United Parents Against Lead
& Other Environmental Hazards

All photos: Kelley Lynch

SOLAR FOR NONPROFITS

Resiliency Hub provides safety and self-sufficiency in a disinvested community

Solar power plus battery storage will enable a Petersburg, VA Resiliency Hub to keep its doors open in times of crisis.

Queen Shabazz became an activist three decades ago, when her young son contracted lead poisoning in their rental home. She soon learned that "lead wasn't the only problem out there": her low-income, disinvested community in Petersburg, Virginia, contends with more than its share of environmental hazards – from air pollution to toxic waste.

Increasingly, those hazards are compounded by climate change. As the planet warms, Petersburg is experiencing more flash floods, as well as power outages that last for days. "We see so many of these climate events happening," Shabazz says. "We don't want to have to wait for someone to come save us."

So, Shabazz and her colleagues created Virginia's first solar-powered "Resiliency Hub." The Hub serves as a multipurpose community center, as well as the headquarters of two organizations directed by Shabazz: United Parents Against Lead (UPAL) and the Virginia Environmental Justice Collaborative (VEJC). It is housed in an old USO building that served "colored" soldiers in the 1940s – a treasured bit of community history. And, because it is powered with solar panels and battery backup, the Hub can keep its doors open when the larger grid goes down.

New financing opportunities for solar installations are available through the Biden Administration's Inflation Reduction Act and Greenhouse Gas Reduction Fund.

Solar+storage = safety

Staying open in a disaster is critical to the mission of the Resiliency Hub – and solar power plus battery storage makes that possible. But the cost of a solar+storage system was prohibitive, until a colleague introduced Shabazz to the Clean Energy Group (CEG). CEG helped UPAL conduct a feasibility study, working with technical experts and local residents to design a system that would meet the community's needs and goals.

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With that plan in hand, UPAL secured resources from the Institute for Sustainable Communities and the Honnold Foundation to retrofit the building and install a 33 kW solar+storage system. Grant support enabled UPAL to purchase the system outright, with no financing or debt. And CEG provided funding to train community members to install and maintain the solar array.

"The Petersburg Resiliency Hub is proof of concept that resilient power resources can be developed locally and tailored to serve the unique needs of an individual community," says Marriele Mango, Project Director at CEG.

When fully operational in April 2024, the system will supply 100% of the Hub's electrical needs. In a crisis, the Resiliency Hub's battery can power the entire building for several hours, or support critical loads for up to three days. "People will be able to come to the Resiliency Hub and have light, have food, have shelter," says Shabazz. "They can power up their electronics or their wheelchairs and other medical devices."

Importantly, Shabazz says, "We are not operating only in times of crisis." On an ordinary day, the Hub is alive with activity: trainings in lead and mold remediation, classes in safe driving and Basic First Aid, and more. The hub includes a full-service restaurant, cementing its role as a community gathering place. "We are here every day, so people know where to go when something happens," says Shabazz.

Challenges and lessons learned

Not surprisingly, there were challenges along the way. First, Shabazz had to convince the change-resistant historical society to allow solar panels on its building. And the group expected major pushback from the local utility, Dominion Energy, given their long-time adversarial relationship (VEJC fought Dominion on the Atlantic Coast Pipeline, ratepayer overcharges, and other issues.) But, with support from community members and local elected officials, those hurdles were overcome.

Shabazz offers succinct advice to other nonprofits considering a solar-powered resiliency hub: "Go for it." Since each hub will be unique, she recommends they start with community input to identify residents' needs and wants, then seek grant funding.

"The climate events are getting more intense," says Shabazz. "We can't wait for another Katrina, with people left standing on the rooftops. So do what you can to save yourself and those in your community."

AT A GLANCE

System overview

- Rooftop mounted
- 33 kW of solar
- 60 kWh of lithium battery

Providers

- Technical assitance: Clean Energy Group
- Developers: UPAL; A Mass Construction (installed solar panels); Morua Power (conducted feasibility study)

Financing structure

- Directly owned

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