PUBLIC SERVICE COMMISSION OF MARYLAND

Report on the Community Solar Energy Generating Systems (CSEGS) Pilot Program

In compliance with
Chapters 346 and 347 of the Acts of 2015
Section 2(c)
Annotated Code of Maryland

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I. Introduction

In 2015, the Maryland General Assembly enacted Senate Bill 398/House Bill 1087 establishing the Community Solar Energy Generating System Program (Pilot). The Pilot started in 2017, after the Maryland Public Service Commission (Commission) promulgated regulations and established a work group in consultation with the Maryland Energy Administration (MEA). The Pilot began serving subscribers in 2018. In 2019, the General Assembly extended the Pilot and mandated a report by the Commission to the legislature by July 1, 2022, that considered recommendations by the work group. Specifically, Section 2 of SB 398/HB 1087 required the work group to identify and examine:

1) a framework for valuation of the costs and benefits related to community solar and virtual net energy metering;
2) the costs and benefits of community solar energy generating systems to participating subscribers and to nonsubscriber ratepayers;
3) an appropriate credit mechanism and operational structure that allows a community renewable solar energy generating system to minimize administrative costs to an electric company, electric supplier, or subscriber organization;
4) the benefits to and the technical and cost impacts of community solar programs and virtual net energy metering on an electric company's distribution grid;
5) issues, benefits, and concerns related to the participation of electric companies, including investor–owned utilities, in community solar programs and projects, including owners and operators of the projects;
6) whether and how community solar projects or virtual net energy metering have a substantially different technical impact on the distribution system than traditional net energy metering;
7) identification of any impacts on the standard offer service procurement process;
8) a review of community solar programs and cost–benefit studies in other states;
9) whether and how community solar programs can help reduce the cost of compliance with the renewable energy portfolio standard;
10) how community solar energy generating systems can impact locational marginal prices in Maryland;
11) the impacts of the pilot program on energy costs, reliability, and equitable cost allocation for ratepayers;

12) how community solar project developers can increase participation by low– and moderate–income retail electric customers in community solar projects;
13) the progress of the community solar energy generating pilot program under § 7–306.1 of the Public Utilities Article, as enacted by Section 1 of this Act, in attracting low– and moderate–income retail electric customers;
14) whether community solar energy generating systems are an overall net benefit in helping Maryland achieve its distributed generation and renewable goals;
15) any other matters the workgroup considers relevant; and
16) any additional factors the Public Service Commission considers appropriate.

Members of the Net Metering Work Group (Work Group) submitted findings in different comments to the Commission in June 2022.[1] This report summarizes those findings and contains the Commission's recommendations to the General Assembly on next steps for the Pilot.

The Pilot has attracted significant development interest and continues to grow in the number of projects and capacity. To date, approximately 43 projects with a total of approximately 59 MW of capacity are operational. This represents approximately 10% of the available program capacity. Subsequently, the results of the benefits and costs analyzed by the members of the Work Group listed below are limited and conclusions are preliminary. Analysis after the Pilot concludes could provide additional insight.

- The limited number of operating projects hampers the ability to draw conclusions in areas such as energy market impacts, transmission benefits, impacts to the price of locational marginal pricing (LMP) energy, and impacts to the Standard Offer Service (SOS) procurement process due to the small scale compared to the total grid demand.[2]
- Local solar policies and permitting processes have impacted CSEGS development.
- Siting projects can be challenging due to local policies and a lack of additional financial mechanisms to build projects on preferred sites such as brownfields and rooftops.
- Some system benefits may be realizable if utilities are able to coordinate with CSEGS on the location and dispatch of energy from projects. This may require more integrated system planning or a requirement for pairing CSEGS with energy storage.

[1] See comments filed by the Stakeholder Coalition, June 29, 2022. Maillog No. 241259.

[2] A survey of Subscriber Organizations indicated that the respondents attributed delays to issues with local zoning, supply chain problems, staffing issues related to the COVID-19 pandemic, and in some cases, issues related to utility interconnection timing and expenses. The Commission has addressed these issues by increasing the deadline for project completion through regulation and by granting waivers to the deadline for good cause shown.

- Ratepayers are ultimately responsible for recovery of program costs, including subscriber credits and utility administrative costs. At this time, program costs are relatively minor but will scale with the increase in installed capacity.
- Pilot projects have the potential to provide a significant contribution to the renewable energy portfolio standard (RPS) capacity required for photovoltaic solar.
- CSEGS provide a viable option to customers who may otherwise be unable to access solar, and does so in a manner that enhances Low- and Moderate-Income (LMI) participation and supports equity and environmental justice State policies

Based on the available data and the comments made by members of the Work Group, the Commission recommends the General Assembly consider the following issues when looking at future CSEGS legislation.

- Maximizing low- and moderate-income participation and benefits from the Pilot.
- Coordinating potential CSEGS projects with the electric companies for grid and market benefits.
- Pairing CSEGS projects with energy storage for grid and market benefits.
- Investigating additional funding mechanisms for CSEGS projects to lower costs to ratepayers.
- Addressing local planning and development requirements that may impact CSEGS development.
- Investigating additional funding mechanisms for LMI projects and for siting projects on preferred locations like brownfields and rooftops.
- Additional cost-benefit analysis, which may require additional funding.

II. Summary of Legislative History

The Community Solar Energy Generating System Act (Act) was enacted under Chapters 346 and 347, Acts of 2015, and codified at Sections 7-306.1 and 7-306.2, Public Utilities Article, Maryland *Annotated Code* (PUA) and amended in 2019, 2021, and 2022. Consistent with the Act, the Staff of the Maryland Public Service Commission (Staff), in collaboration with MEA, the Maryland Office of People's Counsel (OPC), the electric utility companies participating in the Pilot[3], and representatives of various organizations with interests in building, developing, or operating CSEGS, formed a work group which developed regulations to implement the Act. The Commission considered these regulations in Rulemaking 56 (RM56) and set the available capacity, manner and timing of enrollment, and certain preferences for LMI customers. Consumer protections and bonding requirements were also adopted. Two subsequent rulemakings were held under RM56 in order to accommodate changes in the statute and

[3] The participating electric companies are Baltimore Gas and Electric Company (BGE), The Potomac Edison Company (PE), Potomac Electric Power Company (Pepco), and Delmarva Power and Light Company (Delmarva).

ongoing issues involved in the Pilot, such as the timing for completion of CSEGS, methods for enrollment through a customer representative, and expanded colocation under specific circumstances. Current regulations may be found at COMAR 20.62.[4]

The Act directed the Commission, in consultation with MEA, to convene a stakeholder work group to study the value and costs of the Pilot and make recommendations to the General Assembly on the advisability of establishing a permanent program. The above mentioned Work Group met to discuss the Pilot. Members of the Work Group submitted separate recommendations to the Commission.

