

Solar Photovoltaic Systems Recovery, Reuse, and Recycling Working Group

Background and Purpose

The Climate Solutions Now Act of 2022 modified the membership of the Maryland Commission on Climate Change (MCCC) to include the Solar Photovoltaic Systems Recovery, Reuse, and Recycling Working Group. The Working Group must do the following:

- **Review solar photovoltaic systems currently used in the state**, including:
 - I. Examining the expected economically productive life cycle of the systems;
 - II. Reviewing the materials that are used, have been used, or may be used in solar photovoltaic systems sold in the state. Including identifying materials that can be recycled or that exhibit any characteristics of hazardous waste under state or federal law; and
 - III. Identifying the number of solar photovoltaic systems in use and estimating the potential impacts on the state's landfill capacity of disposing the systems in the state's landfills;
- **Review other programs** on solar photovoltaic systems recycling, disposal, and decommissioning;
- **Identifying ongoing and recent studies** related to solar photovoltaic systems recycling, life-cycle analysis, and end-of-life programs;
- **Review industry approved best practices** for managing end-of-life solar photovoltaic systems and their components, including the extent to which the systems and components may be:
 - I. If not damaged or in need of repair, reused for a similar purpose;
 - II. If not substantially damaged, refurbished and reused for a similar purpose
 - III. Recycled and the components recovered for reuse;
 - IV. For components that do not exhibit any characteristics of hazardous waste under state or federal law, safely disposed of in construction and demolition or municipal solid waste landfills; and
 - V. For components that exhibit any characteristics of hazardous waste under state or federal, safely disposed of in accordance with state and federal requirements;

- **Perform an economic analysis** to determine the potential impact of solar photovoltaic systems recovery, reuse, and recycling on ratepayers, including a comparison to the economic impact on ratepayers of decommissioning, storing waste, and other costs associated with the end of life of other forms of energy generation;
- **Perform an impact assessment** to examine the environmental impacts of various solar photovoltaic systems' end-of-life scenarios, including the scenarios specified under item (4) of this subsection, compared to the life-cycle environmental impacts of non solar energy generation sources in the state, including the environmental impacts of decommissioning, disposal, and long-term waste storage;
- **Perform an impact assessment** to examine the environmental and economic benefits of generating energy from solar photovoltaics systems including a comparison to the environmental and economic benefits of non solar energy generation sources in the state;
- **Examine and recommend infrastructure needed** to develop a practical, effective, and cost efficient method for collecting and transporting end-of-life solar photovoltaic modules for reuse, refurbishment, recycling, or disposal;
- **Analyze whether** financing mechanisms, including advanced recovery fees, recycling and disposal fees, and product stewardship programs, are necessary to ensure proper end-of-life management of solar photovoltaic systems; and
 - I. Recommend financing mechanisms that best support a circular economy approach.

The working group will report to the Commission and the General Assembly the findings of the study.

Timeline

The Solar Photovoltaic Systems Recovery, Reuse, and Recycling Working Group will meet virtually on a monthly basis. Meetings will last for 120 minutes with meeting details provided ahead of the meeting to the email list. Please email [Bradley Baker](#) and [Susan Casey](#), to be added to the email list. The Working Group will submit recommendations to the MCCC by November 2024 and a study to the General Assembly and Governor by December 31, 2024.

Meeting Agendas

Meeting 1: Introductions and Setting Scope (May 23)

Meeting 2: Current State (June 17)



Meeting 3: Decommissioning Solar Panels, Recycling and Reuse Markets (July 15)

Meeting 4: Life Cycle Analysis and Economic Analysis (August 19)

Meeting 5: Approaches in Other States and Certification Programs (September 16)

Meeting 6: Financing Mechanisms and Infrastructure Needs (October 21)

Meeting 7: Recommendations (November 18)

Meeting 8: Recommendations (TBD)