

Statement of Work/Objectives (From Statement of Project Objectives)

City and County of San Francisco

Solar+Storage for Resiliency

DE-FOA-0001071

Objectives

The primary goals of the project are to accelerate the deployment of PV nationwide and create a roadmap for using PV as a viable tool for energy security in the event of an emergency.

Project Objectives:

- Initiate the project by conducting thorough research of synergistic projects, previous research, and candidate products and technology, resulting in a comprehensive research compendium. The research will look U.S. wide and will draw on work done to date, such as the Florida Solar Shelters. We will issue a report on the state of the current San Francisco disaster preparedness plans with respect to electricity needs of buildings.
- Facilitate stakeholder engagement through the formation and management of a working group to assist in preparing a solar+storage solution, integrated into a disaster preparedness plan. The stakeholder group will include utilities, first responders, emergency service providers, relevant City Departments, and other community and business stakeholders. We will produce presentations for each meeting along with detailed minutes and conclusions. The goal of the working group is to review and assess task work, specifically on disaster prep plan research, road map development, load sizing tool development and outreach/dissemination plans. Key stakeholders, including storage companies and utilities will also provide technical and regulatory review of proposed plans.
- Identify Disaster Preparedness Zones in San Francisco. These will be outlined in a series of GIS maps detailing where in San Francisco buildings are located that have power needs as part of their disaster preparedness plans and identify where buildings can be grouped to form a microgrid and share power in the event of an extended outage.
- Address technical and economic barriers to solar+storage and outline solutions. Team will produce a road map depicting how micro-grids, electrical storage, and islandable distributed solar systems can be implemented throughout the US and develop a peer reviewed report on financing mechanisms leveraging established models and programs. The road map will be posted to the CCSF website and shared at conferences.
- Explore technical feasibility of solar+storage systems in San Francisco. The team will present the technical feasibility to storage vendors such as STEM and the local San Francisco utilities to validate the technical feasibility. Team will identify and/or develop a tool for a non-technical audience in order to assess what electrical loads are required to be maintained in the event of an extended outage and gather stakeholders to understand what retrofit equipment may be required to allow existing buildings with solar+storage to operate in an extended outage. Tool will be available online.
- Team will package and disseminate the plan to regional, state and national networks using various outreach methods including a Best Practices Manual. The team will present at conferences and host workshops.