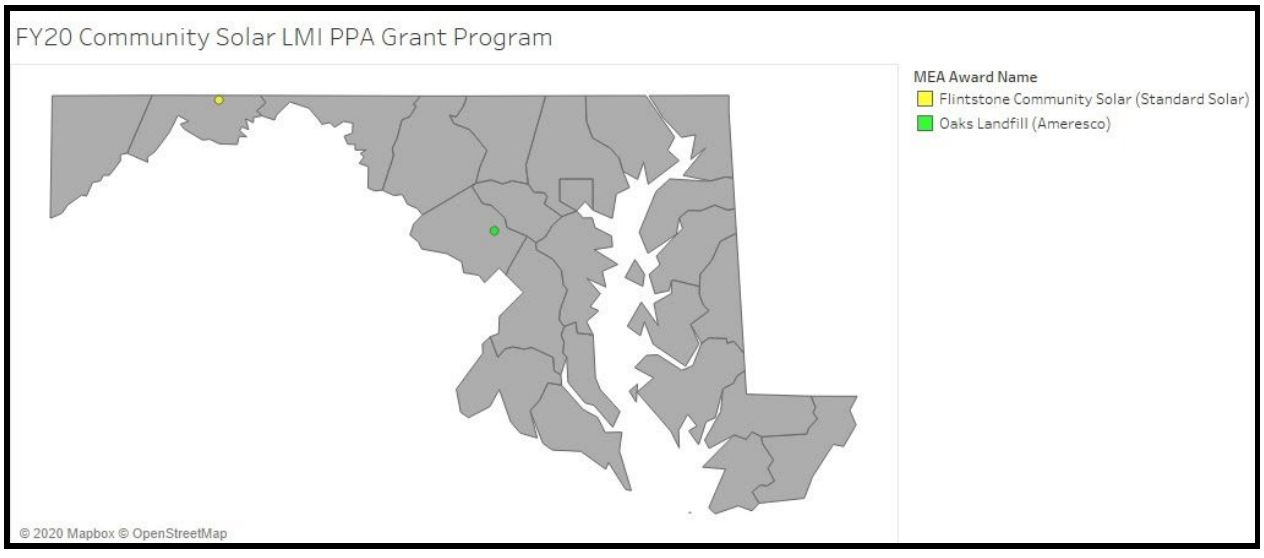
In FY20, program incentives went to subscriber organizations developing LMI community solar projects and a nonprofit entity providing a loan loss reserve for projects targeted to LMI subscribers. However, the ultimate beneficiaries of MEA's Community Solar program are LMI residents who are now more likely and able to participate in a community solar project enrolled in the pilot being overseen by the Maryland Public Service Commission (PSC).

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 in FY20 were designed to help enable LMI Marylanders to participate in the larger Community Solar Pilot Program being overseen by the PSC. Both community solar arrays incentivized in FY20 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 FY20, incentives for 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.

Map 7: FY20 Community Solar Array Locations



[19] energy.maryland.gov/residential/Pages/CommunitySolarLMI-PPA.aspx

FY20 projects are still being developed and are not yet installed. Generation and capacity estimates for these future installations are included below, but are subject to change.

Program Accomplishments

Table 8

Fiscal Year	FY20
Total # of grant awards	3
Estimated total new electricity generation of all community solar projects receiving LMI incentives(kWh-ac/year) from MEA	7,895,966
Overall total capacity of community solar PV (kW) projects receiving LMI incentives from MEA	5,467
Estimated amount of new electricity generation from the incentivized community solar projects directed specifically to the LMI community (kWh-ac/year)[20]	4,027,012
Capacity of the incentivized community solar projects that is directed specifically to the LMI community (kW)	2,784

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

I. Offshore Wind Programs

SEIF Expenditures and Encumbrances: *$1.052 million*

Non-SEIF Expenditures and Encumbrances: *$3.0 million*[21]

Beneficiaries

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

Description

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

The OSWDF has historically been used for environmental surveys and wind resource characterization campaigns. These activities help defray the costs of an offshore wind energy developer to successfully navigate the Bureau of Ocean Energy Management's Environmental Impact Statement process, which requires submission of a Site Assessment Plan and a Construction and Operations Plan. 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 FY20, the OSWBDF supported the Maryland Offshore Wind Capital Expenditure program[22] (Capital Expenditure program) and the Maryland Offshore Wind Workforce Training program[23] (Workforce program).

- The Capital Expenditure program provides support to emerging Maryland businesses that are interested in participating in the global offshore wind industry.

- The Workforce 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.

[21] The Maryland Offshore Wind Energy Act of 2013 created the Offshore Wind Business Development Fund outside the SEIF. MEA has included expenditures from the Offshore Wind Business Development Fund in annual SEIF reports in the past. For consistency, MEA is including this information again for FY20.

[22] energy.maryland.gov/Pages/Info/renewable/offshorewindbusinessdevelopment.aspx

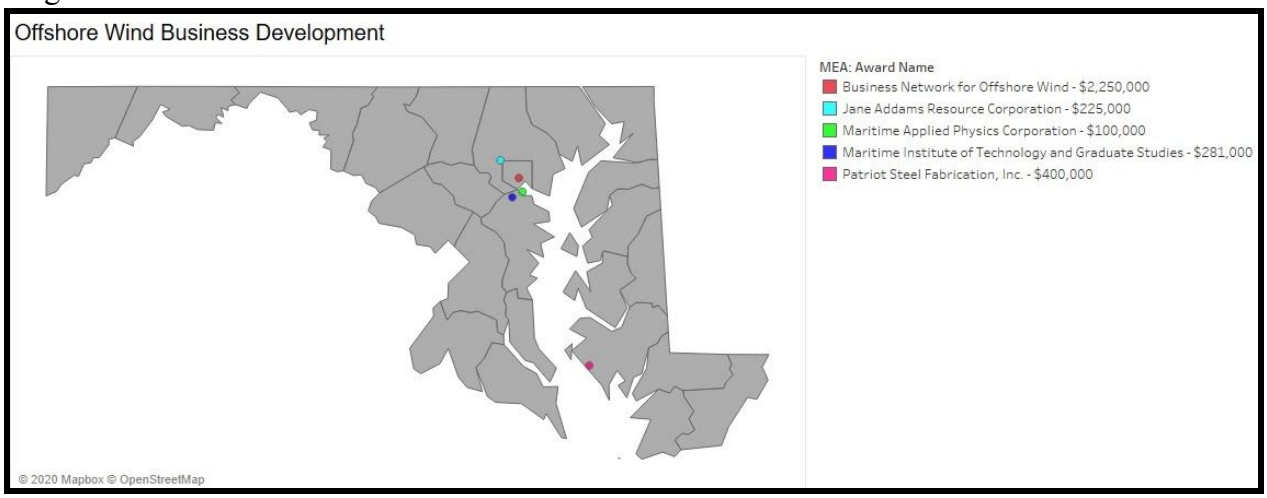
[23] energy.maryland.gov/Pages/Info/renewable/offshorewindworkforce.aspx

Program Accomplishments

In FY20, the OSWDF was used for ongoing Maryland Department of Natural Resources research related to sea bass and any potential impacts of noise during turbine construction. Additionally, FY20 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 solutions.