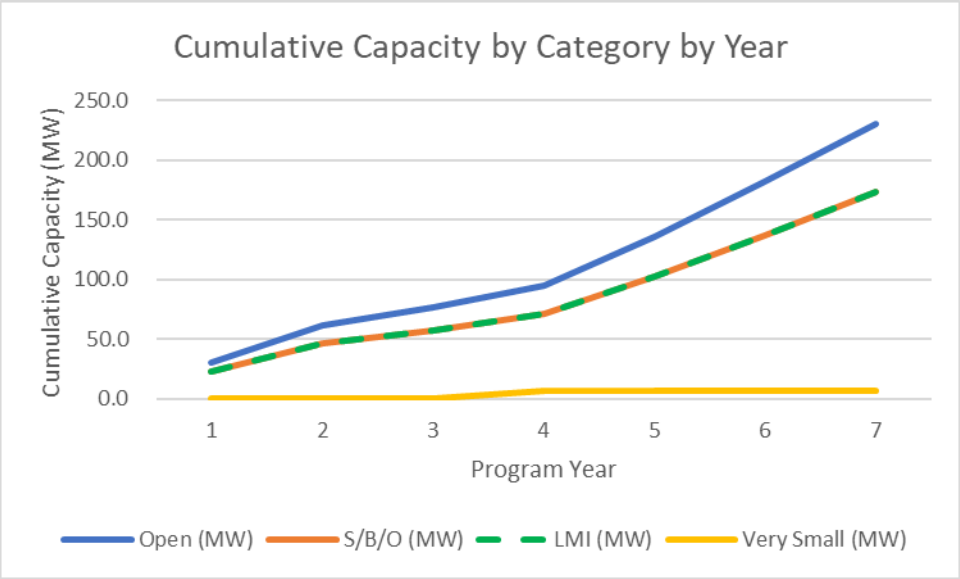
III. Program History

Since 2016, the Commission has completed three rulemakings for the Pilot. The capacity of the program has increased from 193MW to 400MW and finally to 600MW. There are three categories for eligible projects including:

1) "Open," representing a CSEGS that could serve any type of customer in any combination, with no site restrictions;
2) "Small, Brownfield, or Other (SBO)," which represents small CSEGSs (less than 500kW), with siting restricted to brownfield locations, and "other" projects, which includes rooftop arrays (in addition, any project agreeing to subscribe more than 51 percent of the subscribed energy to LMI customers was allowed to receive capacity in this category); and
3) "LMI" which requires at least 10 percent of subscribed energy to be provided to low income customers, with an additional 20 percent subscribed to any mix of low and/or moderate income subscribers.

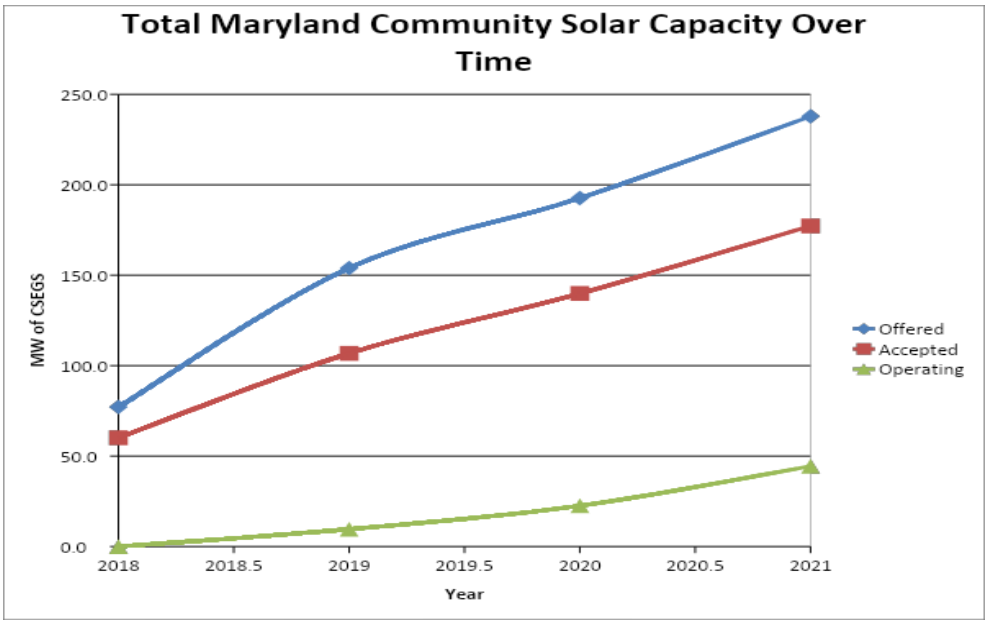
[4] http://www.dsd.state.md.us/COMAR/subtitle_chapters/20_Chapters.aspx#Subtitle62

Figure 1 Pilot Capacity by Year



As shown in Figure 2, the total capacity being offered, accepted, and operated under the Pilot has increased gradually. As of March 31, 2022, the amount of operating capacity has increased to approximately 59MW statewide. As of the most recent PSC Net Metering Report in 2021, the total 12-month CSEGS credits to subscribers amounted to 57,847,852 kWh ($5,961,895), and the total lifetime CSEGS credits amounted to 84,106,389 kWh ($9,122,650).

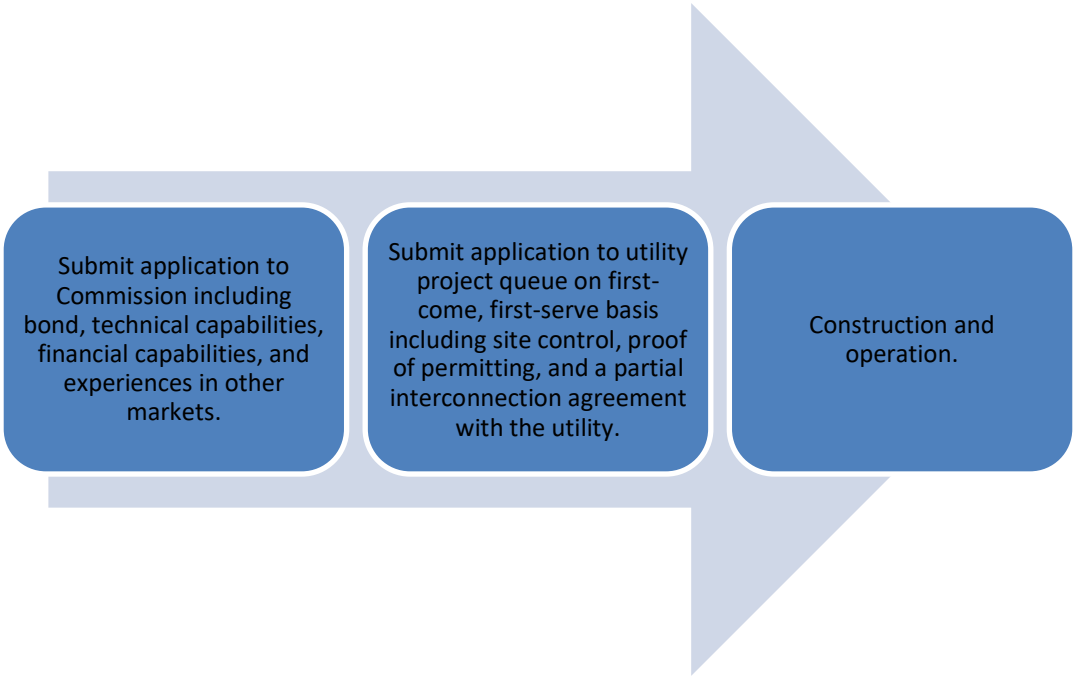
Figure 2 Pilot Capacity over Time



All Maryland utilities are eligible to participate in the Pilot, while the State's four investor-owned utilities (IOUs) are required to participate. Each of the participating electric companies has a community solar tariff on file, and each is responsible for performing the interconnection required to bring a CSEGS into operation with the electrical grid when the Community Solar provider has met the Pilot application requirements, including initial zoning permission from the county in which it will be located.

The application process is outlined in Figure 3 below. A project developer must be authorized by the Commission to participate in the Pilot. As of June 15, 2022, there were 188 authorized subscriber organizations with 459 projects registered.[5]

Figure 3 CSEGS Pilot Application Process



Subscribers receive a credit on their utility bills for energy provided by their subscription. The credit is intended to provide the same value on an energy basis (in kilowatt-hours) as the energy produced and credited to rooftop solar customers that generate from a facility located behind the customer's utility meter. As with rooftop net metered customers, any outstanding banked energy credit is purchased by the utility in April of each year at the supply rate, exclusive of transmission rates. Depending on the utility's credit calculation, the credit is applied to the subscriber's monthly bill as a credit amount in either dollars or kWhs.[6] The average rates for each company's residential customers are shown below.

