

Friday, July 9, 2010

SDG&E readies first rate case with energy-storage component

SDG&E is tracking the rapid growth of residential PV power in San Diego, noting and modeling its intermittency and examining options to level its output, two executives there told us this week. "It's incredibly important to move forward with storage, because failing to do that will negatively affect our customers," said Lee Krevat, director of smart grid.

By the end of 2008, San Diegans had installed 20 MW of solar panels on their homes. That figure increased by 65%, to 33 MW, by the end of last year.

Given that growth rate, the utility plans for the first time to include an energy-storage component in its next

rate case, Krevat said. He could not estimate how much SDG&E will seek toward storage, he said, but "it's an infinitely greater amount than any time in the past," when it sought no storage funding.

Storage will be added to "dozens" of SDG&E's 950 circuits over the next five years, he added.

SDG&E is now studying how regulators and capacitor banks react to solar's intermittency, said Tom Bialek, chief smart grid engineer. At the end of last year, 20% or more of the current on nine circuits was being generated by PV. Solar is inherently intermittent, so it can overload those circuits.

"The worst case is when we have the maximum PV output and minimum air conditioning load," Bialek said. "At that time, the ratio of PV capacity to load is quite high." And at any point, if the system is balanced to accommodate the solar load, a stray cloud can destroy that balance. The higher the percentage of solar on a circuit, the greater the negative effects of being out of balance.

"As the fog burns off, you see a rapid fluctuation in voltage. You have too much power," Bialek said.

Once modeling is completed, SDG&E plans to examine options,

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As Obama tours EV factory, coalition urges federal lawmakers to act

President Obama yesterday toured the Smith Electric Vehicles factory in Kansas City, Mo, telling workers there that they are "building the economy of America's future." And Robbie Diamond, who leads the Electrification Coalition, took the visit to the commercial truck manufacturer as a cue to call for passage of relevant US legislation.

As Obama came into office, his administration chose to "provide critical funding to promising, innovative businesses like Smith Electric Vehicles," Obama said, according to a transcript provided by the White House. The maker of all-electric trucks received a \$32 million ARRA grant.

Smith recently hired a 50th employee. "And we're seeing similar things all across America, with incentives and investments that are creating wind turbines and solar panels," the president said. "We're seeing investments in energy-efficient appliances and home-

building materials, and in advanced battery technologies and clean energy vehicles."

The Obama administration expects "energy investments alone to generate 700,000 jobs over the next few years," the president said. "And this is not just going to boost our economy in the short term; this is going to lay a platform for the future. It's going to create opportunities ... decade after decade as companies like Smith, that start small, begin to expand."

Smith plans open up 20 facilities in the US to service customers, he added.

The US hopes to make up to 40% of the world's advanced batteries by 2015, Obama said.

Republicans and Democrats in both the House and the Senate recently introduced federal legislation intended to advance the wide-scale deployment of EVs and develop the infrastructure needed to support them. Those bills single out utilities and state regulators

as key facilitators to the development of "deployment communities" across the nation, especially in how they incorporate smart grid technology into the transportation electrification effort (SGT, [Jun-01](#)), and "it is time to move that legislation forward," Diamond said in a prepared statement.

QUOTE OF THE DAY:

President Obama and his administration have made it clear that electric vehicles must play a major role in ending our nation's dangerous dependence on oil. The electrification of cars and trucks will create jobs, protect our national security and reduce pollution.

*Electrification Coalition
President Robbie Diamond*

The Electrification Coalition in November announced plans to push for the deployment of EVs on a mass scale and for related smart grid infrastructure in the next few decades – intending to have three-quarters of the vehicle miles traveled in the US by 2040 accomplished via electricity (SGT, [Nov-17](#)). The recently introduced federal legislation echoes the nonprofit's recommendations, Diamond noted yesterday.

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PUC takes no action on San Francisco's request for speedy ruling

California's PUC did not act on a request for expedited treatment of San Francisco's plea to temporarily halt PG&E's smart meter implementation before the rollout reaches that city, the San Francisco City Attorney's office told us yesterday.

That office last month asked the PUC to rule on its halt request by July 8 (SGT, [Jun-21](#)). But "the CPUC ignored our request for an accelerated schedule," said Matt Dorsey, a spokesperson for the City Attorney's office. "I don't know whether they've thought about anything we've asked them to do."

Since the PUC did not act, PG&E has until July 19 to file with the PUC its response to San Francisco's petition, Dorsey said.

No entry appeared on yesterday's docket pertaining to the city's petition, Andrew Kotch, a PUC spokesperson, confirmed yesterday. [Documents](#) filed in the case are available for public viewing.

San Francisco sought expedited treatment of its moratorium petition because, it said, PG&E is scheduled to be rolling out smart meters there this month. It wants the rollout halted until the PUC gathers results from a current

investigation of alleged inaccuracies in the smart meters PG&E has been using. The investigation, by Houston's Structure Group, is expected to be done by summer's end (SGT, [May-14](#)).

PG&E "will be moving forward with its smart meter installation schedule, including San Francisco," Jeff Smith, a PG&E spokesperson, told us yesterday. "There is no need for a moratorium, and moving forward is in the best interest of our San Francisco customers."

PG&E this summer -- before the city filed its petition -- installed smart meters

in "a few small commercial areas, a few isolated cases" in San Francisco, Smith said. The residential rollout there has not begun but is scheduled to start this fall, he added.

