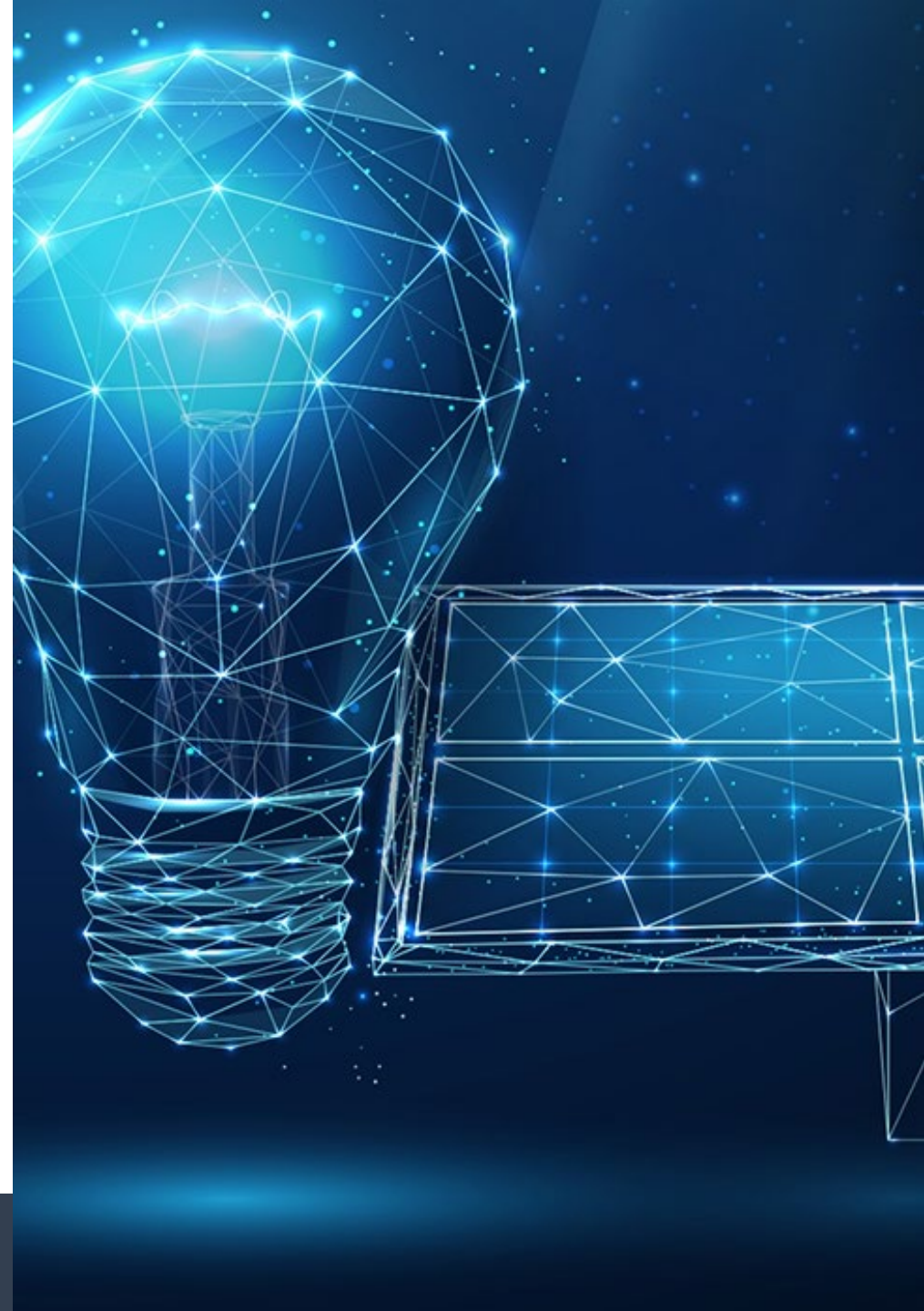




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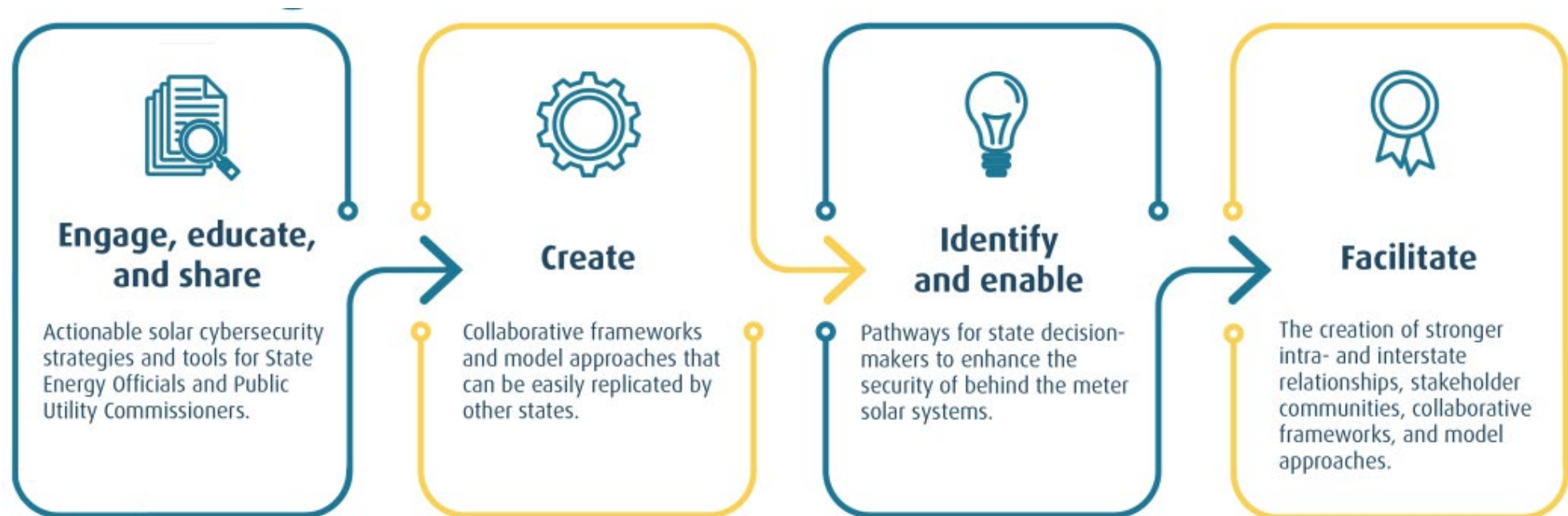


# CATSS Project Goals and Objectives

## Goals

- **Convene** State Energy Office Directors and Public Utility Commissioners to identify challenges, priorities, and mitigative actions in addressing solar cybersecurity issues
- **Enable** critical strategies and solution pathways for state decision-makers to enhance the security of solar systems
- **Facilitate** the discussions between state officials and solar and cybersecurity experts to create new relationships
- **Create** collaborative frameworks and model approaches that can be easily replicated by other states

