Solar photovoltaic (PV) energy is becoming more affordable, accessible, and prevalent in the United States (US) than ever before. While the PV boom continues, it is now critical to plan for the end-of-life (EoL) of current and future PV modules. With an opportunity to recover $2 billion worth materials, it will be important to understand the environmental and societal impacts of different EoL managements for the PV industry. The goal of this synthesis working group is to outline the data and tools for creating the highest societal benefits from PV industry by analyzing environmental and economic trade-offs through different life cycle paths of remanufacturing, recycling, and landfilling EoL management. To achieve this goal, we will overcome a major shortfall - the lack of environmental data on energy-water nexus of solar industry. Unavailability of such data is due to lack of regulations concerning EoL management of PV because this emerging technology and the associated regulations have not been widely introduced to the scientific and production community yet. This project will construct the first PV energy-water database that consists of hazardous and toxic emissions to water bodies by creating energy-water networks for remanufacturing/recycling and landfilling scenarios. We will also analyze the societal and economic trade-offs of different remanufacturing/recycling and landfilling scenarios to inform practitioners and decision-makers regarding socio-economic impacts of different EoL management of PVs. Both the working framework and protocols established through this synthesis working group is expected to be widely applied within the scientific community for PV and other similar (electronic waste) systems.