In FY20, funds from OSWBDF were used to provide funding to the Business Network for Offshore Wind to continue efforts to organize Maryland businesses entering the industry. The OSWBDF also provided four additional grants in FY20; two under the Capital Expenditure program and two through the Workforce program. The Capital Expenditure program will fund a bay door expansion project that will enable an existing facility to manufacture larger boats, such as the crew transfer vessels required for the offshore wind industry, as well as to help an emerging business to purchase new metal fabrication equipment. Both of these upgrades will expand the capability of Maryland manufacturing for offshore wind, as well as manufacturing needs for other Maryland industries. The Workforce program will help fund an initiative to recruit and train individuals in welding, the fundamentals of manufacturing, or computer numerical control machining. The program will also help the Maritime Institute of Technology and Graduate Studies to become a certified training provider of the Global Wind Organization's Basic Safety Training (BST) Standard and BST Refresher Standard.

Map 8: Map of FY20 Offshore Wind Capital Expenditure Program and Workforce Training Program Grants[24]



[24] As detailed further in footnote 21, the Offshore Wind Business Development program is outside of SEIF, but is reported here for consistency with prior year reports.

J. Transportation

SEIF Expenditures and Encumbrances: $1.762 million

Beneficiaries include homeowners, businesses, nonprofit organizations, and state and local government entities that install transportation-related alternative fuel refueling, including electric vehicle charging equipment.

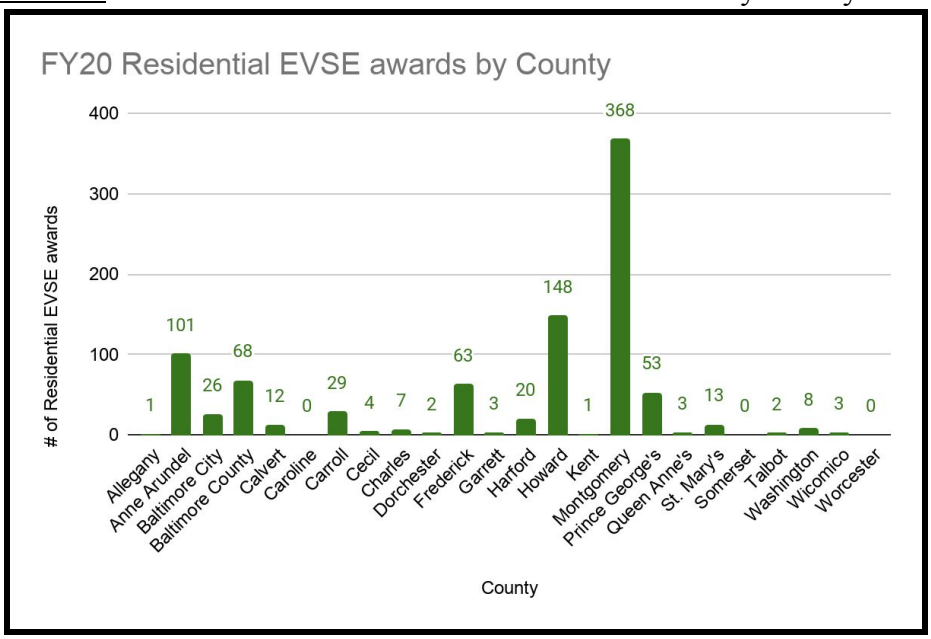
Description

MEA runs incentive programs that aim to reduce petroleum use in Maryland's transportation sector. The programs accomplished this goal by increasing the availability of alternative fuel refueling and charging infrastructure in the state. In FY20, MEA's transportation-related programs consisted of the Electric Vehicle Supply Equipment[25] (EVSE) Rebate program and the Alternative Fuel Infrastructure program[26] (AFIP).

EVSE program- Residential rebates

935 EVSE rebates were funded through SEIF to Maryland residents. For the EVSE Rebate program in FY20, Montgomery, Howard, and Anne Arundel counties had the highest number of total residential EVSE rebate awards.

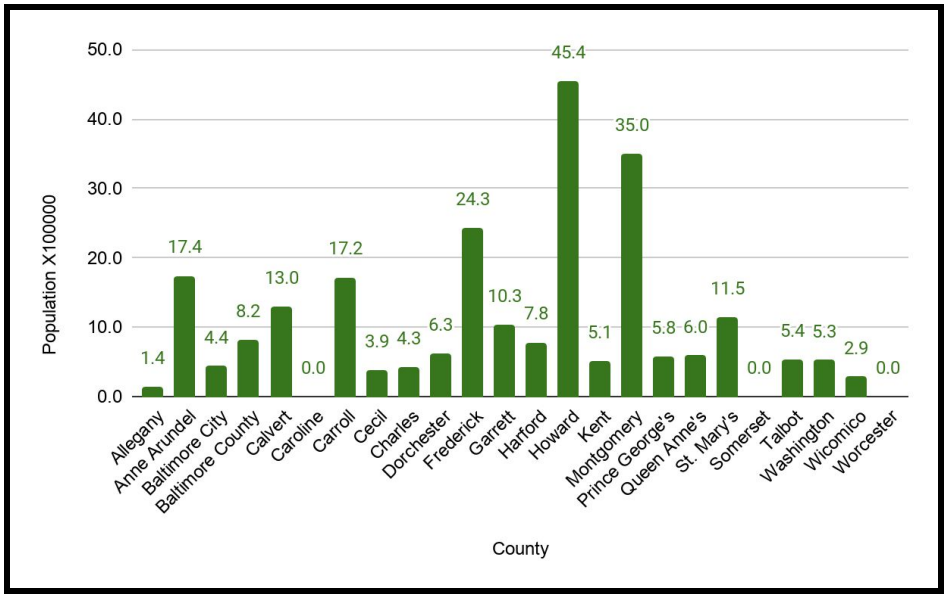
Chart 5: Total FY20 EVSE Residential Rebate Awards by County



When county population is also factored in, Frederick and Carroll counties can also be seen to have relatively high rates of residential EVSE participation per capita in FY20.

[25] energy.maryland.gov/transportation/Pages/incentives_evserebate.aspx
[26] energy.maryland.gov/transportation/Pages/afip.aspx

