

Northampton lands \$3 million grant to build ‘microgrid’ linking its highest-priority emergency facilities

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NORTHAMPTON — The city has landed nearly \$3.1 million from the state to link three of its highest-priority emergency facilities together under a “microgrid” that will improve their ability to maintain operations when there are power failures.

Under the plan, Cooley Dickinson Hospital, the Department of Public Works headquarters and an American Red Cross emergency shelter at Smith Vocational and Agricultural High School would share a power backup system during long-term blackouts. The three facilities are close to each other on Locust Street.

Two such crises occurred in 2011, when Tropical Storm Irene and a massive Halloween ice storm showed the vulnerability of the region’s power system.

In an interview in his office Tuesday, Mayor David J. Narkewicz said it’s vital that the city is able to provide emergency shelter for individuals and families who are unable to stay at home during emergencies, that the hospital be able to provide medical services even when power goes out for long periods and that the DPW be able to support emergency services. He said the grant will enable the city to better safeguard the community at critical times.

Christopher Mason, the city’s energy and sustainability officer, said the engineering study will likely take the next few months, with the project slated for construction in the summer and fall. That construction would include both the installation of any new system and the infrastructure such as electrical wires necessary to connect the facilities.

The money comes from the state Department of Energy Resources and is part of an overall effort by the state’s new Community Clean Energy Resiliency Initiative. In addition to the microgrid, Northampton landed a separate \$525,400 grant through the program last fall to install a solar array in the Fire Department parking lot on Carlon Drive.

The 20-kilowatt, canopy-style array will include batteries that will store power for use in emergencies. That work is expected to begin this spring when the city contracts with a third party to

install, own, maintain and operate the array. It will work in tandem with an existing generator on site that has been used for years.

The grant awarded last week for the microgrid builds on a technical study the city undertook last year thanks to an initial grant from the Resiliency Initiative to see if the project was workable, and it ties in with an internal analysis the city began in 2012 of its own energy grid. Narkewicz said the city began to take a closer look at its ability to withstand potential blackouts in the aftermath of several significant storms, including Hurricane Sandy's effects on New Jersey and New York. The state program to fund improvements began to take shape shortly thereafter, opening up an opportunity for the city to apply for funding to pay for improvements to its grid.

The \$3.1 million will enable the city to design and build the microgrid to generate electricity to serve the three facilities. This will likely be accomplished by expanding an existing solar array and adding a large battery bank at Smith Vocational and/or developing an alternative on-site generation or battery storage at Cooley Dickinson, said Mason.

The hospital now has two biomass plants with generators to meet its power needs. When those plants stop working, generators kick in to keep the power on but certain functions such as air conditioning do not work, Mason said.

"They are well backed up right now, but this would add to their capabilities," Mason said.

The DPW and Smith Vocational also have their own backup systems that would remain in place, but the microgrid would create an additional layer of backup so that there are multiple levels of redundancy.

In addition to beefing up the city's ability to provide these services in times of emergency, the microgrid will also reduce the city's carbon footprint and fits in with its goals to turn to renewable energy sources when possible, the mayor said.

Northampton was one of about a dozen communities or agencies to receive \$18.4 million in grants recently through the state's resiliency initiative. The program will award \$40 million to communities that identify the facilities where the loss of electrical service would result in the disruption of a critical public safety or life-sustaining function, including emergency services, shelters, food and fuel supply and communications infrastructure.

Greenfield landed a \$367,300 grant that will enable the city to add battery storage to complement a proposed 207-kilowatt solar array planned for its high school. The high school currently has diesel generators that serve as backup power sources in emergencies. Those generators will last for two to three days. The city, however, notes that recent severe weather events have led to power outages that last for up to a week in some areas.

Holyoke won a \$1 million grant to improve resiliency at three different project sites: on the roof of its fire headquarters building, at the Mount Tom Tower, the city's emergency communications tower, and at Dean School, which serves as a community shelter.

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