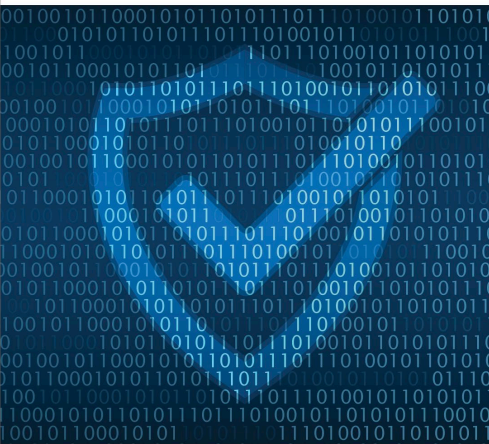
## Objectives






# CATSS Toolkit

**User Guide for CATSS Tools**  
A Cybersecurity Advisory Team for State Solar (CATSS) Tool



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**ANNEX B**

**Photovoltaic Solar Engineering and System Overview**  
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**ANNEX A**

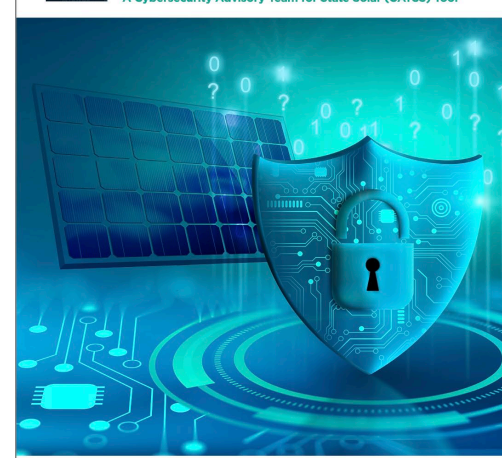
**Standards Quick Guide**  
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**Assessing Solar Cybersecurity: Questions for States to Ask Electric Utilities**  
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**ANNEX C**