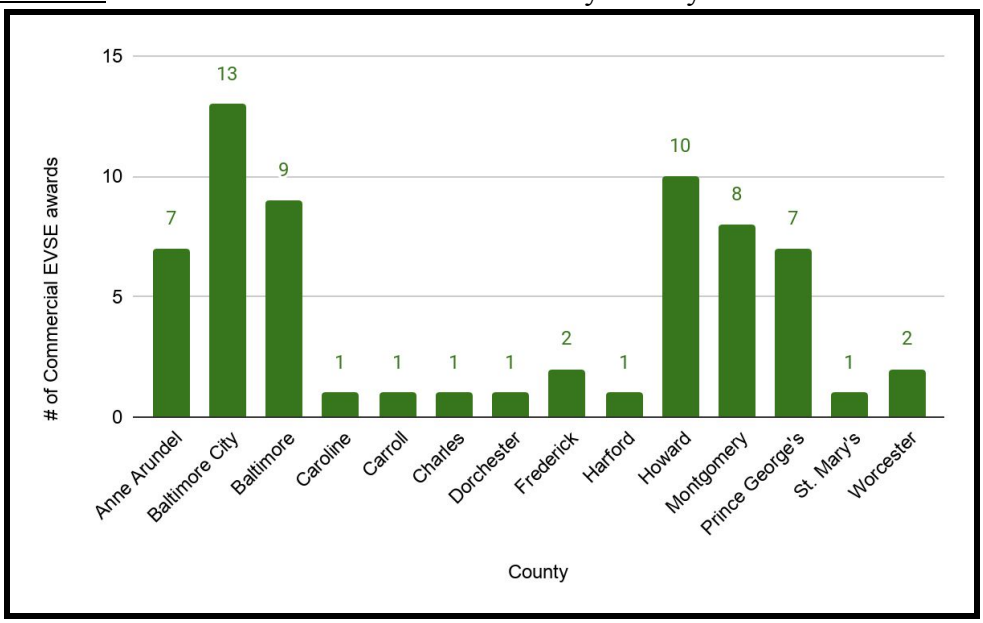
Chart 6: FY19 EVSE Residential Rebates per Resident (x 100,000)[27]



EVSE program- Commercial rebates

Baltimore City has the highest number of commercial installations receiving an award under the Commercial EVSE program, followed closely by Howard and Baltimore counties. Each commercial award can potentially involve multiple chargers (e.g., a charging station in a parking garage or at a retail establishment). In total, the FY20 commercial EVSE rebates incentivized 64 awards.

Chart 7: FY20 EVSE Commercial Rebates by County

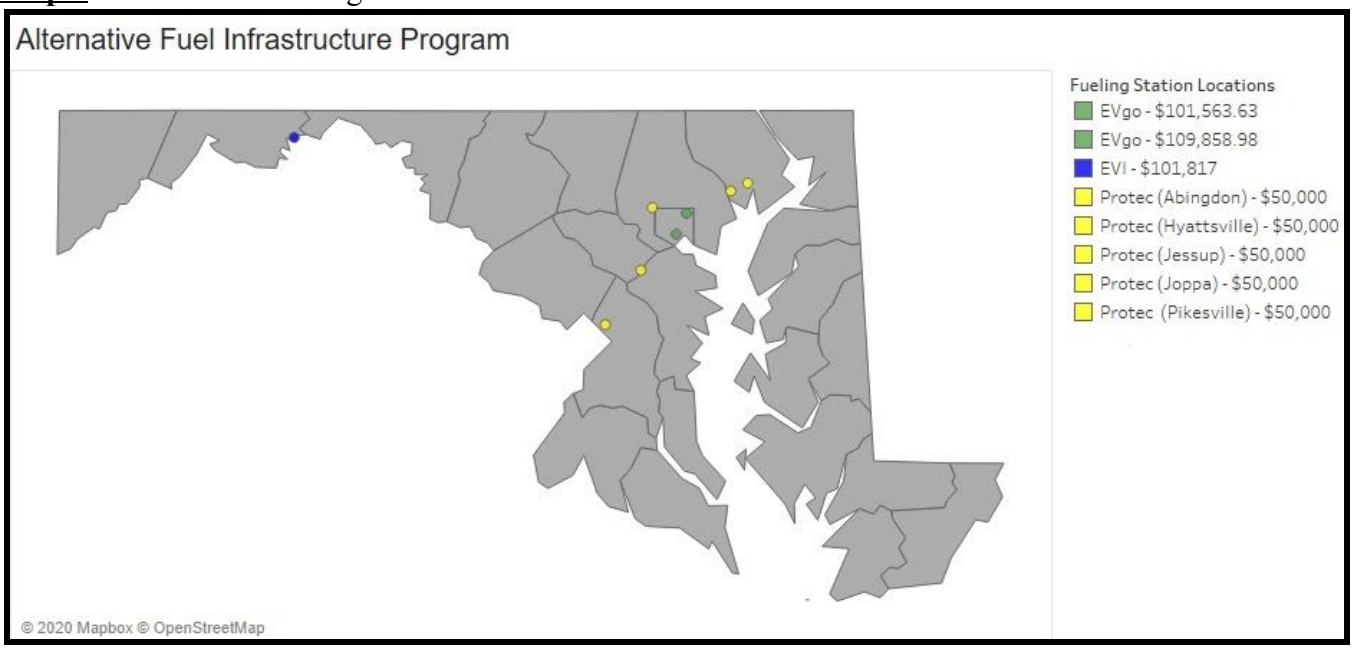


[27] Population data obtained from information available on the U.S.Census website at census.gov/quickfacts/MD on 11/30/2020.

AFIP

Three awards were made for the AFIP in FY20, some of which involved installations at multiple locations. These awards will result in the installation of ethanol fueling equipment at five sites across the state, as well as direct current (DC) EV fast charging stations at three additional sites.

Map 9: FY20 AFIP Fueling Station locations[28]



Projects receiving an award in FY20 are still in progress. For this reason, the summary below shows estimated project metrics and benefits associated with FY20 grants, which are subject to change.

Program Accomplishments

Table 9

Fiscal Year	FY20
# of total EVSE rebate awards made	999
# of AFIP Ethanol refueling pumps/locations	38 dispensers at 5 locations
# of DC fast charger (electric) stations and locations	6 charging points at 3 locations
Total estimated annual petroleum displacement (GGE)	1,843,094[29]

[28] The map shows planned fueling station locations by grantee. For grantees with an AFIP award for more than one fueling station, the total amount of the award is the sum of the individual locations.

[29] GGE stands for Gasoline gallon equivalents.

K. Maryland Energy Infrastructure Program[30]

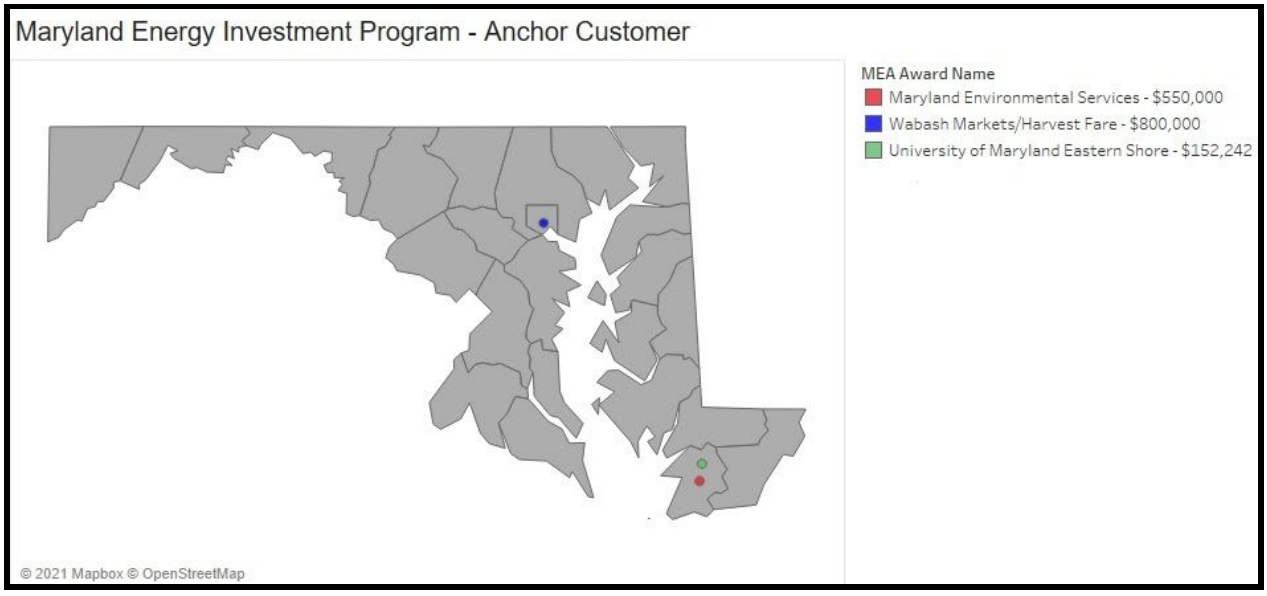
SEIF Expenditures and Encumbrances: $4.0 million

