

City And State Renewable Energy Sectors Get Big Boost

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National and local clean-energy advocates are cheering provisions in the recently signed \$787 billion federal stimulus bill that will increase funding and give tax credits to increase the use and development of renewable energy sources.

The American Recovery and Reinvestment Act of 2009 is expected to pump billions into renewable energy resources, including solar, wind, geothermal, hydropower, waste-to-energy, landfill gas, biomass and others.

Tom Modica, the city's government affairs manager, says Long Beach is in line to get money earmarked for energy efficiency.

"A certain amount of energy efficiency money is coming to the city; we're still waiting to figure out what that's going to be," Modica says. "We're looking to do things like upgrade our public infrastructure, energy infrastructure [and] things like public buildings so we can be greener and also save some operating costs in terms of energy use."

An \$85 million solar-powered parking structure at Long Beach Airport was among items that the city submitted to the 2008 U.S. Conference of Mayors as examples of shovel-ready projects that the stimulus bill could fund.

The Golden State is a leader in solar energy, thanks to programs like the successful Million Solar Roofs Plan launched in 2007 as part of the California Solar Initiative (CSI). The plan calls for 1 million solar roofs to be installed in the state by 2018. The CSI program received 3,590 applications for new projects in the last quarter of 2008, with December alone bringing in more than 1,300 applications for new projects, according to a progress report from the California Public Utilities Commission.

In addition, last year the state opened its first solar thermal plant in 20 years. The plant in Bakersfield was built by Palo Alto-based Ausra Inc. It will use 1,000-foot-long mirrors to convert the sun's rays into energy, and is expected to generate enough electricity to power 3,500 homes. A second, larger plant is set to go on line in San Luis Obispo in 2010.

Under current California law, utility company Pacific Gas & Electric is required to obtain 20 percent of its energy from renewable resources by 2010.

Darwin Hall, Ph.D., professor of economics at California State University, Long Beach (CSULB) and co-director of CSULB's environmental science and policy program, believes the stimulus money will not only spark new renewable energy projects but will also create new jobs.

"This represents a chance to develop industries that are homegrown and that employ people here as opposed to exporting jobs," says Hall, who has a doctorate in natural resources economics from the University of California, Berkeley. "The benefits of moving in this direction are not only that we're producing electricity here, [but that] we're building the new generation of industry upon which we will be



Solar Panels – Workers from AMECO Solar Company check the installation of solar panels on a home. Solar energy is expected to expand under current California laws mandating greater use of renewable energy. (Photograph by the Business Journal's Thomas McConville)

able to learn how to meet our [energy] needs in a more cost-effective way over time."

Patrick Redgate, president of AMECO Solar in Paramount and vice president of the California Solar Energy Association, hopes that greater federal support will translate into new business.

"They're carving out a lot of money from the stimulus package to get [the solar] industry on its feet nationally," says Redgate, who's been in business since 1974. "California's been the leader on that. Thank goodness we had a governor that was all for solar. Because of him and because of similar-thinking people, the State of California has once again become the national leader for solar, [but] we're still behind the rest of the world, though, so that's why we need Obama to do this."

Redgate says a combination of the economic recession and a national spotlight on solar energy is already sparking a renewed interest in solar from businesses and homeowners.

"We're having a lot of people call who just want to know what it costs," he says. "The sad thing is, everyone is worried about their overhead now, much more than they were last year. . . . so they're looking for ways to cut their overhead and trim their expenses, [and] because of all the talk about solar they think maybe they can get a solar system for free or . . . really cheap. There are certainly subsidies and programs that are going to help you, but it still costs. The up-front costs for installing a solar system aren't going to solve cash-flow problems for today; they're going to solve projected expenses."

A commercial solar system usually takes anywhere from five to seven and a half years to pay back the investment in energy cost savings, Redgate adds.

Michael Goggin, electric industry analyst with the American Wind Energy Association (AWEA), a Washington, D.C.-based advocacy group, says provisions like the production tax credit for electricity derived from wind facilities through 2012 provide much-needed incentives to potential investors and manufacturers.

"There was a three-year extension of the production tax credit," Goggin says. "That's been one of the big problems, that this production tax credit would last like a year or two and then it wouldn't be extended and the industry would just dry up without a longer-term certainty."

California – with 2,517 megawatts – is among the top five states for wind power-generating capacity, according to AWEA.

Goggin says wind energy has matured and is now considered a mainstream energy source, surpassed only by natural gas as the largest new source of generating energy. In 2007, it accounted for almost 35 percent of the total new generating capacity added that year, and made up 42 percent of the entire new power-producing capacity added in 2008, he says.

"It's really become a mainstream technology as natural gas prices have gone up and people get more serious about climate change," Goggin adds. "[People] realize that it's a great investment that makes sense."

If the new administration is serious about its commitment to renewable energy, the next big step is to expand the nation's aging power grids, Goggin says.

"We need a transmission policy in this country that allows transmission to get built," he says. "Right now there's just not enough transmission to move the wind power from where the wind is to where people live."

Federal officials have set an ambitious goal of doubling the production of renewable energy in three years and having the country obtain 25 percent of its electricity from renewable resources by 2025.

Goggin says the goal is "entirely doable" with states like California – the number three producer of wind energy in the country behind Texas and Iowa – leading the way.

"There are going to be challenges to get there," Goggin says. "We need to reform our [energy] policies, we need to have long-term policies that give the industry the certainty it needs so that manufacturers can really scale up their capacity to build wind turbines in this country. [But] if the right policies are in place, the sky's the limit – we can definitely do 25 percent by 2025."

The stimulus bill provides \$16.8 billion in direct spending for renewable energy and energy efficiency programs over the next 10 years, including:

- \$2.5 billion for research and development;
- \$11 billion to modernize the nation's electricity grid;
- \$2.3 billion in grants for the manufacture of advanced batteries like those used in hybrid vehicles;
- \$1.6 billion for Clean Energy Renewable Bonds (CREBs) to finance renewable energy facilities;
- \$2.4 billion in bonds to finance state, municipal and tribal government programs to reduce greenhouse gas emissions;
- \$6 billion for a temporary renewable-energy loan-guarantee program for any renewable energy power generation and transmission projects that begin construction by September 30, 2011; and
- \$500 million to fund job training programs in energy efficiency and renewable energy.

All figures based on data from the American Council on Renewable Energy (ACORE), a Washington, D.C.-based nonprofit dedicated to bringing renewable energy into the American mainstream. ■