



Clear Sky Tampa Bay: Project and Toolkit Overview - Resilience-Based Resources for Assessing Solar + Storage on Critical Facilities

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This publication was part of a larger project. The full project can be found at <https://tbrpc.org/clearsky/>.

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Clear Sky Tampa Bay: Project and Toolkit Overview

Resilience-Based Resources for Assessing Solar + Storage on Critical Facilities



When designed to do so, resilient power systems can operate independently from a centralized electrical grid during power outages, generating energy and powering critical loads until utility services are restored. Recent natural disasters such as Hurricanes Harvey, Irma, and Maria have reinforced the need for reliable power to sustain essential services and critical facilities within communities.

In the Tampa Bay Region, as in other locations nationally, resilient electric power systems have relied primarily on diesel generators for backup generation. However, there is growing interest in installing solar photovoltaic (PV) systems combined with battery energy storage (solar + storage) to provide backup power during electric grid outages.

The Clear Sky Tampa Bay Team, convened by the Tampa Bay Regional Planning Council (TBRPC) and composed of county and city partners, private and public sector stakeholders, solar energy experts, and academic partners, collaboratively developed a set of resources to support the expanded use of solar + storage in the context of community resilience in Florida. Key questions guiding the project included:

- What types of buildings and systems provide the maximum resilience benefits?
- Where within our communities should we prioritize future solar + storage analysis or investment to mitigate the impacts of disasters?
- How might other societal variables be incorporated into a site assessment when considering solar + storage for resilience?
- Can a standardized process be developed that leverages existing resources to assist local governments with solar + storage for resilience research and decision-making?

Why "Clear Sky?"

The name "Clear Sky Tampa Bay" was chosen to signify the blue, clear skies that follow a storm and the preparedness and post-disaster recovery that can be achieved through the application of solar + storage for resilience.

Clear Sky Toolkit

The Clear Sky Toolkit, available online at tbrpc.org/clearsky, provides local governments and community partners with novel resources for evaluating solar + storage for disaster resilience purposes and contributes to a more consistent approach for making resilience-based decisions about solar + storage across the Tampa Bay Region. While designed with and for city and county governments in Tampa Bay and Florida, the resulting toolkit could be adapted and applied in other contexts nationally, as well.



Decision Support Template and Guide

Download the Decision Support Template and Guide: www.tbrpc.org/clearsky

The Clear Sky Decision Support Template and Guide walk users through a structured approach to prioritizing potential sites for solar + storage investments based on community resilience considerations, site feasibility, power requirements, and utility collaboration. The resources consolidate and streamline the most relevant materials from the emergency management discipline, the electric utility sector, and national energy research institutions.

Each of the five modules includes a series of guiding questions to facilitate data and information collection and offers insights on how to interpret that information in the context of solar and storage decision-making. The Decision Support Template is designed to be flexible and adaptable to various contexts.



Quick Screening Module: The Quick Screening Module is designed to help users more quickly eliminate facilities that have limited need for a resilient energy solution or do not meet basic solar siting criteria from further data collection efforts.



Prioritization Module: The Prioritization Module provides a structure for assessing the relative criticality of community functions performed by three facilities based on the facilities' role in supporting Federal Emergency Management Agency (FEMA) Community Lifelines and other aspects of community resilience.



PV Siting Module: The PV Siting Module helps users evaluate whether the site meets essential installation requirements for PV technology and whether essential power needs could be met by the installation of the PV system.



Critical Load Module: The Critical Load Module establishes criteria for understanding which entities rate the facility as critical and considers the facility's critical functions and associated power requirements.



Utility Engagement Module: The Utility Engagement Module helps users engage with local utility providers to identify sites for priority restoration and consider surrounding electricity infrastructure and its relationship to the facility.

Case Studies

A series of case studies illustrate varying use-cases for the Decision Support Template and describe the user's process in assessing sites for solar + storage within four local governments in Florida.

- [Manatee County Case Study \(link\)](#)
- [Hillsborough County Case Study \(link\)](#)
- [Pinellas County Case Study \(link\)](#)
- [City of Largo Case Study \(link\)](#)

Digital Resource Library

The Clear Sky Toolkit includes additional resources for users to continue assessments beyond the initial screening and prioritization assessments captured in the Decision Support Template. The suite of solar + storage assessment tools will continue to grow as new resources are made available.

- [Digital Resource Library \(link\)](#)

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