
Department of Energy

World's Largest Solar Energy Project Heads to Mojave

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A California company will harness the Mojave Desert sunshine to create the world's largest solar energy system by the end of 2013. The Ivanpah Solar Electric Generating System, located just a few miles from the California - Nevada border near Interstate 15, will generate approximately 400 MW of energy per year, almost doubling the amount of solar thermal energy produced in the United States.

Ivanpah will focus sunlight from mirrors placed on poles, which don't require the land to be graded and can be placed around areas that are already in use or environmentally sensitive. The project of Oakland, Calif.-based BrightSource Energy, Inc. will likely generate enough power for 140,000 homes. In fact, BrightSource already has contracts to sell that power to Southern California Edison and Pacific Gas & Electric. The project is supported by \$1.37 million in conditional loan guarantees by the U.S. Department of Energy, made under the 2005 Energy Policy Act.

BrightSource Senior Director of Corporate Communications Keely Wachs says the project has been in the works for years. In fact, BrightSource built a 1.5-MW

demonstration facility in Israel's Negev Desert just to demonstrate the technology to investors, customers and the federal government. That's important, he said, because solar thermal energy is just starting to be commercialized. Utilities need to feel comfortable that they're getting a low-risk, reliable source of power before they'll make the investment.

Solar thermal energy is different from the rooftop photovoltaic panels most consumers are used to seeing. Instead of chemically transforming photons into electricity, solar thermal plants focus sunlight onto a boiler. When the water boils, the steam turns a turbine, creating electricity. In that respect, the technology is more than a century old, Keely says – but using the sun is an innovation.

"The world has been producing electricity with steam for a long time," he says. "The question is, how do you create high-quality steam from solar?"

BrightSource already has an engineering and construction contractor, Bechtel, lined up for work on Ivanpah to begin this fall. The two companies estimate that the project will create 1,000 jobs, largely in skilled construction. Thanks to agreements Bechtel signed, these will be union jobs drawn from the local workforces in San Bernardino and Riverside counties.

"What's really exciting is that the types of jobs on this project are the types of jobs that had been lost due to the crash of the housing market and construction market," Keely says. "So we're going to be employing pipe fitters, welders, electricians.

What does this mean for me?

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