[5] Not all PSC-authorized projects move forward to enter a utility's project queue.
[6] PE uses a kWh credit while BGE, Delmarva, and Pepco use a dollar credit.

Table 1 Retail Subscription Credits by Utility

Average Total Retail Subscription Credits (January – June 2022)				
Credit $/kWh	BGE	Pepco	DPL	PE
Residential Class	$0.126	$0.137	$0.152	kWh only

Per regulation, each utility in the Pilot provides information on the number of Pilot projects in its queue and project status on its website.[7] The number of operating projects is shown below for the period through the end of the first quarter of 2022. Developing and waitlisted projects are shown through June of 2022.

Table 2 Summary of Projects by Status

	Operating Projects		Developing Projects		Waitlisted Projects	
	# of Projects	Capacity (MW)	# of Projects	Capacity (MW)	# of Projects	Capacity (MW)
BGE	27	34.66	67	104.15	22	25.91
Delmarva	3	4.98	12	19.20	13	26.00
PE	4	5.98	12	23.10	7	14.00
Pepco	9	13.15	28	44.29	8	2.98
Total	**43**	**58.77**	**119**	**190.74**	**50**	**68.89**

As a result of depreciation, state and federal tax credits, favorable land leases, and various state and local incentives, subscriber organizations are able to offer electricity to subscribers at rates below those offered by the local utility. Subscriber organizations tend to offer energy cost discounts to three different categories of customers: 1) commercial subscribers, 2) LMI residential subscribers, and 3) all other residential subscribers. Approximately 97 percent of the energy has been subscribed to residential subscribers. These subscribers see a typical discount of five to 10 percent compared to retail rates. LMI subscribers see an average discount of about 23 percent.[8]

The electric companies have various methods for recovering the revenues associated with applying CSEGS subscription credits to customer accounts. BGE, Pepco, and DPL recover CSEGS distribution bill credits through their respective decoupling mechanisms. Transmission and energy cost CSEGS credits are largely offset through reduced sales, with remaining costs recovered through transmission rates and the SOS energy cost adjustment mechanism.[9] Distribution bill credits recovered through decoupling mechanisms increase distribution rates

[7] COMAR 20.62.03.04

[8] Source: Maryland Energy Administration

[9] CSEGS reduce energy demand and payments to Standard Offer Service suppliers and retail suppliers. The remaining energy cost true up is performed through the energy cost adjustment mechanism.

for all customers.[10] Table 3 shows estimated total distribution credits by utility over the life of the Pilot to date. [11]

Table 3: Total Community Solar Distribution Bill Credits[12]

Utility	2018	2019	2020	2021	2022 YTD	Total
BGE	$406	$48,936	$509,964	$1,179,987	$99,644	$1,838,937
Delmarva	-	$101,152	$405,003	$575,911	$104,116	$1,186,182
PE	-	$4,013	$118,137	$484,762	$63,093	$670,005
Pepco	$1,356	$281,949	$1,051,773	$1,266,811	$180,445	$2,782,334

Table 4 shows estimated total residential distribution credits by utility over the life of Community Solar to date as well as estimated average residential bill impact over the last 12 months. Similar to Table 3, the values presented for PE are proxy values.

[10] Decoupling mechanisms are class-specific so residential CSEGS distribution credits are recovered from residential customers.

[11] Please note that the values presented for PE are proxy values. Unlike the three other investor-owned utilities, PE applies a kWh reduction to subscribers' metered kWh use, rather than bill credits. This results in a reduction in volumetric-based revenue, which has the potential to be eventually recovered in base distribution and transmission rates from all customers. PE does not have a decoupling mechanism; therefore, distribution credits are not recovered from PE distribution customers.

[12] YTD for Pepco and DPL is through March 2023; February 2022 for PE; and January 2022 for BGE. BGE distribution credits estimated for Schedules R, RL, G, and GL. PE proxy distribution credits estimated for Schedules R and G. Pepco, DPL, BGE, PE response to Staff DRs 2-1, 2-2, 2-3.

Table 4: Residential Community Solar Distribution Bill Credits and Bill Impacts[13]

Utility	2018	2019	2020	2021	2022 YTD	Total	Average Bill Impact
BGE	$353	$48,706	$507,332	$1,116,467	$94,140	$1,766,998	$0.08
Delmarva	-	$74,179	$354,914	$478,286	$88,561	$995,940	$0.23
PE	-	$3,995	$117,657	$463,829	$57,265	$642,746	-
Pepco	$14	$275,978	$1,050,375	$1,256,682	$177,675	$2,760,724	$0.20

Staff estimates that the distribution bill impact of Community Solar at full deployment (600 MW) is approximately $1.70 per month for BGE residential customers.[14] For DPL, Staff estimates the residential distribution bill impact at full deployment is approximately $2.10 per month.[15] For Pepco, Staff estimates the residential distribution bill impact at full deployment is approximately $2.00 per month.[16] Approximate average residential transmission bill impacts at full deployment are also provided in Table 6.

Table 5: Average Approximate Residential Community Solar Distribution and Transmission Bill Impacts at Full Deployment[17]

	BGE	Delmarva	Pepco
Approximate Distribution Bill Impacts	$1.70	$2.10	$2.00
Approximate Transmission Bill Impacts	$0.40	$0.50	$0.50

[13] YTD for Pepco and DPL is through March 2023; February 2022 for PE; and January 2022 for BGE. BGE distribution credits estimated for Schedules R and RL. PE proxy distribution credits estimated for Schedule R. Pepco, DPL, BGE, PE response to Staff DRs 2-1, 2-2, 2-3. Customer counts from April 2022 Electric Choice Enrollment Monthly Report.

[14] Based on 305.4 MW DC modeled in PVWatts (https://pvwatts.nrel.gov/pvwatts.php), total Schedule R distribution credit in April 2022 (BGE response Staff DR 2-1) and total residential customers from April 2022 Electric Choice Enrollment Monthly Report. Assume 96 percent of output subscribed by residential customers based on data to date.

[15] Based on 59.64 MW DC modeled in PVWatts, average total Schedule R distribution credit in 2021 (DPL response Staff DR 2-1) and total residential customers from April 2022 Electric Choice Enrollment Monthly Report. Assume 84 percent of output subscribed by residential customers based on data to date.

[16] Based on 180.6 MW DC modeled in PVWatts, average total Schedule R distribution credit May 2021–April 2022 (Pepco response Staff DR 2-1) and total residential customers from April 2022 Electric Choice Enrollment Monthly Report. Assume 99 percent of output subscribed by residential customers based on data to date.

[17] Approximate transmission bill impacts at full deployment based on the same assumptions as described for distribution bill impacts at full deployment based on current residential SOS transmission rates.

IV. Responses to Legislative Issues

As noted previously, the Commission received comments and recommendations from several members of the Work Group. Based on the information available, the Commission provides a summary below of responses to the issues outlined by the Act.

1. Community solar and net metering costs and benefits valuation framework

Several members of the Work Group reviewed the costs and benefits of the Pilot by comparing the system and energy market benefits against the operating costs and costs of subscription credits in each utility territory. This review provided a high-level overview of potential costs and benefits of the Pilot; however, the data was limited and the review could be more robust. The Commission recommends a full benefit-cost analysis be performed at the end of the Pilot using a method endorsed by the National Standard Practice Manual and akin to the tests performed for other state programs like EmPOWER Maryland. The General Assembly could direct subscriber organizations to fund the analysis prior to a full program deployment. A similar test could be run on the net metering program holistically. In that case, the utilities could fund the study and provide the findings to the Commission to be included in the annual net metering report.

2. CSEGS costs and benefits to participating subscribers and to nonsubscriber ratepayers

Below is a list of some of the costs and potential benefits of the Pilot. This list could be included as part of a comprehensive benefit-cost analysis test.

