

Big California solar energy push moves forward

David R. Baker, San Francisco Chronicle, 8-26-10

California's long-awaited boom in solar power plant construction took a major step forward Wednesday when state regulators approved the first in a string of projects that will soon blanket thousands of acres of desert with mirrors harnessing the energy of the sun.

The California Energy Commission unanimously approved the Beacon Solar Energy Project, which a Florida company plans to build on the Mojave Desert's western edge. The plant will use troughs of curved mirrors to concentrate sunlight, heat fluid-filled tubes, generate steam, turn a turbine and produce electricity.

California hasn't issued a license for this kind of big "solar thermal" power plant in about 20 years. But in the coming months, the energy commission will vote on eight other, large-scale solar projects that the state needs to meet its renewable energy goals.

"I hope this is the first of many more large-scale renewable projects that this commission will permit," said Commissioner Jeffrey Byron. "This is exactly the kind of project that we like to see."

California law requires the state's investor-owned utilities to get 20 percent of their electricity from renewable sources by the end of this year, a target the utilities will almost certainly miss. In full sunlight, Beacon Solar will be able to generate as much as 250 megawatts of electricity. A megawatt is a snapshot figure, roughly equal to the amount of electricity used at any given moment by 750 homes.

Many of these large solar projects have been seeking state approval for years, slowly wending their way through the tortuous process of winning government permits. Beacon's developer, a subsidiary of NextEra Energy Resources, first applied in 2008.

But now the developers and the commissioners are racing to meet a deadline set by President Obama's economic stimulus package. Renewable power projects that secure all their permits and start construction by the end of this year can receive a federal grant worth 30 percent of the project's cost, in lieu of taking a tax credit of equal value.

Most of the projects sit on federal land, forcing their developers to win permits from both the state and the U.S. Bureau of Land Management. So federal and state officials tried to synchronize and speed up their approval processes.

"They all said to themselves, 'This is a major national challenge, and in order to deal with jobs and energy security and clean air, we're going to have to do things as efficiently as we can,'" said Michael Picker, senior adviser to Gov. Arnold Schwarzenegger for renewable energy facilities. "And the environmental statutes didn't change, so they couldn't cut corners."

Unlike most of the upcoming projects, Beacon Solar sits on private land, meaning it doesn't need federal approval.

But NextEra can't start construction just yet. No one has agreed to buy the plant's power. Financiers typically demand to see a signed power purchase agreement before funding a project. Although NextEra declines to give

a cost estimate, an energy commission fact sheet for Beacon Solar lists the project's cost at approximately \$1 billion.

"We are still talking to potential customers," said NextEra spokesman Steve Stengel. "Our expectation is to apply for and ultimately qualify for stimulus funds."

Beacon solar will occupy 2,012 acres formerly used for alfalfa farming in eastern Kern County, about 4 miles from California City. The site sits just to the east of a highway and close to an electrical switching station owned by the Los Angeles Department of Water and Power.

That location, on previously used land next to existing infrastructure, appealed to environmentalists who don't want solar projects to ruin pristine desert habitat. So did the company's decision to use recycled municipal water, instead of groundwater, for cooling the equipment.

"We think this is an example of a good project," said Jim Lyons, senior director for renewable energy with the environmental group Defenders of Wildlife. "It'll provide renewable energy with minimal environmental impacts."