SCHOOL OF PUBLIC POLICY
CENTER FOR GLOBAL SUSTAINABILITY

Maryland Department of the Environment

# Solar Photovoltaic Systems Recovery, Reuse, and Recycling

Working Group Meeting
May 23, 2024

# Agenda

- Introduction to research team
- Statutory requirements for report

# Research Team

University of Maryland, School of Public Policy
Center for Global Sustainability

Dr. Kathleen Kennedy

Bradley Phelps

Stephanie Vo

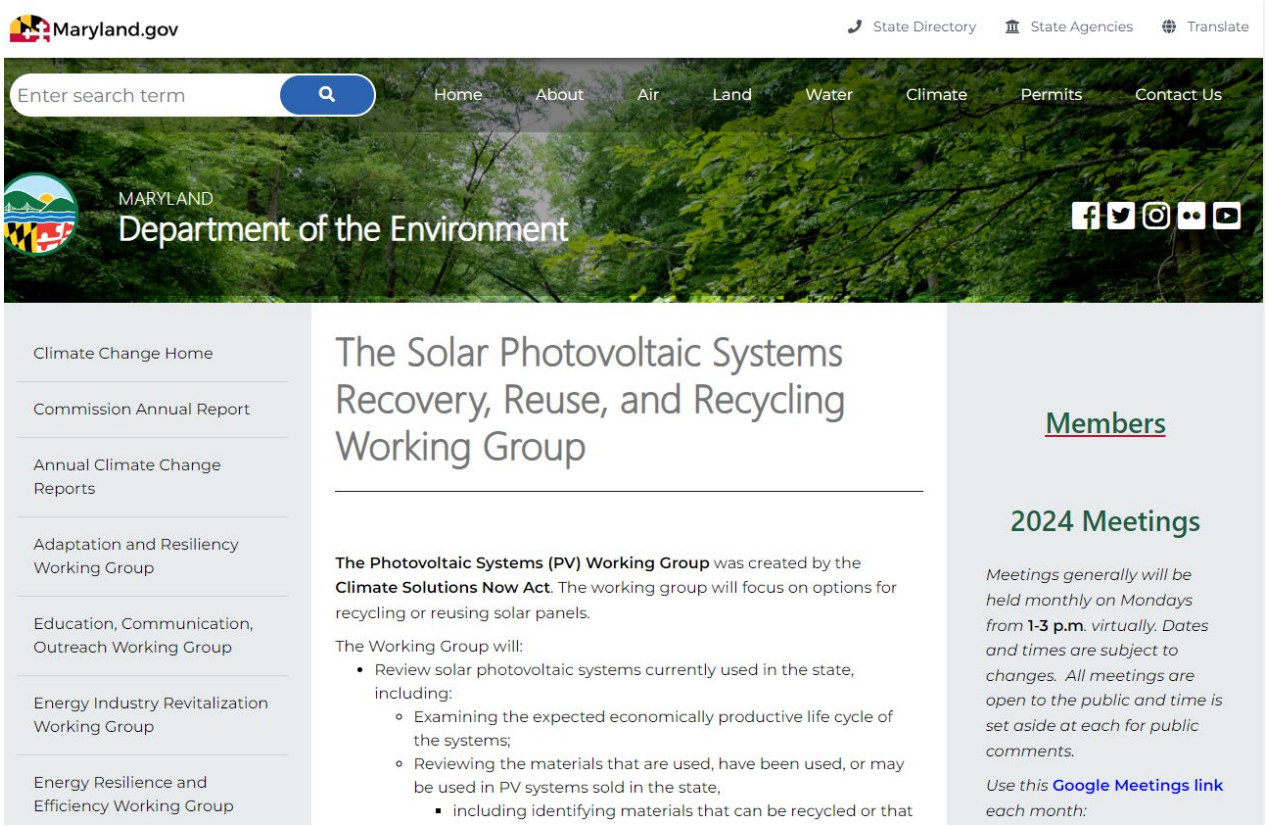
Dr. Steve Smith

Johns Hopkins University, Whiting School of Engineering
Department of Electrical & Computer Engineering

Dr. Susanna Thon

Sreyas Chintapalli

# Statutory Requirements under CSNA



# Statutory Requirements under CSNA

- Review solar PV systems currently used in the state:
  - number of systems in use
  - expected life cycle
  - materials used (what is recyclable, what is hazardous)
  - potential impacts of disposal on the state's landfills

- Review best practices for managing end-of-life solar PV systems:
  - reuse
  - recycling
  - safe disposal in solid waste landfill
  - safe disposal of hazardous waste components

- Review other end-of-life programs for PV systems
- Identify relevant recent studies

# Statutory Requirements under CSNA

- Comparisons with other forms of energy generation
  - Analysis of end-of-life cost impacts on ratepayers
  - Life-cycle environmental impacts of end-of-life scenarios
  - Environmental and economic benefits of energy generation

- Recommend financing mechanisms that support a circular economy for PV systems
- Analyze if financing mechanisms are necessary to ensure proper end-of-life management

- Examine and recommend the infrastructure needed for transporting end-of-life solar photovoltaic modules for reuse, refurbishment, recycling, or disposal.

# Report timeline

- Provide a progress report to the working group with preliminary results on **August 19th**

- Deliver a report that covers the statutory requirements to the working group by **November 15th**

SCHOOL OF PUBLIC POLICY
CENTER FOR GLOBAL SUSTAINABILITY

# Thank you!

**Prof. Kathleen Kennedy**, Assistant Research Professor, Center for Global Sustainability, University of Maryland School of Public Policy, kmkenne5@umd.edu