

1. Resilience Planning

After Hurricane Sandy flooded much of the City of Hoboken in 2012, the city developed five post-Sandy recovery plan projects aimed at mitigating the effects of future storm events. These included (1) adopting Resilient Building Design Guidelines (RBDG) to improve flood readiness and reduce risk, (2) reforming codes, ordinances, and standards, (3) pursuing capital improvement projects related to resilience, (4) applying for a grant through the Hazard Mitigation Grant Program (HMGP) through the state of New Jersey, and (5) assessing historic properties and open space areas throughout the city in relation to mitigating flood hazards.

The City is also involved in the [Rebuild by Design-Hudson River project](#) initially launched by the U.S. Department of Housing and Urban Development (HUD), the city aims to minimize the impacts from surge and rainfall flood events, mitigate adverse impacts to public health, and also provide benefits that will enhance the surrounding urbanized areas. The project was developed through a collaborative process that involved extensive outreach, public involvement and agency coordination and is expected to be completed in 2022.

Looking to the future, the City of Hoboken recently completed a [2018 Master Plan](#) for the city with five main themes, and one focused entirely on green building and environmental sustainability. The goals in that section of the plan build on recent improvements in becoming a more sustainable and resilient city, and focus on upgrading and innovating infrastructure, adapting and mitigating climate change impacts, and improving the response capacity for natural disasters.

Some of the city's more immediate goals are focused on partnering with local utilities to upgrade electricity infrastructure. One priority is establishing additional energy security for the North Hudson Sewerage Authority. In order to harden electrical distribution infrastructure, the local electrical utility PSE&G redesigned and elevated the 16th Street substation. PSE&G is also working on consolidating the Marshall Street and Madison Street substations into an expanded and elevated Madison Street substation. This activity will be completed by 2022. Hoboken's energy strategy will include natural gas generators and a combination of solar PV and battery systems. The City is also examining the use of controllers and the cybersecurity of microgrids.

2. Program or Project Implementation

Hoboken initially started out with a program approach for CHP implementation, but has since transitioned to a project-based approach, by looking at the steps that can be taken in order to promote CHP at individual facilities. For example, in 2017, the City of Hoboken [requested the Board of Public Utilities authorize](#) funding for a feasibility study for a microgrid incentive program. This study had two project areas. The first included the Washington Street region, where 6,000 linear feet of new underground conduits and duct banks were installed across 16 blocks as part of a complete street redesign. The new conduits will be used to lay down a new medium voltage distribution network and fiber optic cable. The second study area will include the main campus of the Hoboken Housing Authority and commercial corridor. The City has also begun an air permitting process with the New Jersey Department of Environmental Protection (NJDEP) and will soon sign a new contract with the New Jersey Board of Public Utilities (NJBPU) and PSE&G for the second phase of the microgrid study. The main drivers behind transitioning to a project-based approach are the benefits associated with costs, the scope of the projects, scheduling and service delivery.

3. Lessons Learned

The resiliency planning process yielded several useful insights for the City of Hoboken. The importance of building strong relationships and maintaining regular communication with partner agencies at both the city and state level was a clear takeaway. State support for Hoboken was crucial following Hurricane Sandy, and continuing a high level of engagement is critical in improving resiliency in the city for the future. State agencies can play a role in assisting cities by providing them with the tools and resources to make effective and well-informed decisions. These resources can provide critical information on the variety of physical and financial risks that exist, and the potential solutions and their impact given uncertainties.

In terms of lessons learned in individual project development, Hoboken identified the need to gauge the level of effort for the identification and implementation of solutions. For example, Hoboken decided to prioritize CHP efforts at the facility level, because a full-scale district heating loop at the city level was beyond the scope and schedule the City could accommodate. It was also important to create a sound business model early in the project, in order to solicit effective packages from financiers and lenders. Further, keeping regulators well-informed from an early stage helps ensure certain processes, such as permitting requirements, are not stalled.

4. Additional Information

- ▶ [Rebuild by design – Hudson River](#)
- ▶ [Hoboken resiliency and readiness plan](#)
- ▶ [Hoboken Madison substation upgrade project](#)