Beneficiaries

The Maryland Energy Infrastructure program (MEIP) includes the Maryland Anchor Customer (Anchor Customer), Maryland Local Distribution Company (LDC), and the Maryland Cost in Aid of Construction (CIAC) subprograms. These initiatives provide funding to assist with energy projects that promote natural gas distribution across the state.

The Anchor Customer subprogram issues grants to commercial, industrial, state agencies, local governments, and nonprofit energy consumers in Maryland. The purpose of the Anchor Customer program is to assist with energy projects that help promote natural gas distribution, including investments in assets that assist customers in converting their operations to natural gas; reintegrate previous natural gas customers who no longer possess natural gas infrastructure or functional natural gas infrastructure; and benefit existing customers not presently utilizing their natural gas infrastructure and/or are seeking to expand their energy demands.

Map 10: FY20 Anchor Customer Grantee Locations



The CIAC subprogram issues grants to LDCs for the purpose of avoiding cross-subsidization of the costs of natural gas expansion. The grants are designed to help a LDC create and fund their own CIAC fund. These funds will promote natural gas distribution, in basic terms, by defraying the costs associated with installing natural gas infrastructure from the end of the utility's asset to the customer's meter. The CIAC program may serve to invest in assets for new customers.

[30] energy.maryland.gov/govt/Pages/MEIP.aspx

The LDC subprogram provides matching grants to licensed LDCs to aid in natural gas infrastructure expansion in Maryland. The purpose of the LDC program is to invest in assets that distribute natural gas to new customers, reintegrate previous customers who no longer use natural gas service and benefit existing customers who are not presently utilizing their natural gas infrastructure.

Some FY20 projects are still being implemented.

Program Accomplishments

Table 10

Fiscal Year	FY20
# of grants issued	8

L. Energy Technical Support

SEIF Expenditures and Encumbrances: $1.203 million

Beneficiaries

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

Description

MEA funded technical and outreach support for efforts 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 FY20 funding include the:

- LMI Energy Efficiency program;
- Maryland Smart Energy Communities program;
- Commercial, Industrial, and Agriculture program;
- Data Center Energy Efficiency program;
- CHP program; and,
- Community Solar program

MEA also funded efforts to support the site assessment portion of the state's upcoming Public Facility Grant program, as well as to determine best approaches for grid reliability and sustained carbon reductions.

M. Communications and Marketing

SEIF Expenditures and Encumbrances: $0.005 million

Beneficiaries

All Marylanders.

Description[31]

In FY20, the funds under the Communications and Marketing budget were used to promote MEA energy programs to Maryland residents, businesses, nonprofits and local governments. Additionally, MEA is tasked with increasing energy awareness via engaging content that helps the public understand the energy sector. MEA participates in regular community outreach activities, including conferences, trade shows and community fairs. Communications and marketing activities in FY20 included:

- Advertising MEA's energy programs via Maryland Public Television, and in JMore media and Microgrid Knowledge publications.

- Sponsorship of several energy-related conferences and events. Examples include events developed by the National Association of State Energy Officials, Regional Manufacturing Institute, Howard County Greenfest, Montgomery County GreenFest, Maryland Clean Energy Center (MCEC), Montgomery County Energy Summit, Maryland Mayors Conference, Sustainable Maryland, and the Mid-Atlantic Bioenergy Council, as well as initiatives like National Energy Efficiency Month, International Women in STEM, Daylight Hour, and Electric Vehicle Week.

- Strengthening online outreach has never been more important than in FY20. MEA migrated exhibits and speaking engagements to virtual environments, including virtual trade show booths. MEA has amplified online content with new educational resources, blog series, news bulletins, videos, webinars and open meetings. Much of this information can be accessed via the MEA blog.

- Maintaining timely and transparent communications during the COVID-19 pandemic was a critical concern immediately following Governor Hogan's Executive Order on March 12, 2020. MEA began outreach to partner organizations and grantees via email blasts, blogs and social media calls to share support measures the agency was taking to address financial shortfalls or timeline changes. MEA created a COVID-19 response "button" on the homepage of its website that links to a page containing all pandemic response updates.

[31] This description broadly summarizes communications and marketing activities in FY20, some of which may have been funded elsewhere from SEIF.

N. Administration

SEIF Expenditures and Encumbrances: $4.428 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 managed numerous programs and initiatives that helped increase the use of renewable energy and energy efficiency technologies among every sector. The funding enabled:

- MEA to execute the state's energy programs described throughout this report;
- Energy policy and planning activity, including expertise to analyze the long term costs associated with the EmPOWER Maryland program; and
- Prior to the onset of the COVID-19 pandemic, travel in support of the execution of the SEIF and the state's energy goals, such as attendance and participation at Maryland Association of Counties and Maryland Municipal League events.

MEA continued to design and launch new energy programs, while refining existing energy programs, helping to maintain the state's place as a national leader in clean and renewable energy.

Program Accomplishments

In addition to MEA's program accomplishments, there have been many other areas of MEA activity that receive administrative resources in the form of staff time and travel.

In its role as the state's energy policy office, MEA participated in legislative-style proceedings and cases before the PSC. Many of the issues addressed in these matters will impact the state's energy landscape either from a renewable energy or energy efficiency standpoint. As an example, MEA continued participation in Public Conference 44 (PC44), known as the Grid of the Future docket, which focuses on topics like rate design, interconnection, energy storage, electric vehicles, and customer choice/competitive markets. Other PSC dockets in which MEA participated include Rulemaking 56 (RM56) on Community Solar, supplier consolidated billing, semi-annual EmPower proceedings, and the three-year EmPOWER program cycle recommendations. More recently, MEA has been closely monitoring the financial situation of the state's ratepayers in the wake of the COVID-19 crisis. With higher levels of unemployment, many Marylanders incurred utility debts they will have difficulty repaying, or simply will not be able to pay back at all, contributing to the overall urgency of the situation. This financial situation would eventually lead to the PSC creating a public conference in the following fiscal year that MEA is closely monitoring and taking part in.

