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Regions largest battery on line in the Hamptons

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Talk about a Hamptons power trip.

Starting this month, the South Fork becomes home to Long Island's first and largest utility-scale battery storage unit as part of an effort by PSEG Long Island and LIPA to boost power to the energy-starved Hamptons—from the Shinnecock Canal to Montauk Point.

PSEG and the battery's owners at National Grid and NextEra Energy Resources flipped the switch on the barrack-sized unit Aug. 1.

The 5-megawatt battery storage unit, located at a LIPA substation in East Hampton, is one of two set for the South Fork as a way to deal with what the utility says is soaring electric demand. At peak summer times, the South Fork draws some 300 megawatts of power, PSEG officials said. One megawatt powers 800-1,000 homes, but South Fork customers use more than most, PSEG has said, particularly during the summer.

A second battery is planned for Montauk later this year.

Both units, costing a combined $110 million over a 20-year contract with NextEra and National Grid, have the potential to save money on energy but for now are being used to improve reliability on the system, said Daniel Eichhorn, president of PSEG Long Island.

LIPA chief Tom Falcone said the units will be in place to store energy when a $1.62 billion wind farm off the coast of Rhode Island is producing energy by the end of 2022.

The batteries recharge at night — it takes eight hours to charge them — when power is cheapest, and they discharge during peak times, when demand is highest and energy is most costly.

The unit helps stabilize the East End grid by reducing the amount of energy that's required during the high-heat summer months, Eichhorn said. That means power plants run less, including temporary generators that are sent out to the Hamptons each summer to help deal with soaring peak energy, primarily driven by air conditioners in mega-mansions during the afternoon and evening. They can also lessen the need for aging diesel-fueled plants located near them at the East Hampton site.

The first battery — operable Aug. 1 at a 20-year cost of $51 million — has been undergoing testing in its early phases but is fully functional.

The unit isn't the first in the state. AEG Energy Storage in 2011 installed an 8-megawatt system in Johnson City, just outside Binghamton, but a federal database says it's since been decommissioned, and an AEG spokesperson didn't respond to requests for comment. The LIPA units will have greater capacity, rated at 40 megawatt hours each. Across the United States, larger units are planned or already in operation, including in California and New Jersey. Gov. Andrew M. Cuomo this year announced a plan for 1,500 megawatts of battery storage statewide by 2025.

The project met some initial resistance among residents who live around it.

Marguerite Wolffshon, planning director for East Hampton Town, said the planning board approved the project earlier this year after addressing concerns about noise and potential fire hazards. Air-conditioning units around the batteries are the only source of the noise, Wolffshon said, which is below code requirements, and local fire responders met with the company to get assurances the project would not present any new hazards. "So far so good," she said Friday.

Charlie Esposito, who lives about 100 yards from the long metal bunker containing the battery at the East Hampton substation, said she hadn't heard about it until a reporter's visit, but had questions about electromagnetic radiation from the unit, and the potential for noise. Three diesel generators were operating nearby at midday Friday. "If it's noisy I'm going to be really upset," she said. The units, housed in a green bunker behind the diesel generators, weren't audible.

PSEG officials said the units will help offset the need for temporary generators that are shipped out to the Hamptons each summer as visitors flood the area. PSEG trucks in 17 megawatts of temporary generation for East Hampton and 6 megawatts for Montauk each summer. It no longer needs to do so for Shelter Island, which has a new distribution cable under the Peconic Bay completed earlier this year. PSEG is also expected to reach a goal of reducing power by 8 megawatts on the South Fork through demand-reduction techniques, including utility-controlled thermostats and efficiency measures, by next year, Eichhorn said.

But the main fix for the South Fork is a series of new transmission cables that will be installed in largely existing underground tunnels, or conduits, over the next several years. The new cables include a 138,000-volt cable from Wading River to Riverhead, a second 138,000-volt cable from Riverhead to the Shinnecock Canal substation, a 69,000-volt cable from the canal to Southampton in an existing conduit, and a 138,000-volt cable to Wainscott, where a new substation is planned by 2026. None will be overhead, PSEG officials said.

That $513 million project will be capped by the 90-megawatt wind farm that's projected to come online in December 2022. The combined cost for all the South Fork units, including the batteries, is about $3.68 per month for all PSEG ratepayers, the utility has said.

Commercial fishing groups oppose the wind farm and the 50-mile 138,000-volt cable that will run from waters off Long Island through local waters, concerned it will limit fishing grounds and that the cable will ensnare trawler nets. They say PSEG should focus on repairing just the grid, which largely solves the electric need, while avoiding the expense of the $1.62 billion wind farm, which will provide actual capacity of between 30 megawatts and 40 megawatts, given the intermittent nature of wind, said Jim Parmelee, senior manager of power resources and contracts for PSEG.

The grid work is already underway, and the second battery system will be fully operational by year end.

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