

Testimony of the Advocates for Herring Bay¹ Regarding HB 827 – Solar Energy – DGCPCN Submitted by Kathleen Gramp, March 11, 2025

Favorable, assuming adoption of sponsor amendments

HB 827 would establish a new regulatory framework for solar generation projects between 2 and 5 megawatts of capacity (or DGCPCN²), allowing those projects to be approved on an expedited basis if they meet standard conditions and procedural requirements. Those conditions include compliance with guidelines aimed at reducing impacts on forested lands and stormwater runoff.

The Advocates for Herring Bay (AHB) commend the sponsors for including provisions that address the ecological and water quality impacts of ground-mounted solar projects. Benefits of enacting the bill as amended include:

Forest protection. The environmental preservation conditions in Section 7-207.4(B)(2)(III) would prohibit forest clearance except where necessary to reduce shading near the perimeter of the site or for certain specified needs. Linking that condition to expedited approval creates an incentive to avoid siting projects on parcels that are largely or completely forested while still allowing for incidental clearing. Without those protections, more projects like those shown in Attachment 1 will be built on forested land, including some in the jurisdictions that experienced the greatest forest loss over the 2013-2018 period according to a 2022 study by the Hughes Center on Agro-Ecology.³

Stormwater management. Section 7-207.4(B)(2)(IV) as amended would align Maryland's licensing conditions with best practices for estimating and minimizing runoff from solar projects. Those updates are urgently needed, especially in the state's MS4 jurisdictions. Maryland's existing solar stormwater guidelines were written over a decade ago, before the state began experiencing more intense rain events stemming from climate change or had experience with projects across Maryland's diverse geographic regions. They also predate recent studies that show that maintaining well-drained soils and deep-rooted vegetation under and between the panels—the site's "green infrastructure"—is key to reducing runoff from solar sites (See Attachment 2).⁴

The guidelines in HB 827 will encourage solar developers to take a holistic approach to estimating stormwater runoff, one that accounts for the characteristics of the soils at each site (before and after construction), the ground covers under and between the solar panels, and the impacts of the solar panels themselves, which may vary in size, distribution, and technology. That approach also allows for consideration of varied rainfall levels, unlike Maryland's current guidelines, which are designed for one inch of rain.

Taken together, the forestry and stormwater provisions in HB 827 will help safeguard Maryland's environmental resources as we decarbonize our electricity supplies. AHB urges the Committee to issue a favorable report on HB 827 as amended.

Thank you for considering our views and supplemental information in Attachments 1 and 2.

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

 ² DGCPCN refers to Distributed Generation projects receiving a Certificate of Public Convenience and Necessity.
 ³ See <u>Technical Study of Changes in Forest Cover and Tree Canopy in Maryland</u>, November 2022.

⁴ See National Renewable Energy Laboratory's (NREL) <u>overview of the PV-SMaRT program</u>, which includes a link to the PV-SMaRT calculator; Great Plains Institute, <u>Best Practices: Photovoltaic Stormwater Management Research</u> and <u>Testing (PV-SMaRT)</u>, January 2023; and Penn State University, <u>Solar Farms with Stormwater Controls</u> <u>Mitigate Runoff, Erosion</u>, July 18, 2024.

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Attachment 1: Examples of Solar Projects Sited on Forested Parcel

Maps of ecosystems services values are from MD DNR's Greenprint GIS

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5505 Kirby Road, Clinton, MD (in service) 1.32 megawatts



Aerial image of parcel Pre-construction



Aerial image of parcel Post-construction



Highest Ecosystem Services Values Greens- \$900 to \$2,800/acre/year Blues - \$2,700 to \$3,600+/acre/year

10711 Cross Trail Road, Brandywine, MD (in service) 0.875 megawatts Image of parcel Pre-construction Aerial image of parcel Pre-construction Aligned of parcel Pre-construction

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AHB Attachment 2: Background Information on Solar Stormwater Issues (continued >)



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AHB Attachment 2 (continued >)⁵

⁵ The estimates of runoff presented in this Attachment were calculated using NREL's PV-SMaRT calculator, version 3.1. Unless otherwise noted, the estimates assume that the ground cover under the solar panels is turf grass. In addition, the estimates of runoff account for the mitigation benefits of the "disconnection" distances between rows of panels. That is, the amounts shown in the graphs are the incremental amounts of runoff not addressed by the vegetation between the rows.

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AHB Attachment 2 (end)







Runoff also is affected by the size and location of the panels and developers' choice of panel technology The panels are impervious and concentrate runoff. The extent and distribution of those impacts will be affected by the contours of the site as well as whether the panels are fixed or tilt in response to environmental conditions

Estimates of runoff at solar sites need to be stress-tested for variations in the severity of future rainfall events