Table 6 Summary of Potential Costs and Benefits of the Pilot

	Description
Utility and Power Sector Impacts	Includes (but not limited to) the costs and benefits associated with CSEGS on the power sector, such as costs of the program, distribution system impacts, transmission system impacts, and more.
Societal Impacts	Includes (but not limited to) the costs and benefits associated with CSEGS on society, such as greenhouse gas emission reductions, societal health impacts, and more.
Participant Impacts	Includes (but not limited to) costs and benefits associated with participation in the Pilot, such as bill savings and more.

3. Appropriate credit mechanism and operational structure that minimizes administrative costs to an electric company, electric supplier, or subscriber organization

Information on this issue was not included in the Work Group comments received by the Commission. This topic can be reviewed at the end of the Pilot prior to a full program deployment.

4. Benefits, technical impacts, and cost impacts of community solar programs and virtual net energy metering on an electric company's distribution grid

The main impact to the distribution grid from CSEGS identified by members of the Work Group is deferred capacity. Deferred capacity refers to the reduction in the hosting capacity of the circuit on which a CSEGS is deployed by the rating of the generator. An electric utility may consider many factors when evaluating a new CSEGS generator, including circuit voltage, wire size at generator location, existing generation on the circuit, existing load on the circuit, and distance from substation, upstream protection devices, upstream regulation devices, and any potential circuit ties during outage events.

When a CSEGS project is deployed, any future system planning must be done assuming an operating spectrum from where the system is operating at full output, to the system not operating at all. This adds to the complexity of planning the utility's system to ensure the reliability and quality of distribution service. According to the Pilot utilities, they do not have the ability to measure and analyze benefits, and they have been unable to assess reliability benefits for any project built to date. The Commission finds, however, that prudent and just-and-reasonable distribution planning is a core competency and responsibility of distribution utilities. Performance Incentive Mechanisms and other legislature-directed policies could be explored to require utilities to use standard grid-planning practices to optimize the benefits and stem any ratepayer cost impacts from CSEGS.

There are potential system benefits if CSEGS are deployed in a manner that defers distribution capacity investments. However, in order to realize these benefits, there must be some certainty that a DER will be available and producing energy at the interconnected circuit's peak in order for its capacity to be used in distribution planning.

5. Issues, benefits, and concerns related to the participation of electric companies, including investor–owned utilities, in community solar programs and projects, including owners and operators of the projects

Although electric companies are permitted to participate in the Pilot as subscriber organizations, through 2022, no utility has operated a project. Initially, utilities considered participation but were not permitted by the Commission to recover project costs in base rates. To date, no projects have been proposed by electric companies. The electric companies could further support the Pilot through working with CSEGS in the interconnection and siting processes. Performance incentive mechanisms or other policies could be explored to encourage this partnership.

6. Whether and how community solar projects or virtual net energy metering have a substantially different technical impact on the distribution system than traditional net energy metering

This issue was touched on in the discussion under number 3 of this section. Further analysis could be completed at the end of the Pilot prior to a full program deployment.

7. Identification of any impacts on the standard offer service procurement process

Electric companies use the energy generated from a CSEGS to offset purchases from wholesale electricity suppliers for SOS.[18] In this sense, CSEGS output replaces a portion of the energy that would have otherwise been procured through the SOS bidding process. The SOS bid process is conducted up to four times per year pursuant to a Commission-approved procurement process. Bids and the resulting SOS prices are observed by each utility and by the Commission's bid consultant. The price activity and bid performance are reviewed by the consultant and Staff prior to approval of the bids and subject to a Commission hearing.[19] During the course of the Pilot, there have been no bid issues that resulted in bid rejections or otherwise noted as irregular. All of the bids during the Pilot period from 2017 through the present have been accepted by the Commission.

In response to Staff data requests, all utilities stated that they have not conducted an analysis of the impact of the Community Solar pilot on SOS costs or the amounts billed to SOS customers for SOS. BGE, Pepco, and Delmarva stated that there has been no impact on SOS

[18] PUA 7-306.2 (d)(8)

[19] Case Nos. 9064 and 9052.

bidding from the Community Solar pilot. PE stated that it is unclear whether there has been any impact to SOS bidding from the Community Solar pilot and noted that winning SOS bids continue to follow general market conditions; there has been no discernible change in bidding behavior. SOS costs are pass-through costs, unlike distribution costs, and utilities earn a return on SOS sales, although it is less than the utility's overall rate of return for distribution. Community Solar may impact the revenue and cost true-up process for SOS, but there is no evidence to date that this is happening. Utilities pay Community Solar subscriber organizations the PJM LMPs for unsubscribed generation. Unsubscribed generation is generation exported to the distribution system but not contracted with any customer. Unsubscribed generation reduces SOS purchases by utilities on behalf of SOS customers. While PJM LMPs are generally lower than SOS prices, the amount of unsubscribed generation to date is minimal relative to SOS sales.

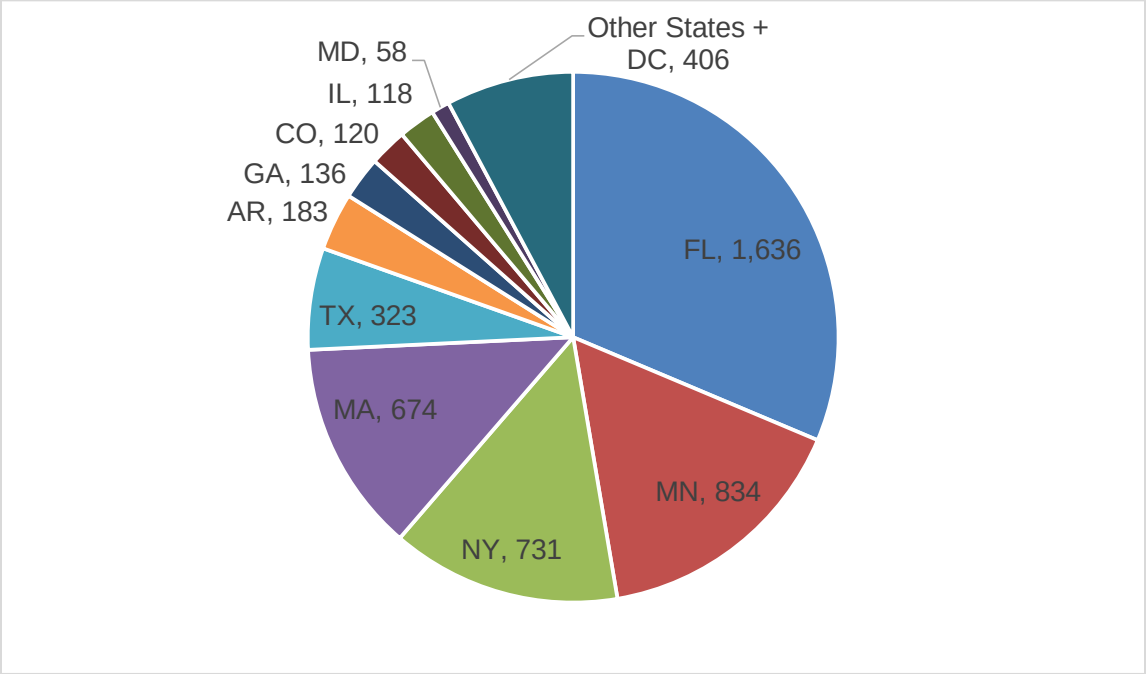
8. Review of community solar programs and cost–benefit studies in other states

Through December 2021, approximately 40 states were operating community solar programs. As shown in the graphic below, there is a wide variety of project capacity.[20] The National Renewable Energy Laboratory tracks the solar program activities of various states.[21] Of the states listed, 18 have program capacity ranging from approximately 10 to 600 MW (Maryland included). New York has a program with capacity shown as 3,000 MW. Most of the programs in other states are a combination of mandated and incentive driven programs. Florida and Wisconsin have programs that are utility led. Typically, programs require the subscriber to be served in the same utility service territory as the facility. California requires subscribers to be located within a certain distance of the facility. Most of the programs have limitations on the size of the facility and the amount of capacity that can be served to a single customer, or limitations on the customer classes.

