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Demand for Home Microgrids Surges in Response to California Fires

October 12, 2020 By [Lisa Cohn](#) 2 Comments

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Interest in home microgrids is surging in California in response to wildfires and public safety power shutoffs (PSPS), with microgrid companies saying demand has jumped by as much as 1,000% in the last month.

Not only has demand increased; so has the pressure to install home microgrids as quickly as possible, and some companies say they can't move quickly enough to satisfy customers' requests.

"People want it now. In our latest project, they want us to start construction this year and it's not going to happen," said Gary Oppedahl, vice president, emerging technology for Emera Technologies.



By Photobank.kiev.ua/Shutterstock.com

Emera Technologies, a subsidiary of Canadian utility Emera, is experiencing "huge" demand in California, he said. The state was not originally on its list of markets, but is now on the company's radar because demand is so high. "Without us having any advertising out there, we've been getting at least a call a week since March or April with opportunities in California."

The company provides microgrids for neighborhoods made up of 50 to 75 homes, and generally works with real estate developers doing new construction, which is the most cost-effective way to provide the microgrids. But some potential customers have contacted Emera Technologies about retrofitting communities. And utilities have reached out to the company, as well, he said

Demand through the chimney

"Utilities want local solutions in California and other markets where you have the resilience story. We are hearing from them much more than we would have expected," said Oppedahl.

In Emera Technologies' case, utilities, independent power producers or community choice aggregations generally own the systems.

Arnold Leitner, CEO, YouSolar, said his company is also fielding calls from California, and hasn't done

any advertising. "Demand was through the roof before and now it's through the chimney. We are hearing from frustrated customers in California." The company sells the PowerBloc, a plug and play microgrid.

INDUSTRY PERSPECTIVES

Can a Microgrid be a Resilience Superhero?



Microgrids can enhance energy resilience in the face of wildfires and extreme weather, not only by islanding, but also in several other ways. Steve Hoffman, CEO of Hoffman Power Consulting, explains how.

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What on Earth is an 'Oasis' Community Microgrid?

As extreme weather and wildfires increase in intensity and frequency, and the economic cost of power outages grows, local communities increasingly recognize that resilience to extreme events begins at home, at the community level – and that's where the community microgrid resides. An extension of this is an "oasis" community microgrid, which encompasses critical community services in the microgrid. Get the report from Hoffman

For Instant On, demand for home microgrids has surged by 1,000% in the last month, said AJ Perkins, president. "We have people calling from all across the country for home nanogrids and microgrids for businesses, but 90% of these calls are definitely focused on the West Coast." He has also seen an uptick in customers asking about microgrids with solar and fuel cells, which provide redundancy when smoke undermines the production of solar in California.

Commercial operations such as wineries are also looking for microgrids – and are offering to pay high price tags.

Learn more about home microgrids at Microgrid 2020 Global in a special panel, "Bringing it Home: Residential Microgrids of the Future," on Nov. 18, 2020. Registration is free but space is limited on the platform. So please register soon!

Blue Planet Energy Systems this week drafted business contingency plans for a winery operation. One was for continued harvest and processing during a utility PSPS, and a second one addressed outages or imminent fire presence that would threaten the quality of the wine stored in the cellar. The work would come with a seven figure price tag, said Olar Lohr, regional sales manager, Blue Planet Energy.

Free Resource from *Microgrid Knowledge Library*



How to Optimize Energy Storage in a Microgrid

In this paper, new voltage sensitivity indexes are proposed to search and evaluate the candidate buses in a microgrid, where the energy storage systems can be installed to contribute most effectively to the system. To learn more about optimized energy storage in a microgrid download this white paper.

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"The wildfires are the 'hurricanes of California.' They will come back every year. It is unclear where and when, but our customers are planning for the new normal." Incentives and very high electric rates bolster the argument for immediate action and justify microgrid planning, said Lohr.

And OhmConnect quadrupled the number of new customers during the mid-August heatwaves, said Cisco DeVries, company president. The customers get paid for OhmConnect to control their appliances or home microgrids for load management or to provide power to utilities.

What's the utility role?

Some of the microgrid companies say that utilities should be paying for home microgrids or communities of home microgrids.