**Hypothetical Solar Cyberattacks Scenarios and Impacts**  
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**Decision Support Tool for Solar Energy Cybersecurity Policy and Regulation**  
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**Disclaimer:**  
The CATSS Toolkit is designed to provide states with basic education on cybersecurity issues for solar and enable their efforts to support cybersecurity enhancements efforts for solar. Cybersecurity challenges for solar should not be viewed as unique. All electricity generation technologies are in varying degrees of industrial maturity and vulnerability, susceptible to cyberattacks and DDoS, generally have a unique advantage to ensure that cybersecurity is incorporated by-design and prior to deployment, rather than applied as post facto. The recommendations provided within the CATSS Toolkit tool were developed to meet the expressed needs of State Energy Offices and Public Utility Commissions during the project and their respective policies, priorities, and objectives to support cybersecurity solar deployment in their states. While many industry and federal partners were included in the CATSS Advisory Group, it must be noted that neither the states' nor other stakeholders' perspectives collected are exhaustive. The Toolkit represents a snapshot of a quickly evolving and complex area and should not be treated as a definitive guide, but rather a basis for continued discussion and adaptation of public-private partnerships for solar cybersecurity.

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Prepared for the National Association of State Energy Officials (NASEO) and National Association of Regulatory Utility Commissioners (NARUC)


**Case Studies and Model Guidance for Establishing Solar Cybersecurity Working Groups**  
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**Cybersecurity and the Solar Workforce: Considerations for States**  
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**Cybersecurity Considerations for State Procurement of Solar Assets**  
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**Exercise Design Guidance for Solar Cybersecurity**  
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**State Legislative Options to Enhance Solar Cybersecurity**  
A Cybersecurity Advisory Team for State Solar (CATSS) Tool



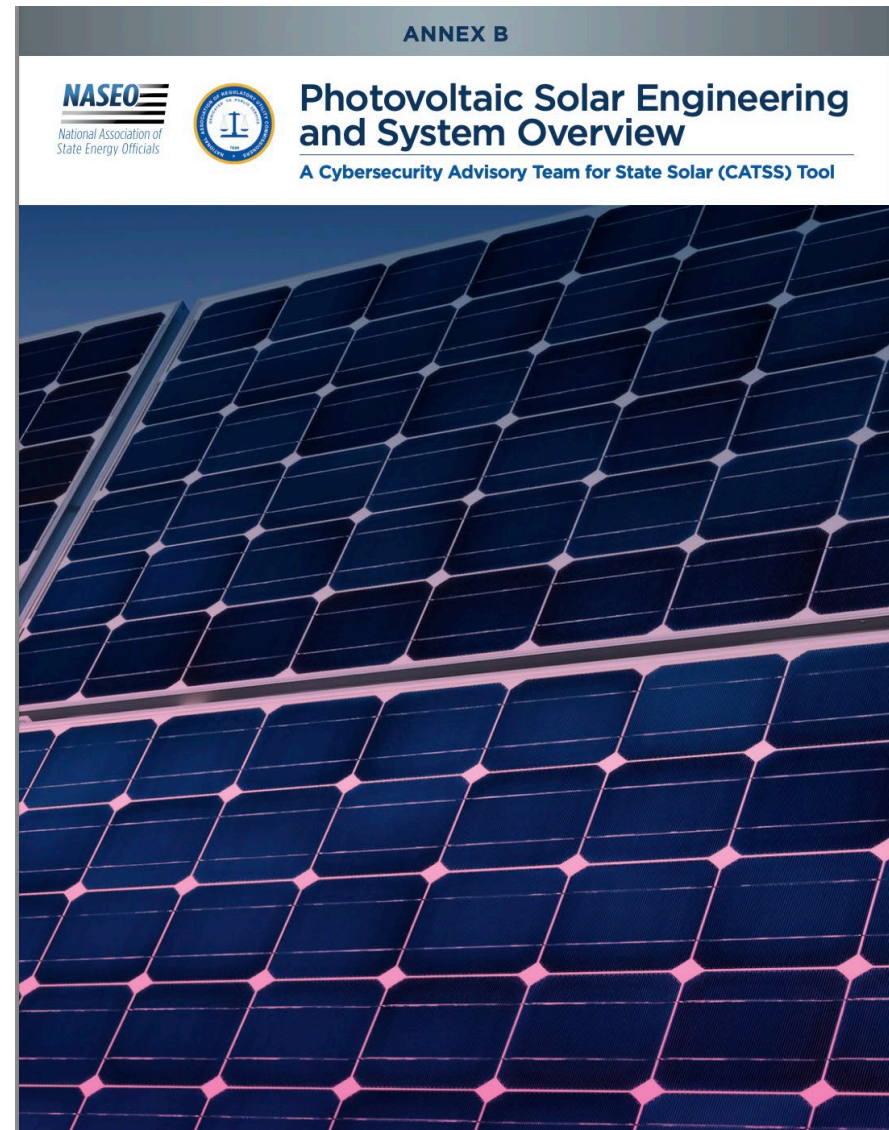
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# Photovoltaic Solar Engineering and System Overview

- Depicts local solar PV components, interdependencies with the grid, and local two-way communication pathways.
- Identifies physical and virtual risks and delineates between solar PV and grid scale components.
- Provides readers with a fundamental overview of the most relevant and critical physical components and serves as a basic educational resource for readers.
- Suggested as the first tool to review because it provides the reader with key terminology and basic risk information that is referenced in subsequent tools.