[20] **Source:** Sharing the Sun Community Solar Project Data (December 2021) https://data.nrel.gov/submissions/185 - Chan, Gabriel; Heeter, Jenny; Xu, Kaifeng (2022): Sharing the Sun Community Solar Project Data (December 2021). National Renewable Energy Laboratory. 10.7799/1845718

[21] Cook, Jeffrey J., and Monisha Shah. 2018. Focusing the Sun: State Considerations for Designing Community Solar Policy. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-70663 https://www.nrel.gov/docs/fy18osti/70663.pdf

Figure 4 Comparison of Community Solar Capacity in Other States



9. Whether and how community solar programs can help reduce the cost of compliance with the renewable energy portfolio standard

As of June 14, 2022, subscriber organizations have applied for authorization to build 711.5 MWs of community solar in the Pilot. To date, 1,550.2 MWs of solar in Maryland has been registered in PJM-GATS (Generation Attribute Tracking System) reflecting the installed base of photovoltaic solar, which is earning solar renewable energy credits (SRECs).[22] Of this amount, approximately 886 MW is rooftop solar based on the 2021 Net Metering Report.[23] As such, community solar could make a significant contribution with regard to meeting Maryland's Renewable Energy Portfolio Standard. Under the current law, Maryland will require approximately 6,200 MWs of solar to meet the RPS requirements in 2030.

[22] The GATS system is operated by PJM Environmental Information Services, Inc. and is designed to track the ownership and trading of generation attributes. See the 2020 RPS Annual Report, page 2. https://www.psc.state.md.us/wp-content/uploads/CY20-RPS-Annual-Report_Final.pdf

[23] See 2021 Net Metering Report, page 7 https://www.psc.state.md.us/wp-content/uploads/2021-Net-Metering-Report-FINAL.pdf

10. How CSEGS can impact locational marginal prices in Maryland

The introduction of new generation, including solar, would place downward pressure on LMPs. The LMP is a way for wholesale electric powered energy expenses to mirror the price of electricity at different locations, accounting for the patterns of load, generation, and the physical limits of the transmission system. The LMP at a load-sector is a weighted average of all of the nodes within the load area. If the system were to be completely unconstrained and have no losses, all LMPs would be the same, reflecting the lowest cost of serving load. The generator with the lowest-price electricity offer would serve the incremental MW of load, and electricity from that generator might be able to flow to any node at the transmission device. LMPs differ among locations because transmission and reserve constraints prevent the next-cheapest MW of electric energy from reaching all locations of the grid. As LMPs are established hourly throughout the day, it is possible that solar generation during the peak sun hours may reduce the LMPs during the middle of the day by reducing actual transmission circuit loading. LMPs would be expected to increase during the peak loading hours of the morning or evening, but there would be some cost savings during the middle of the day.

11. Impacts of the Pilot on energy costs, reliability, and equitable cost allocation for ratepayers

Members of the Work Group noted that modeling of expense reductions or system improvements related to reliability or resiliency may be possible, but it was not pursued in the current state of the Pilot due to the low level of deployed CSEGS. This could be reviewed at the end of the Pilot prior to a full program deployment.

12. How community solar project developers can increase participation by low– and moderate–income retail electric customers in community solar projects

LMI income qualification criteria are set forth in COMAR 20.62.01.02 B(12) and B(13)[24] and COMAR 20.62.03.03 D(1).[25] The Commission provided additional guidance in a February 14,

[24] (12) "Low income" means a subscriber whose gross annual household income is at or below 175 percent of the federal poverty level for the year of subscription or who is certified as eligible for any federal, state, or local assistance program that limits participation to households whose income is at or below 175 percent of the federal poverty limit.
(13) "Moderate income" means a subscriber whose gross annual household income is at or below 80 percent of the median income for Maryland for the year of subscription.

[25] D(1) The Commission may establish alternate means aside from income verification or participation in the Maryland Office of Home Energy Programs' assistance programs to verify the status of Low- and Moderate-Income subscribers.

2020 letter order,[26] which authorized subscriber organizations to qualify LMI subscribers based on enrollment in State and federal low-income programs and residence in census districts with a concentration of low-income persons as determined by the United States Census Bureau. In addition, the Commission granted waivers to subscribers serving LMI customers who received electricity as part of a commercial class but who otherwise qualified for community solar service. Finally, as discussed below, MEA awarded grants to parties serving LMI customers.

13. The progress of the Pilot in attracting low– and moderate–income retail electric customers

The Pilot had a difficult start, with zoning concerns in four counties that significantly delayed or limited the implementation of Community Solar projects.[27] Thirteen LMI projects and an additional three "SL" projects (SBO projects with 51% LMI capacity) were withdrawn during the first two years. Although 92.2 MW of capacity were available in the LMI and SBO categories in the first two years (April 2017-November 2019), only 11.6 MW was actually allocated to LMI or SL projects. The bulk of these projects started coming online from November 2020 through February 2021.[28]

LMI marketing was initially hampered by three issues: 1) a lack of clarity around the criteria of 'moderate income' (which is 80 percent of statewide median income as opposed to 80 percent of the area median income); 2) identifying the required documentation to validate income and the retention requirement to support an audit; and 3) alternate methods to verify low- and moderate-income eligibilities. The first issue was resolved by discussions between Staff, MEA, and some of the subscriber organizations, while the latter two issues were resolved by the PSC's February 14, 2020 letter order. Formal appeals to the Commission for various types of waivers, combined with specific income information or income requirements that were not tied to persons by name, presented new issues that needed to be addressed.

LMI enrollment was primarily accomplished by four organizations: Nexamp, Turning Point Energy, Common Energy, and Neighborhood Sun. LMI marketing was normally conducted for a project within six months of the project going online. No project was delayed in order to obtain the required number of low- or moderate-income subscribers. Low- and moderate-income households were subscribed to arrays in both the LMI and SBO categories.

As of May 1, 2022, MEA had awarded grants totalling $7,064,095 to 23 Community Solar projects. Twelve of these projects have capacity in the LMI category, while the remaining 11 have capacity in the Small/Brownfield/Other category and guarantee at least 51% of their

[26] https://webapp.psc.state.md.us/newIntranet/Content.cfm?ServerFilePath=%5C%5CColdfusion%5CLetterOrder%5CPosted%5C61459.doc

[27] Anne Arundel, Carroll, Harford and Baltimore Counties.

[28] Several projects were online earlier, and some projects are still trying to overcome legal and permitting hurdles.

output energy will be subscribed to LMI customers. When online, these 23 projects represent 55.512 MW of solar capacity, with at least 24.130 MW dedicated to LMI subscribers. Nine of these projects are currently online. The average capacity of an LMI subscription is 7.25 kW, so these 23 projects would be expected to support 3,331 LMI subscribers over a 20-year period (or 66,620 subscriber-years of solar energy).

Table 7: Capacity Available by Program Year (as of June 2022)

Year	Annual L & SL Capacity (MW)	L & SL Capacity Allocated (MW)	L & SL Capacity Online (MW)
1	46.1	7.1	6.2
2	46.1	4.5	1.9
3	23.1	2.1	0.0
4	26.9	4.6	0.0
5	61.5	0.0	0.0
6	69.2	0.0	0.0
7	73.0	0.0	0.0

Table 8: Cumulative Capacity Available by End of Program Year

Year	Cumulative L & SL Capacity (MW)	Cumulative L & SL Capacity Allocated (MW)	Cumulative L & SL Online (MW)
1	46.1	7.1	6.2
2	92.2	11.6	8.1
3	115.3	13.8	8.1
4	142.2	18.4	8.1
5	203.6	18.4	8.1
6	272.8	18.4	8.1
7	345.8	18.4	8.1

Challenges remain in reaching LMI customers. Additional financial incentives could aid in making more projects LMI accessible and in subscribing more customers to projects. If resolved, more LMI customers may be able and willing to participate in the Pilot.