That's generally the model that Emera Technologies uses in areas outside of California, including Florida, which is being hit by hurricanes.

"We're hearing in regulated markets that microgrids provide a big benefit. Our system allows the utilities to manage and bring in a higher amount of renewable energy to their portfolios in a distributed platform," said Oppedahl.

However, in California, due to its deregulated structure, there are challenges to utilities owning the systems, he said. Utilities aren't allowed to own distribution and generation. Emera Technologies is trying to work with [community choice aggregations](#) and cooperatives, which are permitted to own the systems.

"The utilities are spending a lot of money to serve just a few customers, when microgrids would make more sense." – Arnold Leitner, YouSolar

Power Consulting that explores the "oasis" microgrid.

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The move toward microgrids can create a business challenge for utilities. If a whole community were retrofitted with microgrids, the utility would earn less revenue, and it's possible that utility infrastructure would be viewed as a stranded asset, said Oppedahl.

YouSolar's Leitner advocates utilities owning microgrid systems. For example, they can be a good alternative to wires that serve small numbers of people in far-flung areas at high costs.

"During fires, all the power lines need to be shut down. When it comes back on line, utilities need to fly helicopters over these areas to serve just a small number of customers." The utilities are spending a lot of money to serve just a few customers, when microgrids would make more sense, he said

"What if we started rethinking: Maybe those customers should be supplied with microgrids paid for by Pacific Gas & Electric," Leitner said.



YouSolar CEO Arnold Leitner tests a solar and battery system the company installed at a home in Big Sur, California. Photo courtesy YouSolar

His company, YouSolar, began with a crowdfunding campaign, which was oversubscribed and recently closed \$1.07 million of equity crowdfunding. YouSolar now has a pipeline of more than 500 new customers in the US. About 70 investors signed up to become customers, he noted.

Hurricanes and home microgrids

The demand for home microgrids isn't only coming from California, said Oppedahl. Emera

Technologies also works in Florida, which has been affected by hurricanes.

"Every time there is a natural disaster, people start thinking about how we can have a different approach. They then think of microgrids, local generation and local distribution. There's a lot of pressure to have resilience built into communities," he said.

Shuli Goodman, executive director of LF Energy, a nonprofit organization tasked with solving the climate crisis through the use of open source technology, said that the technology for home microgrids has matured so that early adopters are taking advantage of it.

The early adopters will help move the market forward, said Goodman. "This will drive costs lower and make them more accessible to homeowners seeking to harden themselves to power outages. We are at the very beginning of a profound innovation surge. We can assume there will be dramatic cost decreases driven by commodity hardware that will be networked and controlled by software that will be 80-90% open source."

Read more about home microgrids in the Microgrid Knowledge special report, "Nanogrids: A New Opportunity for the Solar Industry," downloadable free of charge, courtesy of Instant On.

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Comments



Solarman says:

October 12, 2020 at 10:43 pm

When former CEO of NRG Energy David Crane announced at an Energy Conference that power over wires on poles is obsolete, stunned an audience of electric utility company CEOs and his attempt to re-organize NRG into an energy provider that actually owns, operates and repairs and maintain residential solar PV systems fell on the deaf and dumb at the Corporate board level. The board of directors at NRG asked him to leave shortly after this. A half hearted attempt for NRG to become 'the' alternative energy utility failed. Some day another utility will approach NRG after it hits bankruptcy court and assets are sold for pennies on the dollar. We can only hope the Board of Directors are 'rewarded' for their part in the debacle and incompetent insistence to keep old fueled assets far beyond useful lifetimes of service.

““During fires, all the power lines need to be shut down. When it comes back on line, utilities need to fly helicopters over these areas to serve just a small number of customers.” The utilities are spending a lot of money to serve just a few customers, when microgrids would make more sense, he said.”

Yeah, 'they' fly helicopters over the area, but when do 'they' fix problems, when lines are already down?

“What if we started rethinking: Maybe those customers should be supplied with microgrids paid for by Pacific Gas & Electric,” Leitner said.”

That's one way to finance a micro-grid for one's home.

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angelo muzzin says:

October 13, 2020 at 11:15 am

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