SETO’s Soft Cost Resilience Work

Michele Boyd, Program Manager

April 7, 2021
Solar Soft Costs (Rooftop)

Core Components of SETO’s Soft Costs Portfolio

- Foundational Research, Data, and Analysis
- Technical Assistance
- Training

Lower Soft Costs & Barriers

The Solar Market Pathways Program brought together 14 diverse teams under a single goal:

**Drive down the soft costs of solar energy and accelerate deployment.**

Products and tools are available at [https://solarmarketpathways.org/](https://solarmarketpathways.org/)
Demonstrating an actionable path toward designing resilient communities through consequence-based approaches to grid investment.

1. Resilient Community Design Framework

City-utility pairs:

- Dominion Energy
- Hawaiian Electric
- LA DWP
- ConEdison
- EVERSOURCE
- Siemens
- World Resources Institute
- Converge

Contributors:

- Sandia National Laboratories
- National Renewable Energy Laboratory
- Sandia National Laboratories
- Hawaiian Electric
- Dominion Energy

2. Case Studies

El Cano Martin Pena, San Juan, PR

Social Burden

\[ B_c = \sum_{i=1}^{n} \frac{E_{i,\text{inf}}}{A_{\text{pop}}} \]

San Antonio, TX

3. Regulatory Approaches and Business Models

Federal/Regional Regulators, Policymakers, & Researchers

- Analyze system-level resilience
- Support the development of stress tests

State/Local Regulators

- Design and enforce resilience standards
- Evaluate proposed resilience investment plans or rate cases

Utilities

- Prioritize resilience investments
- Analyze institutional resilience
Solar Energy Innovation Network

The Solar Energy Innovation Network is a collaborative research program that supports multi-stakeholder teams to research and share solutions to real-world challenges associated with solar energy adoption.

**APPROACH**

- Teams identify local and regional challenges, and receive technical and financial assistance to formulate and test innovations, and validate new models.
- Teams meet in person for several multiday work sessions to further refine solutions and learn from other teams.
- Research and innovative solutions shared through peer network.

**OBJECTIVE**

- Develop innovative solutions that make solar energy adoption easier and enable stakeholders across the United States facing similar challenges to replicate them.

**Products and tools are available at**
SEIN Resiliency Projects

NARUC/PJM

• Studied opportunities for solar to provide system resilience both at distribution and bulk power level, including valuation methodologies, regulatory approaches, and the potential for solar and storage to provide black start.

Groundswell

• Designing plan for a solar + storage micro-grid for resilience at Atlanta University campus complex to serve the campus and the local low-income community. Conducted expansive stakeholder engagement with the local community to understand its needs.

Tampa Bay Regional Planning Council

• Developing regional processes and models to help local governments (1) identify and prioritize sites for solar-plus-storage to support emergency management and resilience efforts; and (2) conduct cost-benefit analyses that incorporate both economic variables and societal factors.

City of Reno

• Quantifying value of resilience provided by solar + storage in a mid-sized city and implementing in city procurement, especially for emergency response and public safety facilities.
Resilient Communities

Planning and Coordination

Ensuring Equity

Technologies

Valuing Resilience
QUESTIONS?