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THE WALL STREET JOURNAL.
WSJ.com

BUSINESS | JULY 31, 2009

New Jersey Outshines 48 of Its Peers in Solar Power

Lacking California's Sunshine and Deserts, State Capitalizes on Utility Poles and Flat Industrial Roofs to Claim No. 2 Spot

By [REBECCA SMITH](#) and [RUSSELL GOLD](#)

New Jersey's biggest utility is outfitting 200,000 utility poles with solar panels, part of the state's embrace of a try-anything strategy that has made it the nation's second-biggest producer of solar energy behind California.

Instead of bemoaning what it doesn't have -- bright sunshine, high winds, empty land -- New Jersey has looked for places where solar capacity can be squirreled away inconspicuously. In addition to utility poles, the state is pushing solar panels for industrial locations with many flat roofs.

FedEx Corp., for example, said Thursday it will begin installing solar panels atop its distribution hub in Woodbridge, N.J., next month. Covering about three acres and capable of generating 2.42 megawatts of electricity, it is expected to be the largest rooftop solar facility in the U.S. when completed in November. The solar array will satisfy about 30% of the facility's electricity needs.

Other states may adopt New Jersey's practical approach, if Congress pushes ahead with plans to create a national renewable-energy mandate. In Southeastern states, this could mean burning more wood chips or farm waste to make electricity.

"We don't have the land to do big, grid-connected, utility-scale solar projects, so we've had to think more creatively," said Ralph Izzo, chief executive of [Public Service Enterprise Group Inc.](#) The big utility received regulatory approval this week to install 40 megawatts of solar panels on utility poles and another 40 megawatts at its industrial yards and on rooftops.

Rooftop projects avoid the environmental hurdles associated with the use of pristine, desert locations, often sought out in Western states like California. Nor is there the problem of trying to get leases from the federal government, the biggest landowner in the West. And, of course, when solar energy is scattered on rooftops, it's literally sitting right on top of customers, so there is no need for major new transmission lines.

"We need to break away from the mindset of putting solar energy where there's lots of land but no people," said Mr. Izzo.

The Garden State's generous financial incentives for solar installation are helping to generate interest. "I've had plenty of people ask me, 'Why New Jersey? Why not Arizona?' " said Paul Vicarro, a facilities managing director at FedEx. "The answer is: That is where the money is, that is where incentives are to make the deal financially viable."

California also is on a solar tear. It wants "a million solar roofs" a decade from now, and is spending \$3.3 billion on subsidies, hoping to get 3,000 megawatts installed. More than 158 megawatts of grid-tied solar power were installed in California last year, double the amount installed in 2007. Since the 1980s, California has installed nearly 500 megawatts of grid-tied solar power, equivalent to one large power plant, but still a tiny fraction of the 40,000 megawatts the state needs on a summer day.

New Jersey's \$514 million program will double its solar capacity to 160 megawatts by 2013, and will be funded by utility customers. Costs will be defrayed slightly by a 30% federal tax credit, roughly \$1 million a year in proceeds from the sale of solar renewable energy credits. In addition, solar energy fetches higher prices in the state's deregulated market, because it's produced at peak times.

PSEG will get more than electricity from the pole-mounted systems, which cost about \$1,000 apiece. The solar units will have a radio capability, so they can alert the utility to outages and relay other grid data. "As they deploy these systems, they get a smart grid network," said Shihab Kuran, chief executive of Petra Solar in Plainfield, N.J., which is manufacturing the systems locally.

Jesse Pichel, an alternative-energy analyst with Piper Jaffray & Co., said a change in government incentives should stimulate more solar development. Beginning Aug. 1, renewable-energy companies can get cash grants from the federal government, instead of a credit against taxable income, for 30% of the cost of projects. The change will make it easier to finance projects.

Even though panel prices have fallen amid abundant supplies of polysilicon, the primary material used to make panels, the electricity still costs more than power generated from conventional fossil-fuel sources. "We've got to stop pretending solar power will lower the cost of energy. It's going to increase the cost, and people have got to understand why it's worth more," said PSEG's Mr. Izzo. He listed the names of pollutants produced by coal or gas incineration that don't occur with solar technology.

Jeanne Fox, president of the New Jersey Board of Public Utilities, said her state has 4,000 solar installations, or "more per square mile than California." There are limits, though, she added, "because the ratepayers can't afford to have solar everywhere, even though the cost is dropping."

New Jersey's goal is to garner 3% of its electricity from the sun and 12% from offshore wind by 2020, part of a larger effort to meet 30% of the state's electricity needs through clean sources.

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Printed in The Wall Street Journal, page A5

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