14. Whether CSEGS are an overall net benefit in helping Maryland achieve its distributed generation and renewable goals

Community Solar projects may provide some offsetting cost-related benefits that are compared against program costs and non-financial benefits related to societal or economic measures. CSEGS help the State meet the solar and renewable energy goals of the RPS and can help the State to meet its emissions targets under the Greenhouse Gas Reduction Act. During the period when solar installations exceed the required solar carve-out of the Renewable Portfolio Standard, SREC rates fall, which may result in lower costs to wholesale and retail suppliers. Potentially, these effects could lower costs to all ratepayers. As an example, in January 2016, the value of an SREC was approximately $120/MWh. This value fell to approximately $5/MWh in October 2017. It should also be noted that since the Pilot began, environmental equity and justice have also become recognized as important State policies, and CSEGS contribute to meeting these policy objectives.

Conclusion

The Commission appreciates the opportunity to provide information on the CSEGS Pilot to the General Assembly. Due to the limited data available, the Commission recommends a full benefit-cost analysis be conducted at the end of the Pilot in a similar manner to other state programs, such as EmPOWER Maryland. Based on the available data and the filings made by members of the Work Group, the Commission recommends the General Assembly consider the following issues when looking at future legislation on the Pilot.

- Maximizing low-and-moderate income (LMI) participation and benefits from the Pilot.
- Coordinating potential CSEGS projects with the electric companies for grid and market benefits.
- Pairing CSEGS projects with energy storage to increase both grid and market benefits.
- Investigating additional funding mechanisms for CSEGS projects to lower costs to ratepayers.
- Addressing local planning and development requirements that may impact CSEGS development.
- Investigating additional funding mechanisms for LMI projects and for siting projects on preferred locations like brownfields and rooftops.
- Additional cost-benefit analysis, which may require additional funding.

Appendices:

Appendix A: Subscriber Organization Application
Appendix B: MEA LMI Experience

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

Appendix A: Subscriber Organization Application

Submission Guidelines

You must use the attached form to submit your Application. Please remove this instruction sheet prior to filing. If you need more space than is provided on this form or if you are attaching exhibits, please attach and label each separate attachment to identify the Application item to which the attachment corresponds. You are also required to file an electronic version of this document **(excluding confidential information)** using Adobe PDF.

To file an Application with the Maryland Public Service Commission, submit:

- A signed and verified original
- 17 copies of the Application
- An electronic version of the Application and attachments
- Application fee of $400 for Type A or $50 for Type B or C. (payable to "Public Service Commission of Maryland")

Send all materials to:

Executive Secretary

Maryland Public Service Commission
6 Saint Paul St.
Baltimore, MD 21202

Concurrently with the filing of the Application with the Executive Secretary, a paper copy of the Application shall be submitted to the Office of People's Counsel, 6 Saint Paul St., 21st Floor, Baltimore, MD 21202.

Questions pertaining to completion of this Application may be directed to the Public Service Commission Staff, Energy Analysis and Planning Division, at the above address or you may call the Division at (410) 767-8085.

If your answer to any of the Application items changes pending Application review, or while you are operating within the State of Maryland, you are under a duty to inform the Commission within 30 days.

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

1. Identity of the Applicant:

(Must match the entity listed on the certificate issued by the State Department of Assessments and Taxation of Maryland if applicable)

Legal Name: _____

Current Address: _____

_____

_____

Street Address (if different than above): _____

2. Indicate the type of Subscriber Organization authorization requested. Select only one.

☐ Type A. Proposed Owner and/or Operator of Community Solar Energy Generating System(s) Authorization requires a Subscriber Organization Bond. *See* Attachment A. The bond amount is $10,000 plus $25,000 per each MW of program capacity in excess of 1MW for which the Applicant seeks to apply. Application Fee is $400.

☐ Type B. Proposed Collective Group of Subscribers of a (single) Community Solar Energy Generating System. Complete Attachment C. A bond is not required for program participation of 1MW or less. The bond amount is $25,000 per each MW of program capacity in excess of 1MW for which the Applicant seeks to apply. *See* Attachment A. Application Fee is $50.

☐ Type C. Proposed Non-profit Owner and/or Operator of Community Solar Energy Generating System(s) Authorization requires a Subscriber Organization Bond if program capacity requested exceeds 1MW. *See* Attachment A. The bond amount is $25,000 per each MW of program capacity in excess of 1MW for which the Applicant seeks to apply. Application Fee is $50.

3. Complete Attachment B for each facility that the Applicant plans to apply for capacity in the Pilot Program.

4. Applicant Operations:

In completing, check all boxes that apply in each subsection.

Identify the functions that the Applicant will undertake on its own behalf, and those that it expects to either partner with others to provide or contract to others.

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

(Note: Check more than one box for a particular function if more than one applies.)

	Applicant	Partner/Contract
Develop	☐	☐
Finance	☐	☐
Build	☐	☐
Own	☐	☐
Solicit Subscribers	☐	☐
Operate CSEGS*	☐	☐
Manage Subscriptions*	☐	☐

* "Operate CSEGS" means to operate and maintain the CSEGS facility; "Manage Subscriptions" means maintaining the ongoing subscriber relationships, customer service to subscribers, and data interface with utilities on subscriptions.

Identify which types of subscribers the Applicant intends to serve (Check all that apply):

- ☐ Commercial and Industrial
- ☐ Residential
- ☐ Low and Moderate Income

Identify each investor owned utility where the Applicant intends to operate (Check all that apply):

- ☐ Baltimore Gas and Electric
- ☐ Pepco
- ☐ Delmarva Power & Light
- ☐ Potomac Edison
- ☐ Southern Maryland Electric Cooperative

Identify the number of CSEGS the Applicant intends to operate (Check one):
(Note: Check the box for "Single CSEGS" if Applicant is a special purpose entity organized to legally own a single CSEGS.)

- ☐ Single CSEGS
- ☐ Multiple CSEGS

Identify whether Applicant will accept either or both of the following.

- ☐ Security Deposits (as defined in COMAR Regulations 20.62.01.02)
- ☐ Prepaid Subscription Fees (as defined in COMAR Regulations 20.62.05.11)

List the names and identification numbers of any affiliated approved Subscriber Organizations. Submit attachments if needed.

☐ Applicant has no affiliated approved Subscriber Organizations

Name	Number

"Affiliate" means a person that directly or indirectly, or through one or more intermediaries, controls, is controlled by, or is under common control with, or has, directly or indirectly, any economic interest in another person.

5. Regulatory Contact:

Name and Title: _____
Address: _____
_____
_____

Telephone: _____
Fax: _____
E-Mail: _____

6. Primary Corporate Officers/General Partners/Managing Partners (if applicable)

President/General Partner/Managing Partner:
Name: _____

Business Address: _____
_____

CEO:

Name: _____

Business Address: _____
_____

7. Applicant's Business Form (if applicable):

- ☐ Proprietorship
- ☐ Corporation
- ☐ Partnership
- ☐ Limited Partnership
- ☐ Limited Liability Company
- ☐ Limited Liability Partnership
- ☐ Other: _____

8. Actions Against Applicant. Provide the following information for the Applicant.

☐ Actions such as Suspensions/Revocations, Limitations, Reprimands, Fines, Consent Decrees, or other similar actions have been taken or are pending against the Applicant. If checked, provide an attachment describing the action; and include docket numbers, offense dates, and case numbers, if applicable.

☐ No such action has been taken.

9. Technical and Managerial Competency: The Applicant must submit, in an attachment, a statement of technical and managerial competency. The attachment should also include a description of the Applicant and current U.S. operations, intended operations in Maryland, past work experience relevant to the community solar pilot program, general plans for partnering or contracting pilot program functions, and other items or information that demonstrate technical and managerial competency. Finally, list all states where applicant has built or operates a community solar installation at the time of this application.

