



Regulatory and Policy Considerations for the Reuse and End-of-Life Management of Solar and Batteries

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Reuse Regulatory Considerations

NREL reports: [A Circular Economy for Lithium-Ion Batteries Used in Mobile and Stationary Energy Storage](#), and [A Circular Economy for Photovoltaic System Materials](#)

Consideration	Description
Interconnection Regulations	State and local regulations that govern how PV and BES systems connect to the electric grid, which may restrict the reuse of PV equipment and LiBs in certain grid-tied applications
Fire and Building Regulations	State and local regulations that govern the design, materials, and quality of buildings and structures that connect to PV systems and stationary BES systems, which may restrict the reuse of PV equipment in certain grid-tied and off-grid applications
Electrical Regulations	State and local regulations that govern electrical safety, design, installation, and inspection of PV systems, PV equipment, BES systems, and LiBs, which may restrict the reuse of PV equipment and LiBs in certain grid-tied and off-grid applications
Industry Certification Standards	Voluntary international industry standards that provide safety and reliability guidance for the reuse of LiBs

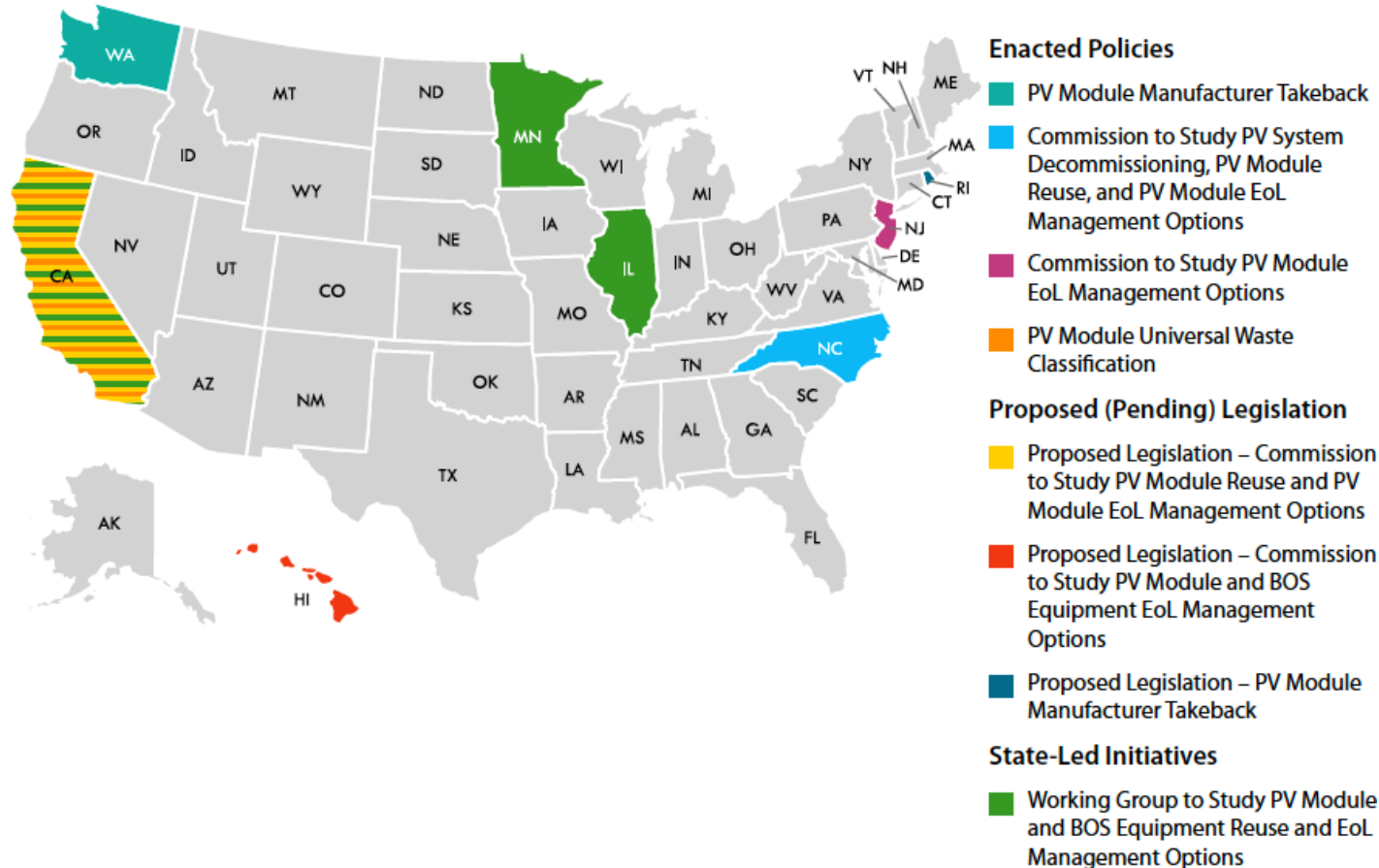
Reuse, Recycling, and Disposal Regulatory Considerations

NREL reports: [A Circular Economy for Lithium-Ion Batteries Used in Mobile and Stationary Energy Storage](#), and [A Circular Economy for Photovoltaic System Materials](#)

