SolarCity launches community microgrids with Tesla batteries

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SolarCity, well-known for rooftop solar systems, is expanding to so-called microgrids, larger power systems that can be tapped by communities when the power grid goes down.

The systems, which add generators and software to manage the power to standard solar panels, will include Tesla Motors batteries to store the energy generated. While the owner can tap the solar power for daily use, the main purpose is to maintain electricity in the event of a natural

disaster such as an earthquake or hurricane.

"There has been a dramatic increase in severe weather events the last few years - climate-related, almost certainly - and its led to more grid outages," SolarCity spokesman Jonathan Bass noted, pointing to the storm known as Sandy that hit the Northeast last year as a prominent recent example.

The company is targeting cities that are in the line of fire for such catastrophic events for the new service.

"Traditionally, microgrids have been used in campuses, medical facilities and military bases, and we will pursue some of those opportunities if they become available," said Daidipya Patwa, who is leading SolarCity's microgrid efforts, "but our primary target is municipalities, communities and areas with a weak grid or no grid at all."

That focus opens up a potentially large market, said GTM Research analyst Shayle Kann.

"Any municipality in a region that is prone to some kind of natural disaster ... they have a few key locations that they need to keep running in the event of an outage or a natural disaster - a community center where they're going to house people or police stations," the analyst said.

This will also be the first major effort overseas for SolarCity, as the company shops its microgrids to island nations with poor power grids. While Bass said the bulk of its microgrid business will focus on the United States and North America, he noted that it will be the first international work for SolarCity aside from its charitable work to provide lights at schools in the developing world.

These types of systems have the potential to make a big difference in the

developing world, Kann said.

"Ultimately, it seems like this solution could be used to electrify rural areas in the developing world or to provide better reliability in places where the grid goes down a lot," the analyst explained.

SolarCity will attempt to squeeze into a market segment with a product better than home tinkerers can build and less expensive than larger rivals.

"The approach to microgrids to date has largely been either piecing something together from some small equipment vendors or you go at the high end, to a GM or Siemens and pay upward of $10 million for a massive solution that may not be, from a budget standpoint realistic, especially for a rainy-day solution," Bass noted.

SolarCity hopes to tap economies of scale to accomplish its goal: The San Mateo company acquired Fremont solar panel manufacturer Silevo last year and plans to build a large solar panel factory in New York, while Tesla Motors - run by SolarCity Chairman and investor Elon Musk - builds a massive "Gigafactory" for the lithium-ion batteries that the microgrid systems will use.

"(Tesla is) manufacturing advanced battery technology at a scale that's just not seen anywhere else, and we absolutely expect that to drive the cost down over time," Bass said.

While SolarCity seems to have a road map that will allow it to build microgrids for interested customers, the question will be whether there will be enough communities willing to take the plunge, Kann said.

"The operative question is how big this will be for SolarCity, and more broadly, how big the microgrid market will be in general," he said.