10. Affiliated Applications: List the name of each company or entity which is affiliated with the applicant, if that company or entity has separately applied for, or intends to apply for, admission to the Maryland CSEGS Program as a Subscriber Organization. Describe the nature of each affiliation.

11. Application Fee: The Applicant must enclose the required application fee of $400 (Type A) or $50 (Types B and C)

Applicant: _____

By: _____

Print Name Here (Sign line above)

Title: _____

Date: _____

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

AFFIDAVIT OF GENERAL COMPLIANCE

State of _____ :
: ss.
County of _____ :

_____, Affiant, being duly [sworn/affirmed] according to law, deposes and says that:

That he/she is the_____(office of Affiant) of_____(Name of Applicant);

That he/she is authorized to and does make this affidavit for said Applicant;

That the Applicant herein certifies to the Commission that:

The Applicant agrees to comply with the terms and conditions of all applicable electricity company tariffs and agreements with electricity companies.

The Applicant agrees to comply with all applicable requirements of the Federal Energy Regulatory Commission and PJM Interconnection, LLC.

The Applicant agrees to comply with all applicable Federal and state consumer protection and environmental laws and regulations, and Maryland PSC regulations, fees, assessment, and requirements.

The Applicant has obtained all the licenses and permits required to operate as a Subscriber Organization in the State of Maryland. The Applicant agrees that it will obtain all further licenses and permits required to carry out any future activity pursuant to its role as an approved Subscriber Organization, prior to undertaking the respective activity for which local, state or Federal licenses or permits are required.

The Applicant agrees that it shall neither disclose nor resell individual residential customer data provided to the Applicant by any Maryland electricity company. Disclosure or resale of individual non-residential customer data provided to the Applicant by a Maryland electricity company will be governed by customer contract.

The Applicant, including any of its affiliates engaged in the sale of electricity or related services, the general partners, corporate officers or directors, or limited liability company members, managers or officers of the Applicant or its affiliates:

1. Has had no civil, criminal or regulatory sanctions or penalties imposed against it within the previous ten years pursuant to any State or Federal consumer

protection law or regulation; and has not ever been convicted of a felony; or, alternatively

2. Has disclosed by attachment all such sanctions, penalties or convictions.

The Applicant further certifies that it:

1. Is not under involuntary bankruptcy/insolvency proceedings including but not limited to, the appointment of a receiver, liquidator, or trustee of the subscriber organization, or a decree by such court adjudging the subscriber organization bankrupt or insolvent or sequestering any substantial part of its property or a petition to declare bankruptcy as to reorganize the subscriber organization; and

2. Has not filed a voluntary petition in bankruptcy under any provision of any Federal or State bankruptcy/insolvency law, or its consent to the filing of any bankruptcy or reorganization petition against it under any similar law; or without limiting the generality of the foregoing, a Subscriber Organization admitted in writing its inability to pay its debts generally as they became due, or consents to the appointment of a receiver, trustee or liquidator of it or of all or any part of its property.

That the facts above set forth are true and correct to the best of his/her knowledge, information, and belief and that he/she expects said Applicant to be able to prove the same at any hearing hereof.

_____

Signature of Affiant

Sworn and subscribed before me this_____day of_____,_____.

_____

Signature of official administering oath

My Commission expires _____

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

VERIFICATION

State of _____ :
: ss.
County of _____ :

_____, Affiant, being duly [sworn/affirmed] according to law, deposes and says that:

That he/she is the_____(office of Affiant) of_____(Name of Applicant);

That he/she is authorized to and does make this affidavit for said Applicant;

The Applicant understands that the making of false statement(s) herein may be grounds for denying the Application or, if later discovered, for revoking any authority granted pursuant to the Application. This Application is subject to all applicable sections of the Annotated Code of Maryland as may be amended from time to time relating to perjury and falsification in official matters.

That the Applicant will supplement this Application in the event the Commission modifies the approval requirements, or requests further information and that requiring such modification or further information will delay processing of the application.

That the Applicant agrees that an approval issued pursuant to this Application may not be transferred without Commission approval.

That the Applicant understands that authorization as a Subscriber Organization requires participation in the CSEGS Pilot Program which requires the Applicant to retain project, subscriber and any other information as requested and provide that information to the Maryland Public Service Commission upon request or through required reports.

That the Applicant understands that CSEGS Pilot Program tariffs, rules, or other requirements may change over the Pilot Program in accordance with Orders or other regulatory action of the Maryland Public Service Commission.

That the facts above set forth are true and correct to the best of his/her knowledge, information, and belief and that he/she expects said Applicant to be able to prove the same at any hearing hereof.

_____

Signature of Affiant

Sworn and subscribed before me this_____day of_____,_____.

_____

Signature of official administering oath

My Commission expires _____

Attachment A

Subscriber Organization Bond **(Insurer Name)**

Bond No. _____

KNOWN ALL MEN BY THESE PRESENTS:

That we, **Company Name**, as Principal(s) and **Insurance Co.**, a company authorized to transact surety business in the State of **Maryland**, as Surety, are held and firmly bound unto **Maryland Public Service Commission**, as Obligee, in the penal sum of _____ **($) DOLLARS**, lawful money of the United States of America, for payment of which, well and truly be made, we hereby bind ourselves, our heirs, executors, administrators, legal representatives and successors, jointly and severally, firmly by these presents.

WHEREAS, the Principal has obtained or is about to obtain, from the Obligee, authorization to do business as a **Subscriber Organization** in Maryland under the Maryland Annotated Code, Public Utilities Article, § 7–306.2 and Code of Maryland Regulations, Title 20.

NOW THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that if the said Principal shall comply with the provisions of the said Code, licenses, all applicable Ordinances, Rules and Regulations, and any Amendments thereto, then this obligation shall not be payable, but shall otherwise remain in full force and effect, subject to the payment as set forth below.

This obligation shall become effective on the _____ day of _____ , _____ , and shall remain in force until cancelled.

PAYMENT under this bond shall be due if the Commission determines that **Company Name** is financially insolvent or unable to meet its obligations as an authorized **Subscriber Organization** in Maryland. **Insurance Co.** will permit the Commission to direct that the proceeds of this bond be paid or disbursed to satisfy the Subscriber Organization's financial obligations to the Commission or other Maryland governmental entity. **Insurance Co.** will permit a Maryland court to direct proceeds of the bond be paid to a person that has obtained a judgment against a authorized subscriber organization and has previously attempted to collect the judgment through all other means available through the Court.

PROVIDED, that the penal amount of this Bond may not exceed its face value during the time the Bond remains in force and the Surety may terminate its liability hereunder as to future acts of the Principal at any time by giving sixty (60) days written notice of such termination to the Obligee.

SIGNED AND SEALED this day of_____, _____.

(Subscriber Organization Name)

BY: (Principal Signature)
Principal Name, Title

(Insurer/Bond Company)

BY: (Signature of Insurer)
Insurer Name, Attorney-in-fact

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

Attachment B: Planned Project Information

Address of Facility Site: (Street, City, ZIP)

_____

_____

_____

Local Government Jurisdiction (City, County, Town, Etc.):

_____

Pilot Program Category – ☐ Open ☐ LMI ☐ Small/Brownfield/Other

Project Capacity in kilowatts A/C _____

Expected Number of Subscribers for Project:
☐ Residential _____

% of LMI subscribers_____% Low Income Customers _____

☐ Commercial _____

☐ Industrial > 600 kW demand. _____

Utility Service Territory ☐ BGE ☐DPL ☐ Potomac Edison ☐ PEPCO ☐ SMECO

Applicant should check each box for which the applicant intends to:

☐ Own the facility;
☐ Operate the facility;
☐ Own and operate the facility, or
☐ Collectively control the facility as a group of subscribers.

