

Moniz lauds opening of massive Calif. plant as triumph for embattled DOE loan program

Katherine Ling, Environment & Energy Publishing, 2-13-14

The Obama administration today praised the full operation of the world's largest solar thermal plant in California's Mojave Desert, a project financed through a \$1.6 billion Energy Department loan guarantee.

The Ivanpah Solar Electric Generating System shows President Obama's commitment to an "all of the above" energy strategy and job creation and the success of public and private partnerships, Energy Secretary Ernest Moniz said. He was on hand for the dedication ceremony, along with the head of DOE's Loan Program Office, Peter Davidson.

"In many ways, this project is a symbol of the exciting progress we are seeing across the industry," Moniz said in prepared remarks. "Last year, utility-scale solar set a record with 2.3 gigawatts installed in 2013."

He added, "This project speaks for itself. Just look at the 170,000 shining heliostat mirrors and the three towers that would dwarf the Statue of Liberty."

Ivanpah uses dry-cooling technology that reduces water use. The plant, Moniz said, this will use roughly the same amount of water as two holes at a golf course.

With all three 450-foot-high towers now operational, the plant can provide 392 megawatts of electricity, enough power for 140,000 homes in California, while cutting carbon dioxide emissions equal to removing about 72,000 vehicles off the road, according to NRG Energy Inc., which operates the plant. The plant is a partnership between NRG, Google and BrightSource Energy, which provided the technology.

The dedication stands in stark contrast to the criticism DOE's loan guarantee program received after solar panel manufacturer Solyndra, which received \$536 million in federal financing, went bankrupt about three years ago.

Recently, the administration has begun to push the program again, offering up to \$8 billion in available loan guarantees for fossil energy projects and preparing another \$3 billion for renewable energy sources. It also has \$16 billion remaining authority in the advanced vehicle loan program.

Ivanpah, built on 3,500 acres of desert, uses mirrors to concentrate the sun into a tower to heat up water to create steam power, also known as concentrated solar power. This technology can also offer thermal energy storage, which means the electricity can be dispatched even when the sun doesn't shine -- an important element if solar and other intermittent renewable energy sources provide more power to the grid.

A new **report** from the National Renewable Energy Laboratory found that concentrated solar power plants could extend thermal storage up to nine hours with additional benefits.

It also found that the value of delivered energy of dry-cooled tower -- such as the one used at Ivanpah -- and parabolic trough CSP plants, integrated with thermal energy storage, are quite similar. The report aims to help utilities and grid operators make more informed decisions as greater levels of renewable energy come online, NREL said.

The Ivanpah project is one of five concentrated solar projects backed through DOE loan guarantees, which will provide a total of 1.26 GW of power and have a supply chain throughout 39 states, according to DOE. The projects also include the first molten salt storage in the country and the first power tower with molten salt storage.

In total, DOE says, it has funded 2.8 GW of large-scale solar -- including photovoltaic projects -- through its loan guarantee program in operation or under construction.

While interest in solar projects has jumped in the past few years, they have received some setbacks, especially in the West, as their large arrays can disturb animal migration and wildlife habitats. The Interior Department is working on this issue and sees the solar projects as potentially a way to restore other damaged habitats (*Greenwire*, Jan. 28).