# Standards Quick Guide

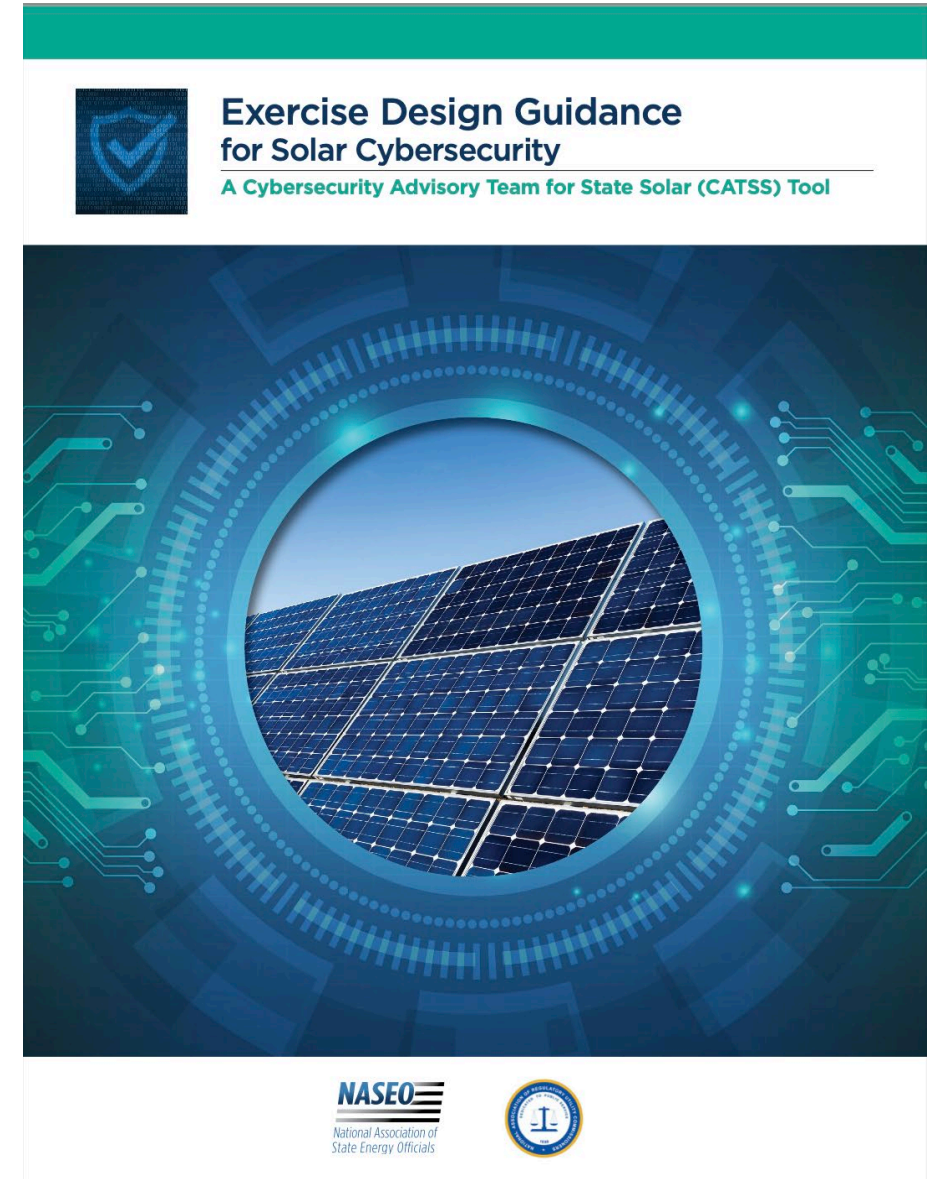
- Contains a list of relevant standards developed or in development for the cybersecurity of solar energy resources and is the first of several guidance documents.
- Outlines different types of standards, such as industry standards, enforceable regulations, and conceptual relevant cybersecurity studies.
- Users may use this quick guide as a tool to enhance understanding of existing standards and for brainstorming new ideas to help states improve the cybersecurity of solar energy resources in their jurisdiction through innovative policy.