Applicant should check the appropriate box for the proposed facility,
Indicate whether the applicant intends to:

☐ Convert an existing facility that it will own or operate
☐ Convert an existing facility that it will control as a group of subscribers
☐ Develop a new facility that it will operate
☐ Develop a new facility that it will operate as a group of subscribers
☐ Develop a new facility, for eventual operation by a different S/O
☐ Own or operate a new facility to be developed by others
☐ Other describe) _____

☐ Check box if deposits will be required of customers

(Applicant should attach additional pages for each project as needed)

Subscriber Organization Application for Authorization to Participate in the Community Solar Energy Generating System ("CSEGS") Pilot Program

Attachment C: Members of Subscriber Group

Members of Subscriber Group must match Subscriber List provided to Electric Co.

Member Name	Service Address	Utility Account Number

(Applicant should attach additional pages for member list as needed)

Appendix B: MEA LMI Experience

Determining the actual non-payment risk from LMI subscribers.

MEA established a program, run by the Climate Access Fund, to guarantee the payment of LMI subscribers for the first seven years of project operation. One of the purposes of this program was to determine the actual late-payment and non-payment risk from LMI community solar subscribers. However, at the time of this writing, no project subscribing to this service had commenced operation, so no data was available. MEA continues to monitor industry interest.

Although the MEA program provided guaranteed payment to the financiers, developers with national portfolios of community solar projects (Nautilus, Ameresco, Nexamp) did not find the guaranteed payments necessary in order to secure project financing; the risk to project investors of potential non-payment by LMI subscribers was minimized through the aggregation of tens of MWs of projects nationwide. By contrast, smaller community solar development companies developing single projects in Maryland are interested. The smaller the overall returns in a portfolio, the greater the risk of subscriber nonpayment to an investor.

In addition, the impact of MEA's Community Solar LMI-PPA (Power Purchase Agreement) grant program on the guarantee program should not be overlooked. As described below, the LMI-PPA grant program allows for a developer to receive up-front grant capital to serve LMI subscribers, whereas the guaranteed product is provided only in the case of default, and, per market practices, requires a fee. The availability of up-front, free capital for LMI projects is measurably more attractive to investors than the availability of a credit enhancement product in the event of subscriber default. Were the Community Solar LMI-PPA grant funds not available, it is likely that developer interest in the guaranty product would be greater; however, the degree of impact is uncertain, and MEA continues to work with stakeholders to determine the best mechanism for de-risking projects to increase availability of community solar projects that are affordable for LMI subscribers.

Marketing the MEA program

After reviewing research conducted by the Clean Energy States Alliance (CESA), MEA established two grant programs to encourage LMI subscriptions. One of the programs was available only to subscribers to a community solar project using an ownership model. As no projects were built within the first three years of the Pilot Program using an ownership model, MEA canceled this grant program. The second program, the Community Solar LMI-PPA Grant Program provided an incentive for subscriber organizations to provide subscriber contracts to the LMI community that: 1) provided deep energy discounts to the LMI community over the first 20 years of project operation, 2) provided short mandatory contract lengths, and 3) made it cost-effective for the subscriber organizations to conduct income validation of LMI subscribers. MEA did not advertise the Community Solar program directly to subscribers but

focused on marketing to developers and subscriber organizations to reduce the ultimate cost to subscribers (allowing the subscriber organizations to do their own marketing), but the grant ensured the LMI subscription provided significant value to a potential LMI subscriber.

MEA attempted to conduct a consumer education program to ensure that LMI subscribers understood the concept of a Power Purchase Agreement. Unfortunately, this program was cut short as the COVID-19 pandemic prevented public education and training meetings with LMI communities.

Starting in late 2022, using data collected by the Commission, MEA will host a public-facing website which will provide official information collected from the subscriber organizations concerning each community solar project from the time of capacity allocation (by the electric utility) until the project goes online.

The Problem of Privacy and the DOE LMI Enrollment Platform

Subscriber organizations have faced challenges finding and enrolling LMI customers; specifically obtaining income information proving eligibility. In general, this information must be obtained from the potential customer. This information is often held by utilities and various government agencies; however, the information is properly deemed confidential. For this reason, the Commission's February 14, 2020 letter order has been helpful to subscriber organizations because it authorized residency in a low-income ZIP code census tract as an additional means of verifying income eligibility for the Pilot program. In a similar fashion, Staff is investigating the wisdom and feasibility of participating in a U.S. Department of Energy demonstration project whereby an income-based platform is made available to S.O. seeking to identify LMI customers who are interested in obtaining solar energy. Income information would come from potential customers, but that information would not be public.

The effect of MEA's Community Solar LMI-PPA Grant Program

MEA was concerned that the perceived added financial risk associated with low- and moderate-income subscribers would dissuade development of projects in this category or projects that were developed would not provide terms sufficient to entice LMI households to subscribe to a project. The concern was two-fold: 1) financiers would translate the perceived added financial risk into high interest rates for project financing, thus reducing the ultimate cost savings to the LMI community, and 2) in order to offer increased savings to LMI subscribers, minimum contract lengths would be too long. It was believed that developers would focus on the Open and SBO categories and would only select the LMI category as a last resort.

As the program progressed, most projects approved during the first year would not have come online until late in the second, or possibly, the middle of the third year at the earliest. Given that the Pilot Program was originally designed to be a three-year program, there would have been insufficient time to develop solutions to these concerns.

MEA believed the LMI portion of the Pilot needed support to get off the ground and offered the Community Solar LMI-PPA Grant Program beginning in November 2017. The grant program provided funding to incentivize subscriber organizations to offer significant energy rate discounts to LMI subscribers, and to offer power purchase agreements with short minimum contract periods (or easy, inexpensive methods to break the PPA contract). MEA did not prescribe the amount of discount or the length of the contract period but instead published a variable incentive structure that developers could use as they desired. Nine applications were received in the first year. After further consideration, one developer decided to withdraw both of its applications over concerns that the grant would complicate or prevent ultimate sale of the projects.[29] Seven grants were awarded, although three of these projects were ultimately withdrawn.[30]

The conditions of the grant were modified in the second year of the program, with the net effect of allowing grants with lower savings to the subscriber, adding an incentive to assist with LMI income validation, and removing the incentive for short contract lengths (as it was determined that all developers were going to offer short contract lengths even without an incentive). There were nine applications during the second year of the grant program, with three of the projects ultimately being withdrawn. There were two applications and grants during the third year of the grant program. One project is complete, and the other is in development and likely to be completed. There were four applications during the fourth grant year, but only sufficient funding to award three grants. Nine applications were received during the fifth grant year (including the one project not funded in year four). One project withdrew but each of the remaining eight projects received awards.

In the first two years of the Community Solar Pilot Program (years where projects have had sufficient time to be completed), nine projects received LMI capacity from the utility. Five of these projects received MEA grants, with four being completed and serving the LMI community. At the time of this writing, the fifth project was in construction. As of December 23, 2021, the date of this analysis, none of the projects that did not receive an MEA grant were currently operational.

It is more difficult to identify the effect of the grant on projects in the SBO category as only one utility (BGE) identifies projects that are committed to 51% LMI capacity. BGE identified these projects on its website with a designation of "SL." Nevertheless, in only the first two years of the Pilot, seven projects received capacity in the SL category. Six of these projects received MEA grants, with five of these achieving operational status. In addition, one project that did NOT apply for an MEA award also began operations.

[29] This concern proved to be unfounded as many projects with MEA Community Solar LMI-PPA grants were subsequently sold.

[30] As the grant funding is only paid when the project produces saleable energy, no State funding was expended on projects that were withdrawn.

From the above data, it is evident that the MEA grant achieved the objective of encouraging LMI and SL project development. As there was only one project operating that had not received an MEA grant, there was insufficient data to determine if the MEA grant resulted in savings to the LMI community that exceeds the savings from a non-grant project.