

Salton Sea could get new geothermal plant

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An Australian company hopes to build a massive geothermal power plant by the Salton Sea, in a development that could raise hopes for clean energy advocates and supporters of Salton Sea restoration.

The Imperial Irrigation District's board of directors voted Monday to approve a 1,900-acre lease agreement with Controlled Thermal Resources, which has proposed a 250-megawatt geothermal plant along the lake's southern shore, near

Calipatria. The facility would generate five times as much electricity as any of the 11 existing geothermal plants in the area.

The proposal would need to be approved by the California Energy Commission. It also faces the same obstacle that has plagued all geothermal development in the region: high up-front costs.

Only one geothermal plant has opened by the Salton Sea since 2000, even though the area is home to one of the world's strongest geothermal reservoirs. Researchers at the National Renewable Energy Laboratory recently said there's little hope of new geothermal plants generating billions of dollars for the revitalization of the Salton Sea, frustrating local officials who see energy development as key to funding restoration projects.

But Rod Colwell, Controlled Thermal Resources' chief executive, believes his company will succeed where others have failed.

In the past, developers haven't built Salton Sea geothermal plants larger than 49.9 megawatts, because doing so would require them to get approval from the California Energy Commission, in addition to Imperial County. But Colwell believes his company can bring down costs through economies of scale. By building a plant at 250 megawatts, he said, it can offer electricity at a price that's attractive to utilities or other potential buyers.

"Our goal is to generate competitive baseload power that's truly competitive with the fossil fuel market," he said.



(Photo: Richard Lui/The Desert Sun)

Kevin Kelley, general manager of the Imperial Irrigation District, sounded a note of caution. He described the lease agreement as "the first leg of a long journey," noting that Controlled Thermal Resources will still need to find a buyer for the electricity before it can start building. The company will also need to secure big loans — a step that could be difficult even with a power purchase agreement in place, said V. John White, executive director of the Center for Energy Efficiency and Renewable Technologies, an industry trade group.

"I would be happy to see anybody down there trying to build geothermal. But to get a bid that's attractive enough that utilities will buy it, and to be able to turn around and get a banker to help — those are the critical variables," White said.

Local officials have argued that California needs more geothermal to meet its ambitious climate goals, including a 50 percent clean energy mandate. The state has made it to 25 percent largely through solar and wind, but the sun doesn't always shine, and the wind doesn't always blow. Getting to 50 percent, some experts say, will require a climate-friendly energy source that reliably generates electricity around the clock: geothermal.

So far, the high costs of building a geothermal plant have prevented much development. But Colwell said the 50 percent mandate gives him confidence that demand for geothermal will materialize. His company is already making plans to scale up the 250-megawatt project to 375 megawatts down the road.

"This is a long-term project, long-term revenue," Colwell said.

For now, the company plans to begin drilling test wells and exploring the site. Colwell said he expects the energy commission approval process to last 18 months, and he hopes to finish construction on the power plant by 2020. The facility would be Controlled Thermal Resources' first project.

The company will pay the Imperial Irrigation District \$40,000 per year during the exploration phase, plus an additional \$190,000 annually once construction begins. It would later pay royalties on any electricity it generates.



Advocates for Salton Sea restoration will be watching the project closely. The district has projected that geothermal development could generate \$2 billion for efforts to restore California's largest lake, which is shrinking as agricultural runoff declines, polluting the air with toxic dust from the exposed lakebed and leading to mass fish die-offs. Researchers at the National Renewable Energy Laboratory were less optimistic, estimating last year that Salton Sea geothermal could generate between \$98 million and \$210 million by 2030. The problem, they said, is that building geothermal power plants is already so expensive that forcing private companies to pay for restoration projects could make development impossible.

Kelley, the Imperial Irrigation District general manager, said he's optimistic new development will eventually move forward.

"It's no secret that IID and Imperial County have been ardent advocates for geothermal, new geothermal generation at the Salton Sea, and I expect that others in a position to make a difference on energy policy in the state are going to arrive at that same conclusion," Kelley said.

Geothermal supporters have long complained that state officials don't properly value the technology's reliability benefits, and its ability to complement solar and wind. They hoped the Legislature would promote geothermal in the bill that raised the clean energy mandate from 33 percent to 50 percent last year, but lawmakers kept in place the system that has largely excluded geothermal.

Local lawmakers have also written bills that would require utilities to buy more electricity from geothermal plants, but those bills have failed to get traction in the Legislature.

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