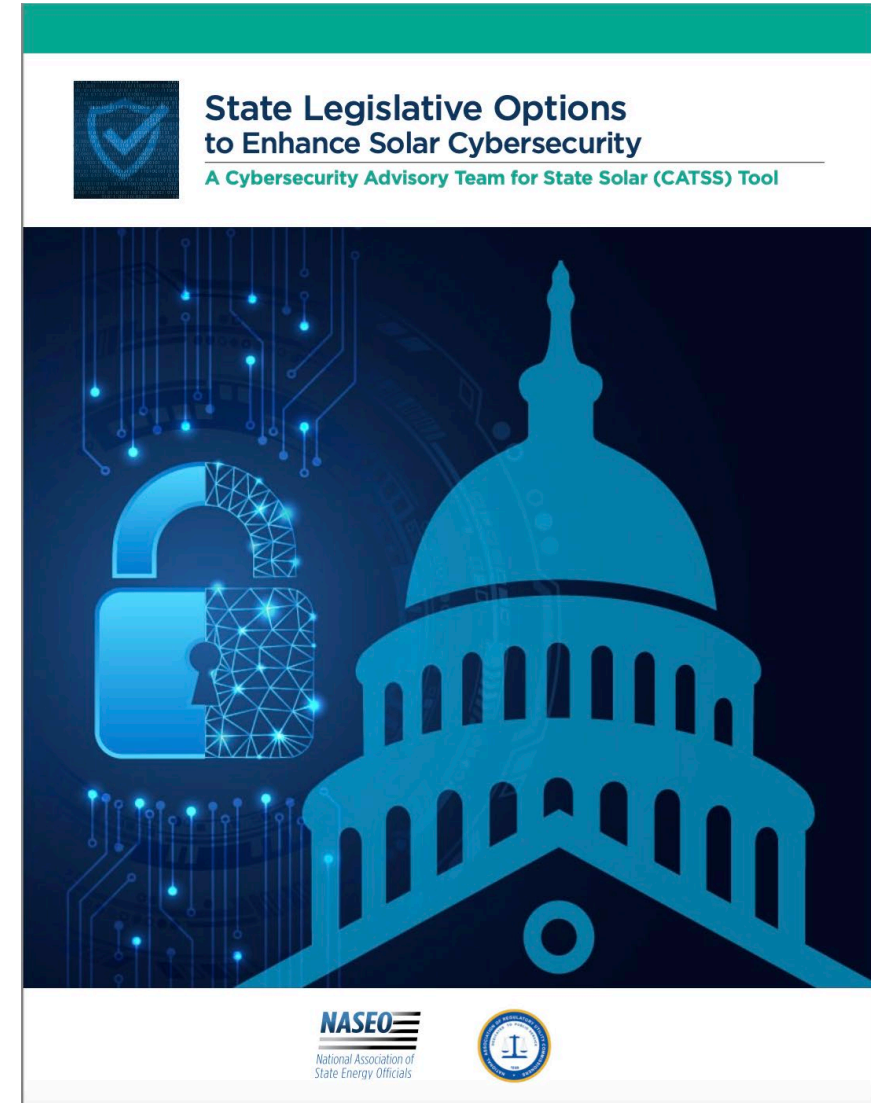
# Exercise Design Guidance for Solar Cybersecurity

- Provides recommendations on how State Energy Offices and Public Utility Commissions might design an energy emergency exercise, drill, or other simulation focused on solar cybersecurity scenarios.
- Target audience are exercise practitioners, planners, or facilitators interested in exploring solar cybersecurity incident response, preparedness, recovery, or mitigation.
- Advanced supplementary resource for persons or entities with prior exercise experience and knowledge based on a set of standard concepts, terms, and procedures that are common among the exercise community.
- This tool may be referenced in conjunction with the *Hypothetical Solar Cyberattack Scenarios and Impacts* tool within the CATSS Toolkit.



# State Legislative Options to Enhance Solar Cybersecurity

- One of the mitigative solutions to solar cybersecurity risks is to proactively develop legislation which can facilitate, guide, or require actionable policy and program development.
- Legislation can reinforce the criticality of protecting energy infrastructure from cyber threats in several ways that can have long lasting impacts.
- Tool outlines relevant state cybersecurity legislation examples which can apply to solar cybersecurity and can serve as frameworks for future legislation by states seeking legislative options to help mitigate these risks.



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**Enhancing Energy Sector  
Cybersecurity: Pathways for  
State and Territory Energy Offices**

2020