Administrative Law Judge Timothy Sullivan, a PUC employee, has been assigned to research San Francisco's moratorium request, the PUC's Kotch said. Sullivan will make a proposal on which the PUC's five commissioners will vote. Sullivan is unlikely to make any decision before receiving PG&E's response, Kotch added.

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Legislation seeking US net metering standard re-introduced, again

US Rep Jay Inslee, D-Wash, last week introduced for the third time the [Americans Making Power \(AMP\) Act](#), legislation his office said would establish a national standard for net metering. The bill would let power customers sell back to their local utility excess renewable power generated through their homes, small businesses and even places of

worship, Inslee's office told the press. It would also improve the grid's reliability by encouraging diverse methods of energy production.

"Imagine getting a credit on your bill from your utility company every month because you generated more power than you use," Inslee said in a prepared statement.

The AMP Act addresses two main issues associated with a robust net metering policy: the net-metering standard and policy governing the connection of renewable-energy sources to the electric grid, known as interconnection.

The act would address these issues by modifying Section 113 of the Public Utility Regulatory Policies Act of 1978. Though about 42 states have already adopted some form of net metering or interconnection standards, the states' policies vary widely, and some states have yet to adopt net-metering language at all.

"This bill will set a national standard but is still flexible enough to allow states to set their own standards, as long as they go above and beyond the outlined language," Inslee said.

The bill is cosponsored by Reps Roscoe Bartlett, R-Md; Vernon Ehlers, R-Mich; Raul Grijalva, D-Ariz; and Brian Higgins, D-NY. No companion bill in the Senate has been introduced and no hearing schedule has been set, Inslee's press secretary, Robert Kellar, told us yesterday.

This is the third time Inslee has introduced the bill, Kellar said. In the past, though, "few states had their own

3 stories in 1 minute

ABI estimates global

market in 2015: Worldwide investment in the smart grid will approach \$46 billion by 2015, according to a [study](#) ABI Research publicized yesterday. The \$4,200 report discusses the growth rate of smart grid markets worldwide and by region, the incentives and challenges for utilities and the major regulatory and policy changes affecting the smart grid rollout.

BVU picks communication

network by Tantalus: Bristol Virginia Utilities (BVU) chose Tantalus Systems to supply its smart grid communication network, Tantalus told the press Wednesday. That firm will

provide communications over a fiber-to-the-home network installed by Bristol, Va. The network will allow for TOU pricing, load shedding and DA, Tantalus said.

EMeter gathers

\$12.5 million: EMeter got \$12.5 million in private financing from longtime investors Sequoia Capital and Foundation Capital, joined by new investor Northgate Capital, the maker of smart grid management software told the press yesterday. The firm will use the money to expand sales and marketing efforts and invest in new products. It last gathered funding nearly a year ago.

[\[Comments\]](#)

net-metering policies in place. Now 42 states have some form of net metering policy, so the acceptance of this idea is growing. The bill's odds of passage "are getting better," Kellar said. "A lot of great ideas take time to take hold."

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General interest news outlets putting spotlight on smart grid

Smart grid is making the rounds in the general interest media – and that is a very good thing for the industry, Demand Response and Smart Grid Coalition President Dan Delurey told us yesterday. National Public Radio [yesterday](#) broadcast its second news feature this week about the smart grid. And *National Geographic* this month ran a nine-page [article](#) by the *Washington Post* reporter whom NPR interviewed for its latest story.

The grid needs to get smarter, the magazine piece asserts, in part to "turn us into savvier consumers of electricity," help prevent blackouts and help solve the "intermittence problem" associated with renewables.

Delurey, who on Wednesday had a chance to explain DR to NPR's listeners (SGT, [Jul-08](#)), believes the broad exposure smart grid issues are getting this month is essential education.

"There is a high-level story to be told here," he said, noting that several daily newspapers have already written extensively about the smart grid. "If the smart grid is understood by the general public, then we'll have more

acceptance of the smart grid in its various incarnations, including smart meter deployment."

These days in the spotlight are "vastly important because the smart grid can be conceptually understood," Delurey added. "You just have to have someone's attention for a couple of minutes and you can get the major points of understanding across."

If people are not aware of how the smart grid is developing, "they're more likely to say, 'Why are we making these investments in the smart grid?' But if you explain to them what the smart grid could mean, I think you have a lot of light bulbs going off, figuratively speaking."

The NPR story for which Delurey was interviewed was produced in response to this week's heat wave in the US, Delurey said, noting that many utilities are now prepared to talk about the smart grid and DR when news outlets call to gather information about responses to hot and other inclement weather. "Smart grid has just come that far, to where it's part of the vernacular."

[\[Comments\]](#)

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including storage and dynamic VARs. When those are coupled with forecasted output, "we'll look at generating a nice, clean primary voltage," said Bialek. Dynamic VARs inject or absorb precise amounts of VARs into a system.

Energy storage -- large-scale batteries with a widely varying list of chemistries -- is one option.

Inverters, which change the phase angle of current relative to its voltage, could also prove helpful, he said. They change that output from kilowatts into kilovars, the energy used in the grid.

The utility has not yet chosen technology or vendors, Krevat reported, though "we've talked to a whole pile of vendors."

Any choice should serve multiple functions, dealing with not only intermittency but also storing solar and wind energy at night and discharging it at peak times when power prices are higher.

"That way, the batteries will pay back their cost more quickly," Krevat said.

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