Further, during FY20, 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, the Regional Carbon Capture Deployment Initiative, and the Chesapeake Bay Subcabinet.

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

III. **SEIF-funded initiatives implemented by other state agencies**

While MEA administers the SEIF, multiple state entities receive SEIF funds. Section III of the FY20 SEIF report summarizes the programs and initiatives being implemented by state agencies other than MEA.

O. Department of Human Services- Energy Universal Service Program Bill Assistance[32]

SEIF FY20 Expenditures and Encumbrances: $19.942 million

Beneficiaries

The Office of Home Energy programs (OHEP) within the Maryland Department of Human Services (DHS) provides electric utility payment assistance to eligible low-income Maryland households. Eligibility requires income equal or less than 175% of the federal poverty level. The applicant must be a Maryland resident with an electric bill in their name who agrees to accept their utility's budget billing plan.

Description

SEIF funds are used for Electric Universal Service program (EUSP) Bill Assistance and Arrearage Retirement Assistance program benefits. Bill payment assistance benefits make ongoing electric bills more affordable by paying part of a household's monthly electric bill. Benefit amounts are based on electric usage, household size, and income. Funds generated through the EUSP utility ratepayer service charge provide the majority of funding for bill assistance, with SEIF funds fulfilling 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 seven years, with certain exceptions for vulnerable populations. Benefits are paid directly to electric utilities on behalf of the program applicant.

Program Accomplishments

The EUSP Bill Assistance and Electric Arrearage Retirement Assistance program administered by OHEP prevent and resolve utility disconnections. The Electric Arrearage Retirement Assistance program directly prevents or resolves disconnections that may result in life-threatening health and safety concerns, or result in households becoming homeless. Bill assistance grants keep bills at an affordable level so that customers do not end up in a utility crisis in the first place.

Table 11

	Households Served	Total Benefits Paid	SEIF Benefits Paid
Bill Assistance	84,079	$41,350,541	$10,429,031
Arrearage Retirement Assistance	12,218	$9,513,893	$9,513,893
Total	84,079	$50,864,434	$19,942,924

[32] dhs.maryland.gov/office-of-home-energy-programs/

P. Maryland Department of the Environment - Climate Change Program

Transfers to Maryland Clean Air Fund from SEIF: $2.850 million

Transfers to Support RGGI Inc. membership from SEIF: $0.354 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 the Maryland Department of the Environment (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 planning, climate change, the Director's office, air monitoring, air quality 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 the 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.

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

MDE Awards made during FY20 that utilize SEIF from prior fiscal years: $5.336 million[33]

SEIF funds transferred in FY20 to MDE: $3.105 million[34]

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 other alternative or green energy sources, and for replacement of aging equipment with newer, more energy efficient technologies. The program focuses on promoting onsite waste-to-energy power generation by commissioning new combined heat and power systems, more efficient pumps, energy efficiency measures, or other alternative/green energy sources.

Program Accomplishments

In FY20, MDE reports awarding prior fiscal year funding to eight projects.[35] Examples include:

- City of Cumberland - This project adds high efficiency blowers and automatic control valves at the city's wastewater treatment plant, thus optimizing the aeration system, reducing energy costs, and allowing for better control of dissolved oxygen in the wastewater treatment process.
- Baltimore City - Existing lighting fixtures will be replaced with more efficient LEDs at the Montebello water filtration plant.
- Somerset County - Solar project at the Princess Anne wastewater treatment plant.
- Town of Federalsburg - Solar project at the Federalsburg wastewater treatment plant.

[33] As reported by MDE to MEA.

[34] 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).

[35] All of these projects are reported as having been allocated or awarded funds from prior fiscal year appropriation, rather than FY20 appropriation as is typically listed in this report.

R. Maryland Department of Transportation-Zero Emission Vehicle Excise Tax Credit

SEIF Reimbursement: $5.994 million

Description

Funds are transferred from the SEIF to the Transportation Trust Fund to offset the reduction in revenues from the vehicle excise tax credit for qualified plug-in EVs. The vehicle excise tax credit program is implemented by the Maryland Department of Transportation's Motor Vehicle Administration (MDOT MVA).

S. Department of General Services[36]

SEIF FY20 Expenditures and Encumbrances: $500,000

Beneficiaries

State agencies and Maryland taxpayers benefit from this program.

Description

Within the Department of General Services (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 funds to:

- Support the state's EPC program currently providing $24.95M 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 FY20, the DGS Energy Office oversaw EPC activity totaling more than $30 million completed on four state projects at the Maryland Department of Health (MDH) Finan Center, the MDH Holly and Perkins centers, the Department of Public Safety and Correctional Services (DPSCS) in Cumberland, and various MDOT MVA locations. The annual guaranteed financial savings associated with these four EPC projects is reported to total $3.2 million, along with 14,907 tons of CO_2 abated.

The statewide utility database is being updated with information about each state agency's building stock. Information on building size, age, and primary use are being sorted and added to the database. 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 take in submeter data.

36 dgs.maryland.gov/pages/energy/index.aspx#:~:text=The%20DGS%20Office%20of%20Energy,minimizes%20costs%20and%20enhances%20sustainability

T. Department of Labor- EARN Maryland Green Jobs

SEIF FY20 Expenditures and Encumbrances by the Department of Labor: $0.975 million

Beneficiaries

Maryland businesses and workers.

Program Accomplishments

In FY20, the Employment Advancement Right Now (EARN) Maryland Green Jobs Initiative funded three Strategic Industry Partnerships:

- Clean Energy Training Partnership - Led by the Living Classrooms Foundation in partnership with Power52, this initiative is implementing a needs-based employment training program to prepare unemployed and underemployed individuals for sustainable employment in the renewable energy industry. The program combines classroom training and eight weeks of hands-on experience, where participants have the opportunity to apply learned skills. Following training, participants will sit for the North American Board of Certified Energy Practitioners Certification. Case managers provide retention services on a monthly basis for program graduates.
- Solar Installation Training Partnership - This program delivers training opportunities to unemployed, underemployed, and incumbent workers for careers in the solar industry. Training includes 320 hours of on-the-job training and focuses on foundational technical skills, government mandated certifications, and job readiness skills. Incumbent training includes solar installer training and leadership skills. The Solar Installation Training Partnership works with organizations like the Baltimore Office of Child Support, the DPSCS, the District Court Reentry Program, and the Maryland Division of Probation and Parole for recruitment.
- Sustainable Energy Workforce Development - This program unites business partners with training institutions, community based organizations, and workforce partners to provide work-based learning, occupational skills training and career readiness training to prepare participants for employment in the sustainable energy sector. Participants have an opportunity to earn industry-recognized certifications, including Occupational Safety and Health Administration (OSHA) 10 and Electrical Level 1.

Ten thousand dollars was also used for an external evaluation of the EARN program.

Between July 1, 2019 through June 30, 2020, four hundred and seventy one individuals participated in EARN-funded training. One hundred and eighty two participants have found employment and two hundred and seventeen have obtained a credential or certification.[37]

[37] The Department of Labor indicates that some students are still actively enrolled in training.

