

## With climate deal in works, DRSG coalition works on Congress

The world's largest economies agreed Saturday to work toward curbing greenhouse gas emissions, the *Los Angeles Times* [reported](#) Saturday, noting that attendees of the UN Climate Change Conference "acknowledged -- and did not vote to adopt -- the so-called Copenhagen Accord, which stemmed from an eleventh-hour deal cut Friday evening" by President Barack Obama and the leaders of Brazil, China, India and South Africa.

One electric utility put out a message of support on the news that the White House distributed Saturday. "We applaud the President's leadership and efforts in Copenhagen and are encouraged by the progress made," Greg Pruett, a PG&E senior VP, said in a prepared statement.

"We join other companies ... in calling upon the Senate to complete its work on a comprehensive climate and energy bill. We pledge our continued support in that effort and look forward to working constructively with the administration and all members to pass a bill early next year."

DRSG coalition members had met Friday with House Speaker Nancy Pelosi and the other members of the US House delegation to the conference in Copenhagen, Dan Delurey told us. The DRSG delegation is the first smart grid NGO delegation to take part in the meetings in Denmark.

The group Delurey heads gave the congressional delegation an overview

of the smart grid and displayed smart grid devices in action. There was the usual talk about the smart grid enabling greater energy efficiency and renewables. But DRSG stressed that "the fact that the smart grid may actually be necessary for achievement of climate change goals."

DRSG is a sponsor of the Smart Green Grid Initiative (SGT, [Oct-20](#)), the new effort intended to educate people working to combat climate change about the smart grid.

The smart grid can cut emissions by 60-211 million metric tons of CO<sub>2</sub>/year by 2030, EPRI said in June 2008, but many still do not see a connection between efforts to modernize the electrical system

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## Talquin's SGIG award brings flock of vendors

Talquin Electric Cooperative was "inundated with vendors" immediately after DOE said the Quincy, Fla, co-op was chosen to receive an \$8.1 million Smart Grid Investment Grant (SGT, [Oct-28](#)), General Manager John Hewa told us recently. Despite those pitches, the co-op has not finally selected a vendor for the 56,000 smart meters that will cover its entire service area in a \$16.2 million project, Hewa said.

"Our preference would be a single vendor that will give us meters or cards for them, plus communications from towers to the meters and into the homes, if desired," he said. "From a project-continuity point of view, we see the benefits of having one vendor, so it's seamless."

Talquin Electric serves customers in 2,600 square miles between the Gulf of Mexico and the Georgia border and is leaning toward tower-based communications with the meters using an existing microwave system for backhaul, said Hewa. Talquin can use as many as 10 towers it already owns, plus one or two more it may have to build, to host FCC-licensed transceivers. It can also mount devices

on the elevated water towers it owns.

A fixed radio system suits Talquin's needs better than PLC for several reasons, Bill May, Talquin's director of cooperative initiatives, told us. The co-op wants to remotely read water meters along with the power, and radio will allow that more easily. The tower-based radio system works better in non-contiguous service areas such as Talquin's, and it is more resistant to storm damage, with fewer collector nodes at risk.

Talquin is still testing some meters to make sure they are capable of remote connect and disconnect, a feature to be included on all 56,000 units. Batched or individual connects or disconnects can cut fuel use by utility trucks, more easily serve the many vacation homes along the Gulf of Mexico and better insulate the utility from high-voltage backfeeds that can result when homeowners run generators -- a frequent occurrence in the hurricane-wracked area. That feature will also enable prepaid service, Hewa said.

Once the vendor is chosen, a Florida-based firm that Hewa declined to name will handle the installations.

The project will be completed within two years, he said, noting that Talquin will use loans to finance its even match to the DOE grant.

One challenge is integrating the co-op's billing, outage-management and mapping systems, then taking that "tremendous amount of data and presenting it back to consumers in a fashion that's correct and useful," Hewa said. "It's important to keep our membership advised on what they're using, when and how. They have to better understand the relationship between their bill and how they got there."

The new metering system will support TOU pricing, which could ease prices that peak during the winter months at Talquin since all customers tend to turn on their heaters at once. Talquin buys 10% of its power on a TOU basis. "We contemplate TOU as an option" for customers, Hewa said.

The system will also support in-home displays using ZigBee (SGT, [Dec-17](#)). But most customers will likely use a utility-sponsored website instead to keep track of energy use, Hewa predicted.

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and attempts to cut global warming, Delurey told us recently (SGT, [Nov-25](#)).

Congressional representatives “believe that developing the smart grid is indeed an option that can provide multiple dividends to US businesses and consumers,” Pelosi said in a prepared statement. “It can lower costs, create jobs and make our nation more competitive in the international marketplace,” she said, noting that the smart grid “ought to be part of the climate change debate ... in Copenhagen and back home.”

Pelosi called the pact reached at the end of the conference “a breakthrough in the global effort to combat the climate crisis” and said “business leaders from around the world” made it clear at the conference that “addressing the climate crisis is not only sound science and a moral imperative, but good business.” Representatives of three DRSG coalition members -- Google, Honeywell and Whirlpool -- had explained in Copenhagen that “their businesses are thriving in the fields of energy efficiency and green technologies,” she said. “They stressed that the funding provided by

the Congress through our Recovery Package has been crucial to their making the investments that are producing jobs for Americans and new products that promote energy efficiency, specifically smart grid technology.”

