

Testimony of the Advocates for Herring Bay¹
Regarding HB 908: Community Solar Energy Generating Systems Program
Submitted by Stephen Marley, February 21, 2023

*Favorable with regard to provisions addressing the impacts of community solar projects
on forests and woodlands*

The Advocates for Herring Bay (AHB) commend the sponsors of HB 908 for including provisions that expressly require developers of community solar projects to comply with the Forest Conservation Act (FCA) and submit reports to the Public Service Commission (PSC) on the anticipated impact of the facilities on trees and forest cover at the sites.

These measures are an important first step in managing the impacts of community solar facilities on Maryland's forests and other natural places that provide valuable ecosystem services. Affirming the applicability of the FCA and other environmental laws should close gaps in the current patchwork of state and local regulation. Similarly, greater transparency about forestry impacts will allow policymakers to tailor policies to actual practices. Such reforms are needed because:

- **The potential impacts on forests are real.** During the community solar pilot program, only a quarter—26 percent—of the capacity was slated to be built on surfaces like rooftops that would have little or no ecological impact. Ground-mounted systems accounted for the other 74 percent, and two-thirds of that ground-mounted capacity was slated to be built on greenfield sites that included acreage with high ecosystem services value, *including some parcels that are completely forested*. (See attached summary of AHB's 198-page profile of the individual projects in the pilot program through June 2022.)
- **Community solar projects are built in areas already suffering from forest loss.** By design, "distributed" power supplies like community solar projects are in the same utility service territory as their subscribers. In practice, this means that nearly 80 percent of community solar facilities will be built in the more populous BGE-Pepco service regions. Those are the same areas that experienced the greatest forest loss over the 2013-2018 period, according to a 2022 study by the Hughes Center on Agro-Ecology.²
- **Net-metered projects should avoid clearing trees.** In contrast to other power suppliers, community solar developers in Maryland receive a guaranteed price for their generation through a system of net energy metering (NEM) payments funded in part by utility customers who are not participating in the program.³ Community solar projects are paid at the same NEM rate as residential rooftop systems, which have higher costs and no impact on forests. Having all net-metered projects conserve forests would ensure a better balance between Maryland's goals for clean energy, clean water, and healthy habitats and communities.

Attachment

¹ The Advocates for Herring Bay, Inc. is a community-based environmental group in Anne Arundel County.

² See [Technical Study of Changes in Forest Cover and Tree Canopy in Maryland](#), November 2022.

³ According to an August 2022 analysis by the staff of the PSC in [RM56](#), net metering payments for the 638 megawatts of capacity authorized during the community solar pilot program will cost residential customers in the BGE, Pepco, and Delmarva systems an average of about \$25 to \$30 a year while those projects are operating. Those annual costs would increase in the future under the permanent program outlined in HB908.

AHB Attachment: Ecological Profiles of Active Community Solar Projects in Maryland

Prepared by the Advocates for Herring Bay
for the Maryland Public Service Commission, Docket RM56

In August 2022, AHB prepared a 198-page profile of the ecological features of the parcels being used by active CSEGS projects in the BGE, Pepco, Delmarva, and Potomac Edison service areas.⁴ We developed those materials because of our dual interests in expanding clean energy and protecting the biodiversity of Maryland's natural resources. The maps and the estimates of the Ecosystem Services Value (ESV) of the parcels were taken from the *Greenprint* GIS website developed by the Maryland Department of Natural Resources (DNR).⁵

The projects covered in AHB's profiles represent a total of about 340 megawatts of capacity, which would impact approximately 1,700 acres across the four utilities.⁶ As shown in the graphs below:

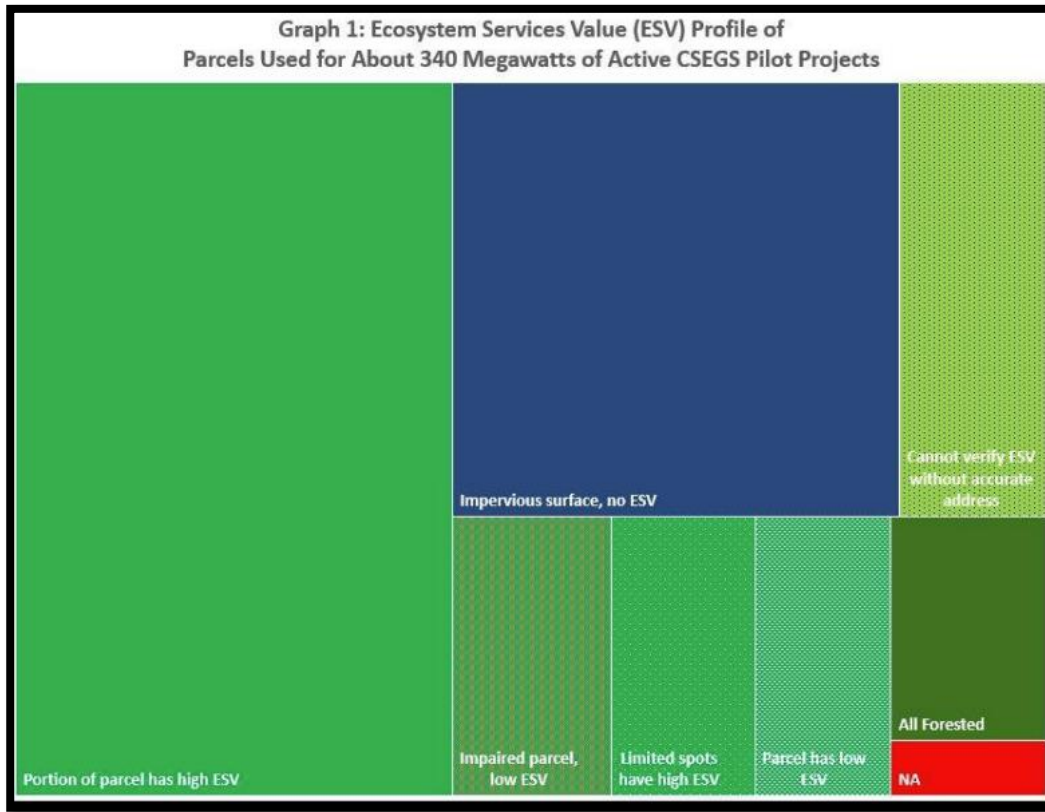
- In the absence of ecological siting conditions:
 - Some forested parcels with high ecosystem services value are being cleared for the construction of net-metered community solar projects;
 - Although many partially forested parcels *could* be developed without impacting acreage with high ESV, decisions about whether to build on acreage with high ESV depend on the economic interests of developers and property owners.
- Applying ecological siting conditions to CSEGS projects would not impede Maryland's progress in meeting its decarbonization goals:
 - Developers are demonstrating that installing solar generation on commercial rooftops and other impervious surfaces is financially viable at Maryland's net metering rates;
 - Apart from forested parcels, virtually all of the tracts being used for ground-mounted arrays have enough acreage with low ESV to accommodate solar arrays without impairing acreage with high ESV.

As illustrated in Graph 1 on the next page, ground-mounted solar arrays accounted for 74 percent of the capacity of active CSEGS projects (or about 1,260 acres, shown in green), and rooftop/canopy systems the remaining 26 percent (or roughly 440 acres, shown in blue). ***Two-thirds of the ground-mounted capacity is slated to be built on greenfield sites that include acreage with high ecosystem services value (ESV), including some that are completely forested.*** Parcels with low or limited ESV are hosting 14 percent of the ground-mounted capacity, and previously developed surfaces (e.g., landfills) another 8 percent. The ESV of the remaining 12 percent cannot be verified because of data limitations. Examples of parcels in each category are shown in Exhibit 1.

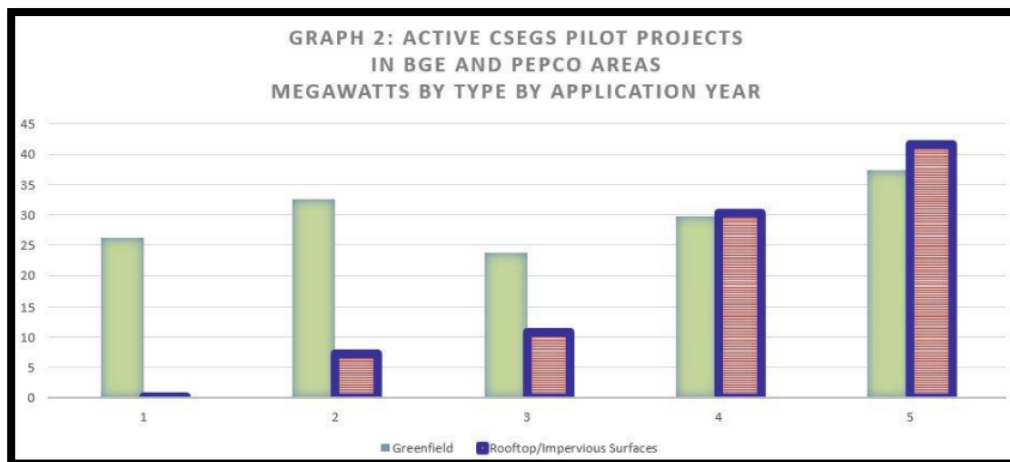
⁴ See [Ecological Features of Active Community Solar Projects in Maryland as of June 2022](#).

⁵ DNR's *Greenprint* GIS is available at <https://geodata.md.gov/greenprint/>

⁶ This estimate assumes an average of 5 acres per megawatt of solar capacity.