U. Maryland Energy Innovation Institute

SEIF FY20 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 FY20. The Maryland Energy Innovation Institute (MEII) that manages the MEIF has produced an annual report of FY20 MEII activity.[38] MCEC, which in previous years received funding from the SEIF, now receives funding from the MEIF through MEII.

In the MEII's Annual Report FY20, MEII reports an actual FY20 budget of $575,272.[39] Based on communications with MEII, the remaining $924,728 went to MCEC.

Table 12

Use of SEIF funds transferred to the MEIF	FY20
MEII	38.4%
MCEC	61.6%

[38] Available on the MEII website at energy.umd.edu/sites/energy.umd.edu/files/SB313Article10-839MSAR11205-FY2020.pdf.
[39] Maryland Energy Innovation Institute Annual Report FY2020, Appendix 2, page 40.

V. Department of Health Energy Performance Contract Repayments

FY20 SEIF Transfer: $2.039 million

Description

In Maryland, General Funds typically pay for state agencies' energy bills. To lower energy bills, many state agencies participate in EPC agreements. EPC agreements are intended to be self-funded with the state borrowing funds to pay for the energy improvements, and the annual energy savings from those improvements guaranteed to be more than enough to repay the borrowed funds. However, for some past MDH energy performance contracting agreements, instead of using the energy savings to repay the loans, the state has chosen to use RGGI-derived SEIF funds allocated for energy efficiency to repay the loans, thereby freeing up general funds to address other needs.

Program Accomplishments

RGGI-funded SEIF investments in this program freed up $2.039 million of General Fund that otherwise would have to repay funds for EPC agreements.

W. Maryland General Fund- State Fleet Electric Vehicle Program

FY20 SEIF appropriation: $2.367 million

Description

Beginning in FY20, and as required by Chapter 565 of 2019, SEIF funds will be used to purchase plug-in hybrid electric and fully electric vehicles for state agencies. In FY20, the purchase of the electric fleet vehicles was coordinated by the Department of Budget and Management. 73 vehicles are being purchased using FY20 funding, with 5 vehicles being fully electric and 68 being plug-in hybrid vehicles.[40]

[40] As communicated to MEA by DBM in July 2020.

X. Department of Agriculture

FY20 Expenditure: *$1.382 million*

Description:

The Maryland Department of Agriculture implements the Animal Waste Technology Fund. In a prior fiscal year, SEIF funding was committed to the Animal Waste Technology Fund for eligible energy-related projects. MDA was reimbursed in FY20 for an animal waste-to-energy project receiving funding through the Animal Waste Technology Fund.

Y. Department of Housing and Community Development

FY20 SEIF appropriation: $0 million

FY20 SEIF Transfers to Department of Housing and Community Development (DHCD) for activities occurring in a previous fiscal year: $0.575 million

Summary

SEIF funds continued to be extended to DHCD programs encumbered through prior year fiscal appropriations. In FY20, funding was used for DHCD's Department of Energy Weatherization Assistance Program for low-income Marylanders, enabling additional energy efficiency, and health and safety measures to be completed over and above what federal program limits allow.

IV. SEIF Planning

Introduction

In the 2019 legislative session, MEA submitted a departmental bill that was introduced by the Chair of the Senate Finance Committee. This bill 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. The legislature enacted Chapter 133, incorporating the requirements MEA recommended. Consistent with Chapter 133, this section of the FY20 SEIF report constitutes MEA's planning update for SEIF in future fiscal years.

Background on SEIF

Historically, SEIF is primarily funded through RGGI proceeds. However, SEIF has also received funding from multiple non-RGGI sources further described in Appendix A. RGGI-derived SEIF proceeds are lower than in some earlier years and fluctuate, impacted by many external factors. With this in mind, in recent years it has been sometimes necessary to supplement traditionally RGGI-funded programs with non-RGGI proceeds in order to avoid contraction or elimination of programs. Generally, SEIF funds from non-RGGI sources have been making up a higher percentage of the overall budget. However, the opportunity to supplement existing programs with non-RGGI sources will likely be greatly diminished in future years as these funds get drawn down.

The majority of non-RGGI contributions to SEIF to date have come by order of the PSC, and in most cases are not known in advance and thus not predictable. Funds from these proceedings come with strictly prescribed allowable uses (e.g., Maryland Gas Expansion Fund) that, in some cases, are similar to the prescriptive uses of funds derived from the RGGI auctions. These funds are typically restricted to distinct purposes or geographic areas of the state. Thus, long-term SEIF forecasting over multiple years can be challenging, due to variability in RGGI proceeds and inability to forecast PSC directives.

Certain legislative initiatives have also made forecasting future SEIF-programs more challenging. In the 2020 legislative session alone, the General Assembly put forth a myriad of proposals that would, if passed, have required the commitment of significant levels of SEIF funding over long periods of time. Some of these proposed commitments would commit annual transfers from the SEIF into perpetuity. As new uses of SEIF funds are contemplated in the future, the existing, prescribed uses of SEIF, established through legislation or regulatory proceedings before the PSC, need to also be considered before legislation is proposed or enacted.

As increased statutorily-required funding demands outpace future distributions into the SEIF, existing energy programs effectively serving LMI Marylanders and others might need to be curtailed. In addition, contemplated future energy programs may need to be delayed or abandoned altogether.

With these considerations in mind, MEA provides the following discussion of funding source availability and future SEIF programming forecast, as well as an update on the status of the SEIF Advisory Board.

Fund Source Availability

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 $7.50 per allowance. All the while, the number of allowances available has decreased from 128.1 million allowances in CY09 to 64.97 million allowances in CY20.

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. Commencing with the FY19 budget, auction revenues have been projected at the auction floor price, assuming all available allowances sell. 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 rises to $2.38/allowance. This conservative approach builds a definitive revenue base in the face of the RGGI volatility and allows for the proper budgeting of revenue over the auction floor price in a subsequent budget cycle. Any proceeds received above the auction floor price are then budgeted in a future fiscal year cycle.

Looking forward, in CY21 the changes of the 2016/2017 RGGI Program Review will take effect. Among the changes is the addition of the Emissions Containment Reserve (ECR), which will function as a counterpart to the Cost Containment Reserve (CCR) in effect since 2014. Together, the CCR and the ECR are designed to promote allowance price stability by adjusting the supply of allowances in real time, in response to changes in auction allowance demand as reflected in the clearing price. The CCR provides additional allowances if the clearance price exceeds a predetermined trigger ($13 in CY21). The ECR instead withholds and retires 10% of the offered allowances if the clearance price falls below its predetermined trigger ($6 in 2021). RGGI auction clearing prices have been rising somewhat since the announcement of these and other 2016/17 Program Review changes and, with the most recent auction clearance price of $7.41 in the December 2020 auction (#50), have now exceeded the FY21 ECR trigger price.

The overall makeup of the RGGI cooperative effort has been changing as well, with the State of New Jersey rejoining RGGI as of January 1, 2020, and the Commonwealth of Virginia entering RGGI on January 1, 2021.[41] Such changes to the overall structure of RGGI introduce additional variables that, in all likelihood, will further impact the RGGI market.

