# Long Island microgrid to set stage for huge savings



#### Clean Coalition founder shares details on scope, goals

The Long Island, NY, microgrid project that won a grant in the state's NY Prize program (SGT, <u>May-1</u>) will "set the stage for pre-empting hundreds of millions of dollars that are currently in

the business-as-usual plan," Clean Coalition Founder Craig Lewis said yesterday. His group is running the project and he shared details about it in a presentation at the Realizing the Potential of Grid-Scale Energy Storage conference in Redondo Beach, Calif.

The offset funds are for transmission upgrades and fossil generation investments that the project is expected to do away with.

**QUOTABLE:** We're expecting that, with the community microgrid approach, we can spend somewhere on the order of 25% of what the business-as-usual, transmission, central-generation approach/methodology would be [to deliver power to the region]. – *Clean Coalition Founder Craig Lewis in a presentation* 

The project is expected to come online by mid-2017, with the solar deployed sooner than 2017. His nonprofit group is working on the project with NYSERDA, grid operator PSEG Long Island and its subsidiary, the former municipal utility Long Island Power Authority (LIPA) (SGT, <u>2014-Jan-7</u>).

The project will cover a substation in East Hampton and serve thousands of customers, Lewis told the conference attendees. About 90% of those customers are residential and some 10% C&I.

The project is meant to investigate the use of integrated, solar-generated power and energy storage to offset demand during the summer months when the community's population grows to five times its size the rest of the year.

"We're going to pair up 15 MWs of local solar, through a feed-in tariff program we helped LIPA design a couple of years ago, with a 5-MW/25-MWH battery system," Lewis said. "We're aiming to get 50% of the total energy within the Long Island Community Microgrid Project grid area from local renewables," measured in MWHs served to the distribution grid in a year's time, he added.

"Then we are going to minimize the use of fossil generators, including local diesel peaker plants that exist in East Hampton – and also backup facilities," he added. Part of the microgrid project will provide "indefinite and ongoing power backup to multiple critical facilities including a fire station and two water pumping and filtration facilities."

Today, all three of those facilities have diesel generation backup, Lewis said.

The project "has a high likelihood to be the most significant New York Prize project that comes online," he told us yesterday. "Many of the funded projects are standard microgrid-type projects that will have far less impact."

The Long Island project, on the other hand, "provides a clear pathway to the DSO/DER approach to grid operations," he added. Those acronyms refer to distribution system operators (DSO) and distributed energy resources (DER) such as DG and energy storage, for example.

To accomplish the deployment, which he called the "nirvana" of community microgrid sector's work, the partners are in the middle of analyzing how to proceed, he said at the conference. Three configuration options are being weighed:

- Add a dedicated feeder into the substation: This would provide access for the energy-storage unit and all the
  associated solar generation and be routed to provide power to the three critical facilities for daily and emergency
  backup operations called the dedicated feeder approach.
- Use a big, central energy storage unit but also put energy storage units behind the meter at the three critical facilities: As in all the configuration options, the solar power would be procured through a wholesale feed-in tariff and interconnected directly to the distribution grid. If the transmission grid goes down, the solar facilities would serve the critical facilities behind the meter. This is called the distributed approach.
- Use a single, large energy-storage facility connected through a dedicated feeder: This approach would spread the

solar PV out across existing feeders. "The key to this 'balanced' approach is when a transmission line goes down, you need to be able to switch off all of your non-critical loads. And then you can use your existing feeders to provision power from the solar facilities and from the central energy storage across your existing feeder lines."

The distributed and balanced approaches look more likely than the dedicated feeder approach at this point, Lewis said at the conference.

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