In addition to Pelosi, the politicians the DRSG coalition addressed included House Majority Leader Steny Hoyer, Charles Rangel, Edward Markey and Henry Waxman, Delurey told us.

“They were all very interested in what we had to say and expressed a lot of support,” he added.

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### SudstainX compressed air power storage wins demo grant

SustainX Energy Storage Solutions won a DOE demonstration grant (SGT, [Nov-25](#)) of \$5.4 million toward a \$10.7 million project to design and build a full-scale, 1 mw, four-hour compressed air energy storage (CAES) facility. The venture-backed start-up was spun out of Dartmouth College in 2008 and employs 10 people in West Lebanon, NH. It uses electrically powered hydraulic pumps to compress air to 3,000 psi, according to its website. Its technology is different from the “classical” CAES that won DOE demo grants (SGT, [Dec-01](#)), the firm’s website said.

SustainX did not return phone calls seeking added information for this article.

After compression, the air is

expanded and used to power a hydraulic motor driving an electric generator. The firm’s technology uses isothermal cycling, which it said keeps the air at a constant temperature. That cycling, along with hydraulic compression and expansion, delivers “cost-effective, efficient energy storage,” the firm told the press.

SustainX technology uses off-the-shelf components and contains only hydraulic fluid. It can be discharged “thousands of times” before needing replacement, plus it lets recovering 70-80% of the energy needed to charge it, the firm said.

“Existing CAES systems suffer from poor thermal efficiency [due to adiabatic cycling] and mandatory

pairing with natural gas-fired generation,” according to the firm’s website. Such systems “are inherently large scale [with corresponding capital intensity] and are geographically constrained [i.e., limestone caverns are required].”

In contrast, SustainX said, it uses a hydraulic drive train to convert electrical energy into potential energy stored as compressed air. The use of hydraulics, among other advantages, lets more precise control of gas expansion and compression, thus maximizing thermal efficiency. The system works similarly in reverse to convert the potential energy stored in the compressed air back into electrical energy.

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### Transmission projects win DOE ARRA funds

DOE is set to distribute \$60 million in ARRA funds to support collaborative transmission planning for the three interconnection transmission networks in the US, the agency told the press Friday. The awards: \$16 million to Eastern Interconnection Planning Collaborative; \$14 million to Eastern Interconnection States’ Planning Council; \$14.5 million to Western Electricity Coordinating Council; \$12 million to Western Governors’ Assn; \$2.5 million to ERCOT and \$1 million to ERCOT for work with Texas government agencies.

The [interconnections](#) help states, utilities and grid operators prepare for growth in energy demand, smart grid technologies and renewable energy sources.

Energy Secretary Steven Chu and FERC Chairman Jon Wellinghoff agreed to coordinate efforts related to interconnection-level electric transmission planning, DOE said. The Agency will lead power and related R&D activities. FERC will continue to oversee power reliability standards nationally and will enforce regulations.

“As we move the country toward a clean energy future, it is critical that we analyze the capacity of the country’s transmission infrastructure and plan for future growth...,” Chu said in a prepared statement. “The initiatives announced today will support collaborative planning efforts among a broad range of industry, government and third-party

organizations.”

The effort will, Chu asserted, “ensure that we are effectively planning, building and strengthening the transmission networks the US needs to operate a reliable, efficient and secure electricity system.”

The plans “have the potential to improve the efficient operation of the transmission system and to reliably integrate new resources such as renewable energy and smart grid technologies,” Wellinghoff said in a prepared statement.

All awardees are required to produce long-term resource and transmission planning studies in 2011, with updated documents in 2013.

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**1 story in 0.5 minutes****Google joins IPSO,**

**group promoting IP:** Google joined the IPSO Alliance (SGT, [Jun-23](#)), a group of technology firms with the common goal of promoting IP for “smart object communications,” the search engine firm told the press Friday, noting that “Google’s PowerMeter application makes use of this idea to help smart grid users capture and analyze their energy usage information.” Google singled out San Diego Gas & Electric and TXU Energy as energy partners.

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## Local paper explains KCP&L’s smart grid motives

Kansas City Power & Light, which won a DOE grant to pursue a \$48 million demonstration “smart grid” plan, will be gathering “a lot of data about how its customers use electricity.” That “should help KCP&L determine how it wants to pursue expansion of the smart-grid technology in other parts of the metropolitan area in the middle of the next decade,” the *Kansas City Star* editorial board [wrote](#) in a “Midwest Voices” column published yesterday on [KansasCity.com](http://KansasCity.com).

The editors said KCPL is “on the right track working toward giving

customers more control over their energy consumption habits. But, the editors noted, some big questions hang in the air, including: Will customers take the time and trouble to try to save electricity, given that the Midwest has some of the cheapest rates in the nation?

Kansas City Power & Light “has been very proactive in terms of consumer empowerment and the creation of microgrids,” the utility luminary Kurt Yeager told us this month (SGT, [Dec-02](#)).

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