Consideration	Description	Application
Solid and Hazardous Waste Laws and Regulations	Mandatory requirements that vary across jurisdictions, which govern the generation, handling, storage, transport, treatment, recycling, and disposal of non-hazardous and hazardous solid wastes, which may include PV equipment, large-format LiBs, and manufacturing scrap accumulated or stored before recycling, or disposal and those being recycled or disposed of	Recycle, Disposal
Hazardous Materials Transport Regulations	Mandatory federal requirements that govern the transportation of hazardous materials in interstate commerce (i.e., across state lines), which may include PV equipment (e.g., modules) and large-format LiBs	Reuse, Recycle, Disposal
Hazardous Waste Export Regulations	Mandatory requirements that govern U.S. interstate commerce shipping and transport of hazardous materials, which may include PV equipment (e.g., modules) and large-format LiBs being shipped or transported across state lines	Reuse, Recycle, Disposal
Penalties for Non-Compliance	Civil and criminal penalties administered for violating a jurisdiction's hazardous waste and/or hazardous materials regulations	Reuse, Recycle, Disposal

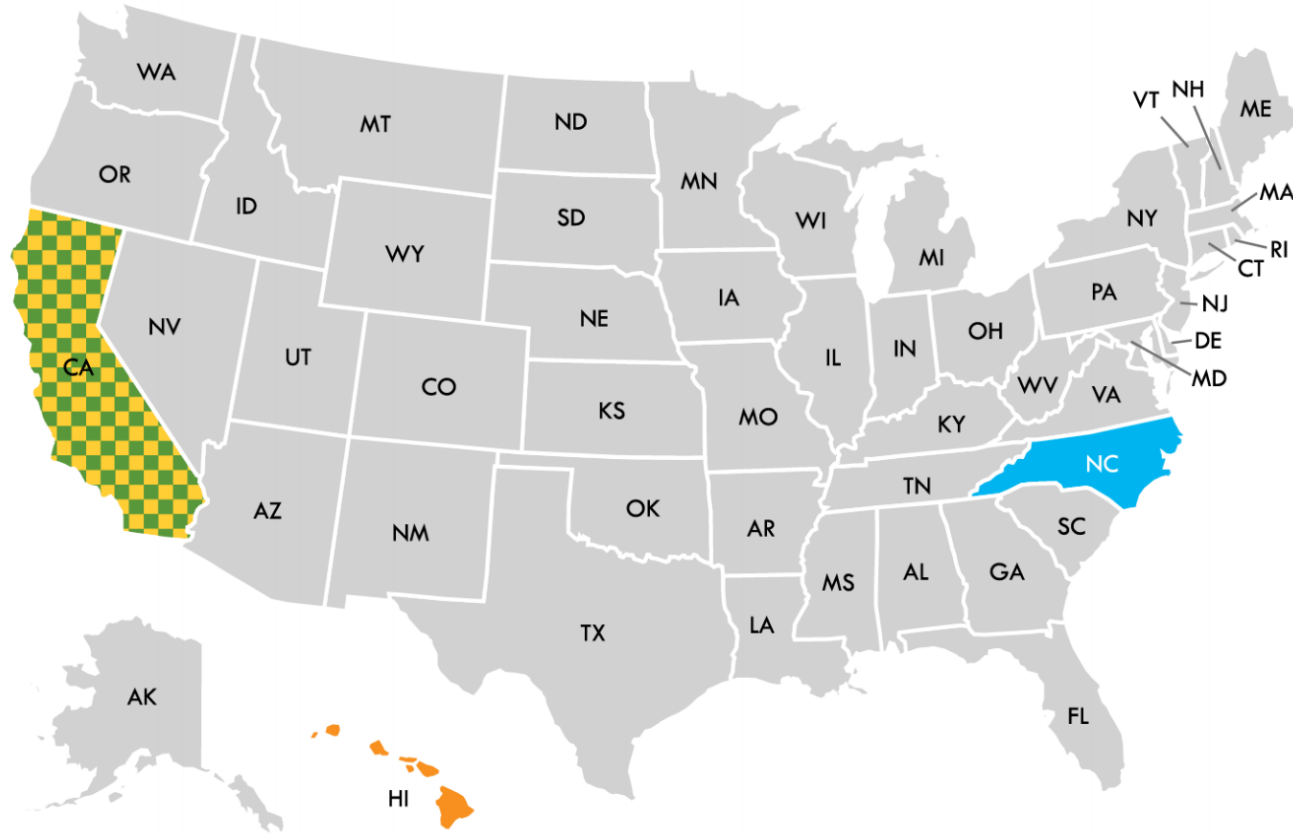
PV Reuse and End-of-Life Management Policies

NREL reports: [A Circular Economy for Photovoltaic System Materials](#), [Best Practices at the End of the PV System Performance Period](#), and [PV Module Recycling: A Survey of U.S. Policies](#)



LiB Reuse and End-of-Life Management Policies

NREL reports: [A Circular Economy for Lithium-Ion Batteries Used in Mobile and Stationary Energy Storage](#)



Enacted Policies

- Commission to Study EV Battery Reuse and EoL Management Options
- Commission to Study Stationary Battery Reuse and EoL Management Options

Proposed (Pending) Legislation

- Commission to Study Stationary Battery Reuse and EoL Management Options

State-Led Initiatives

- Commission to Study EV and Stationary Battery Reuse and EoL Management Options

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