[41] rggi.org/sites/default/files/Uploads/Press-Releases/2020_07_08_VA_Announcement_Release.pdf

Other SEIF sources

Fund balances from several non-RGGI fund sources originating in prior years remain in the SEIF:

● OSWDF supports research initiatives that facilitate development of offshore wind energy projects and scientific understanding of the mid-Atlantic Outer Continental Shelf, as well as the wildlife which resides in, or migrates through, the Maryland Offshore Wind Energy Area.

● The Customer Investment Fund (CIF) continues to fund the final stages of the Net Zero Energy Schools program. Two net zero energy schools were recently completed in Baltimore City, bringing the total of net-zero public schools in Maryland to three.

● The Maryland Gas Expansion Fund was established from public and inclusive processes before the PSC and by PSC order for the purpose of natural gas infrastructure expansion within the state. MEA has developed and introduced programs that comply with the requirements of the PSC order.

●MFN payments support CHP projects and commercial energy efficiency initiatives in the Pepco and Delmarva service territories.

● Alternative Compliance Payments (ACP) are used to fund projects that encourage the development of energy projects that would qualify as a Tier 1 renewable energy source under Maryland's RPS. The majority of funds designated as ACP in the SEIF are derived from PSC Order No. 84698. That order provided for liquidated damages to be deposited in the SEIF and used as if those funds were compliance fees. In addition, a small amount of new ACP funds are deposited with the Comptroller of Maryland each year and then transferred into the SEIF as a result of compliance payments made by electricity suppliers under Maryland's RPS. Chapter 757 of the Acts of the General Assembly of 2019 requires ACP fees derived under § 7–705(b) of the Public Utilities Article to be used to benefit low-income Maryland residents.

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.

RGGI Formula

As required by §9-20B-12 of the State Government article, MEA is required 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 2020 annual report on the investments of RGGI proceeds through 2018 published by RGGI Inc., in comparison to other

RGGI states, Maryland has made a significantly lower level of cumulative RGGI investments in energy efficiency; 29% by Maryland versus 56% by all RGGI states in aggregate.[42,43] The main reason for this difference is that Maryland has instead dedicated a higher cumulative percentage of RGGI proceeds to energy bill assistance; with 48% 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.

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, and/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.

- The LMI Energy Efficiency program is being offered to support energy efficiency projects completed by eligible nonprofit organizations and local governments to benefit Maryland residents.
- The CI&A Grant program is being offered to support improving energy efficiency and reducing the energy costs of enterprises in Maryland's commercial, industrial, and agricultural sector.
- In return for voluntarily adopting energy policies, the Maryland Smart Energy Communities program makes incentives available for counties and local governments to implement energy efficiency, renewable energy, and/or transportation-related petroleum-reduction projects.
- The Data Center Energy Efficiency Grant program provides funding to encourage the implementation of cost-effective energy efficiency technologies in data centers, supporting Maryland's information technology sector.
- The CHP program will incentive CHP systems in commercial, industrial, institutional, and critical infrastructure facilities, increasing overall facility efficiency by capturing and utilizing waste heat.
- The Clean Energy Rebate program offers incentives for residential- and commercial-scale renewable energy incentives for solar photovoltaics, solar thermal, and ground source

[42] rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2018.pdf, page 23.
[43] rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2018.pdf, page 12.

heat pumps, as well as clean-burning wood and pellet stoves. In addition, incentives are also offered for solar photovoltaic canopies installed over parking lots with electric vehicle chargers.

- The OSWDF is used for activities like environmental surveys and wind-related research and development.
- The Community Solar LMI program extends the benefits of community solar projects by incentivizing community solar subscriber organizations to include terms in their subscription agreements that maximize cost savings for qualifying subscribers.
- The Public Facility Solar Grant program provides grant funding to support the installation of solar arrays on existing infrastructure, such as parking lots or rooftops, for public institutions.
- The Clean Fuels Incentive program, superseding MEA's former Alternative Fuel Infrastructure program (AFIP), supports the development of public access, alternative fuel refilling/charging infrastructure in Maryland. In addition, the rebranded program is also establishing new incentives for some alternative fuel fleet vehicles, reflecting feedback from the transportation industry.
- The Resiliency Hubs program encourages the development of solar plus energy storage systems on eligible facilities that, during periods of grid outage, can also provide a resiliency center to local residents living nearby with heating and cooling, emergency lighting and plug charging.
- The Resilient Maryland program is a new pilot first offered in fiscal 2020 that provides grants for planning and designing community and campus microgrids, resilient facility power systems, advanced combined heat and power systems, and distributed generation systems at resiliency hubs.
- Through the EVSE rebate program, Maryland residents, governments, and businesses can access a rebate for purchasing and/or installing an EV charging station.

At the midpoint of FY21, the majority of SEIF-funded awards made to date by MEA have been issued on a first-come, first-served basis to qualified applicants. First-come, first-served awards are made throughout the fiscal year while competitive grants go through an application and review cycle and thus are typically made later in the fiscal year.

With the onset of the COVID-19 pandemic in spring 2020, MEA is cognizant of the job creation and retention impacts that result from MEA's energy program offerings. With this in mind, MEA has been working to adapt programs to be responsive to the new economic landscape and working environments.

Additionally, MEA's policy team has been participating in Public Conference 53 (PC53) where the PSC is examining approaches to managing the financial issues incurred as a result of COVID-19 by the regulated utilities, as well as the best approach to assist vulnerable

communities that are unable to afford their energy bills. The policy team has also been monitoring new developments related to carbon capture technology.

Finally, Governor Hogan, along with the governors of North Carolina and Virginia, signed a memorandum of understanding to create the Southeast and Mid-Atlantic Regional Transformative Partnership for Offshore Wind Energy Resources (SMART-POWER) on October 29, 2020. This agreement will allow the three participating states to work together on offshore wind, as well as the offshore wind supply chain. MEA, along with other state agencies, is working on this initiative in FY21.

SEIF-Funded Programs Implemented by other State Agencies

Other state agencies also implement initiatives funded through SEIF. SEIF appropriation has been approved in FY21 for the following uses:

- MDE - annual dues for Maryland's participation in RGGI[44] and funding for the Clean Air Fund Program for climate change efforts
- University of Maryland, College Park - funding for the MEIF, which is used to fund the MEII directly and the MCEC indirectly, as MCEC is a subgrantee of MEII[45]
- Department of Human Services - low-income energy bill assistance through the OHEP[46]
- DGS - funding for the Energy Office supporting state agency energy plans, EPC, and the energy database
- Department of Health - energy performance contracting repayments
- Department of Labor - job training funds through the EARN program
- Department of Commerce - funding for the Small, Minority, and Women-Owned Businesses Account, as required by Chapter 757 of the Acts of the General Assembly of 2019
- Department of Natural Resources - funding for studies related to clean energy
- EV purchases for use by state agencies

Possible or Expected Program Changes

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

[44] mde.maryland.gov/programs/Air/ClimateChange/RGGI/Pages/index.aspx.
[45] energy.umd.edu/
[46] dhs.maryland.gov/office-of-home-energy-programs/

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 sheer volume of legislative initiatives that would divert SEIF funding, it is challenging to make exact forecasts of SEIF programming in future fiscal years.

With that caveat, there have been some relatively recent developments that will likely have an impact in future fiscal years that could impact SEIF-funded energy programs.