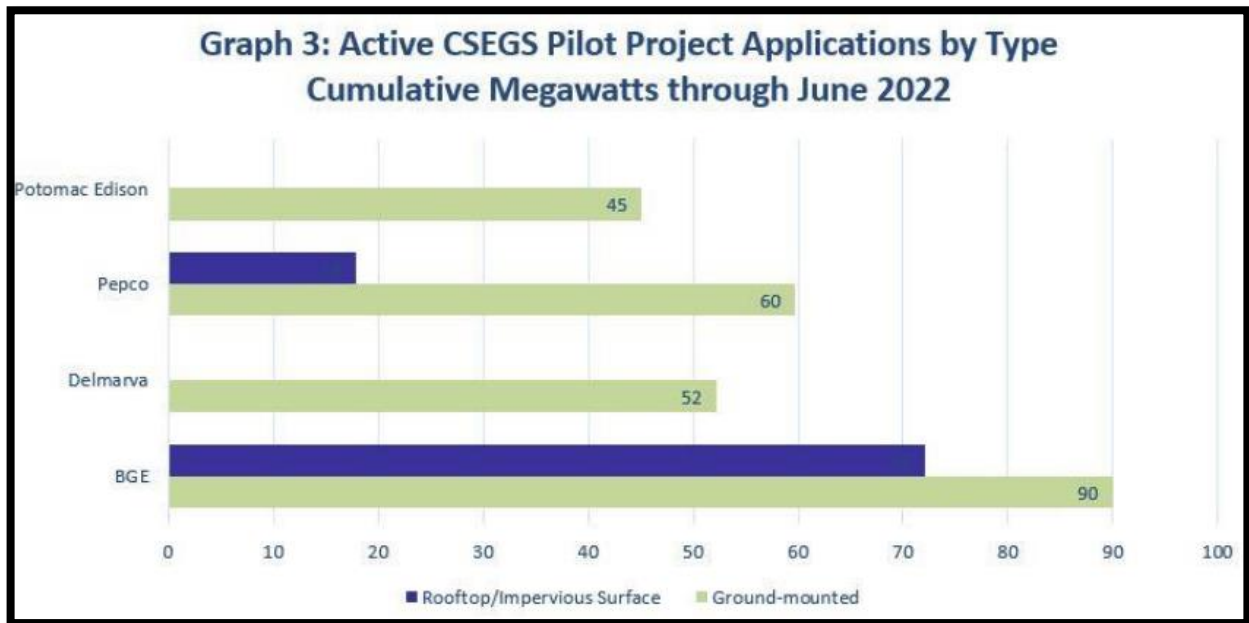


As illustrated in Graph 2 *applications for installing CEGES projects on impervious surfaces surged in Years 4 and 5 of the Pilot Program*. This trend partly reflects the changing dynamics of the solar market. For example, the National Renewable Energy Lab reports that solar generation costs for commercial rooftop installations were about one-third lower in 2020 than when the Pilot Program began in 2015.⁷ A review of the utilities’ application lists also suggests, at least anecdotally, that the growth in rooftop projects resulted from new firms entering Maryland’s CSEGS market.



⁷ During that same period, residential rooftop costs fell by about 25 percent and utility-scale generation by almost 50 percent. See National Renewable Energy Laboratory, *U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks: Q1 2021*, November 2021, pages 75-76.

As seen in Graph 3 below, the BGE region accounted for 80 percent of applications for rooftop/canopy projects, with the rest being built in Pepco's region. Nearly half of the capacity in the Pepco region is being built at subway stations in the Washington DC area, while projects in the BGE's territory are primarily being installed on commercial rooftops. As a result of these investments, the share of rooftop capacity in BGE's portfolio grew from 25 percent at the end of Year 3 to 45 percent by June 2022.



AHB Exhibit 1: Examples of Types of Parcels Used for CSEGS Projects through June 2022

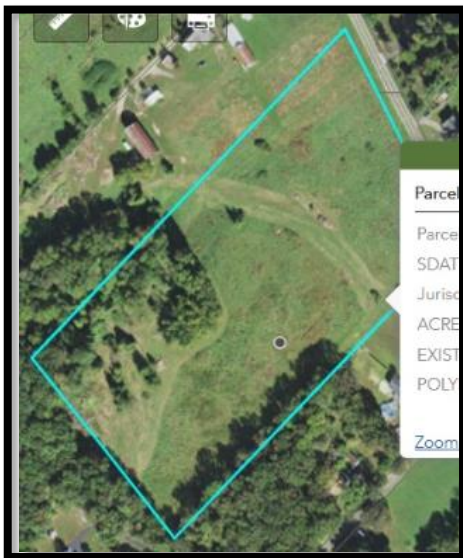
Forested parcel



Portion of parcel has high ESV



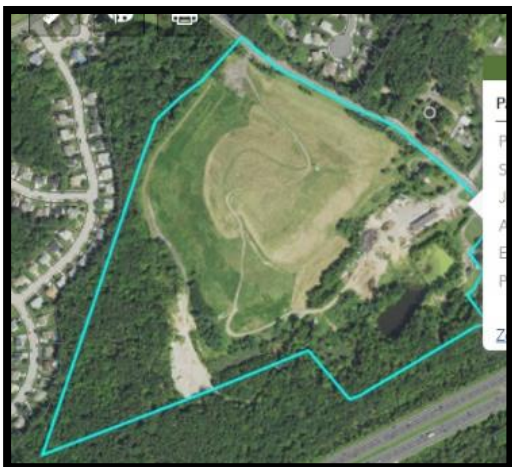
Parcel has limited acreage with high ESV



Parcel has acreage with no measurable ESV



Previously developed surface (landfill)



Impervious surface (commercial rooftop)