- While the full impacts of the COVID-19 pandemic are not yet known, MEA anticipates that additional adjustments may need to be made to reflect the new realities facing Maryland households, businesses, nonprofit organizations, and local governments that participate in MEA's suite of energy programs.
- With the passage of Chapter 757 of 2019, ACP revenues under the RPS are now required to be used to benefit low-income renewable energy projects. To the extent that such revenues are generated under the RPS, existing statute would only allow these funds to be used for energy programs that enable renewable energy projects directly benefiting low-income Marylanders.[47]
- Chapter 757 of 2019 also provided funding for the Clean Energy Industry under §5-1501 of the Economic Development Article. Starting in FY21, SEIF funds are statutorily-required to be allocated to the Small, Minority, and Women-Owned Business Account with the Maryland Department of Commerce. In FY21, $200,000 is required to be allocated; in FY22, $500,000 is required to be allocated; in FY23, $500,000 is required to be allocated; and in FY24, $1 million is required to be allocated. From FY25 through FY28, $1.2 million is required to be allocated each year.
- Starting in FY21, Chapter 410 of the Acts of 2020 provides funds to the Clean Energy Workforce Account within the Maryland Department of Labor:
    - $1.25 million will be made available for grants to pre-apprenticeship job training programs;
    - $6 million for grants to youth apprenticeship and registered apprentice jobs training programs; and,
    - $750,000 for recruitment to the pre-apprenticeship program.
- On Aug. 14, 2020, the Governor's Task Force on Renewable Energy Development and Siting published its final report. Among other recommendations, the final report of this task force proposes looking at incentives offered in other states related to siting solar on preferred lands. This review could result in future adjustments to existing renewable energy incentives, many of which are funded currently through the SEIF.
- As mentioned earlier in this section, the RGGI Program will have an ECR added starting in CY21. Changes to the RGGI Program will likely impact the RGGI market and could have some impact on the magnitude of RGGI proceeds flowing into the SEIF; however, the exact impact is unknown.

[47] As reported in the PSC's Renewable Energy Portfolio Standard Report with Data for Calendar Year 2019, two retail suppliers filed for bankruptcy before retiring RECS in 2019 and were assessed compliance fees. As of July 2020, both companies were in bankruptcy proceedings in New York. See psc.state.md.us/wp-content/uploads/CY19-RPS-Annual-Report-Final-1.pdf.

In addition to the above, there are several PSC proceeding-related funding sources that are anticipated to continue having programmatic activity for the specific allowable uses established by the PSC during this time period, subject to all necessary concurrences and approvals. As an example, through the Net Zero Energy Schools Program funded through the CIF, two new schools recently constructed in Baltimore City will need to have post-construction analysis during this time period to confirm net zero energy status was achieved.

In conclusion, MEA envisions that the SEIF will continue to be used to enable energy efficiency, renewable energy, alternative transportation fuels, or energy resiliency programs and initiatives. MEA continues to work with stakeholders 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. As noted earlier, all potential programmatic activity is subject to all necessary concurrences and approvals by the Governor and the General Assembly.

APPENDIX A: SEIF Funding Details

Table 13

SEIF Expenditures and Appropriations		
	FY2020 Actual	**FY2021 Appropriation**
Maryland Department of the Environment - RGGI Inc. Dues	353,585	550,000
Maryland Department of the Environment - Energy-Water Infrastructure Program	3,105,033	
Maryland Department of the Environment - Climate Change	2,850,000	2,550,000
University of Maryland (Maryland Energy Innovation Fund)	1,500,000	1,500,000
Department of Human Services - Energy Bill Assistance	19,942,924	19,850,329
Department of General Services	500,000	500,000
Department of Health - Energy Performance Contracting Repayments	2,039,087	2,037,973
Maryland Energy Administration - Energy Efficiency - Low-to-Moderate Income	6,000,000	6,700,000
Maryland Energy Administration - Energy Efficiency - Other	3,865,110	5,000,000
Maryland Energy Administration - Renewable Energy, Transportation, and Resiliency	14,722,565	22,369,721
Maryland Energy Administration - Admin	4,427,658	4,683,187
Maryland Energy Administration - Offshore Wind Development	1,051,832	1,500,000
Department of Commerce		200,000
Maryland Department of Labor	542,832	450,000
Department of Natural Resources		500,000
Dept. Housing and Community Development	574,776	
Maryland General Fund - State agency electric vehicles	2,366,956	2,250,000
Maryland Department of Agriculture	1,381,668	
Motor Vehicle Administration - Electric Vehicle Tax Credit reimbursement	5,993,583	0
TOTAL	**$71,217,609**	**$70,641,210**

Table 14

SEIF Revenues by Source			
Source	**FY2018**	**FY2019**	**FY2020**
Regional Greenhouse Gas Initiative Auction Revenue:	$ 44,217,148	$ 51,388,456	$ 54,804,407
RGGI Set Aside Allowances Revenue:	$ 3,440,000	$ 3,520,000	$ 2,983,293
Cove Point Settlement:	$ 8,000,000	$ 8,000,000	
Alternative Compliance Payment Revenue:	$ 54,935	$ 68,869	$ 41,089
Fund Interest Revenue:	$ 3,061,027	$ 3,844,103	$ 3,077,621
Exelon/Pepco MFN Revenue:	$ 4,620,576		
AltaGas Representation Revenue	$ 250,000		
AltaGas Merger Revenue		$ 30,320,000	
TOTAL	**$ 63,643,686**	**$ 97,141,428**	**$ 60,906,410**

Table 15

RGGI Results & Projections by Auction and Fiscal Year						
RGGI Auctions	**Allowances Sold**	**Allowance Price**	**Total RGGI Revenue**	**FY20**	**FY21**	**FY22**
45	2,620,524	$5.20	$13,626,725	$13,626,725		
46	2,620,525	$5.61	$14,701,145	$14,701,145		
47	2,330,353	$5.65	$13,166,494	$13,166,494		
48	2,314,790	$5.76	$13,333,190	$13,333,190		
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	*2,400,372*	*$2.38*	*$5,712,885*		*$5,712,885*	
52	*2,400,372*	*$2.38*	*$5,712,885*		*$5,712,885*	
53	*2,400,373*	*$2.38*	*$5,712,888*			*$5,712,888*
54	*2,400,373*	*$2.38*	*$5,712,888*			*$5,712,888*
55	*2,166,149*	*$2.44*	*$5,285,404*			*$5,285,404*
56	*2,166,150*	*$2.44*	*$5,285,406*			*$5,285,406*
TOTAL				**$54,827,554**	**$44,696,541**	**$21,996,586**

Note: Auctions 51 through 56, noted in italics, have not yet occurred and are thus projections. The floor price established by RGGI is used in these projections.

Appendices B and C

To help make the size of the FY20 SEIF report more manageable, Appendix B and Appendix C of the FY20 SEIF report are being published separately in a second document. This second document will be referred to as Volume 2. Volume 2 of the FY20 SEIF report will include Appendix B, which lists awardees and addresses receiving multiple awards in FY20, and Appendix C, which list all FY20 grantees by name and award amount.