

Wind farm 'mega-project' underway in Mojave Desert

The Alta Wind Energy Center — with plans for thousands of acres of turbines to generate electricity for 600,000 Southern California homes — officially breaks ground Tuesday.

By Tiffany Hsu, Los Angeles Times

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It's being called the largest wind power project in the country, with plans for thousands of acres of towering turbines in the Mojave Desert foothills generating electricity for 600,000 homes in Southern California.

And now it's finally kicking into gear.

The multibillion-dollar Alta Wind Energy Center has had a tortured history, stretching across nearly a decade of ownership changes, opposition from local residents and transmission infrastructure delays.

But on Tuesday, the project is officially breaking ground in the Tehachapi Pass, a burgeoning hot spot for wind energy about 75 miles north of Los Angeles. When completed, Alta could produce three times as much energy as the country's largest existing wind farm, analysts said. It's slated to be done in the next decade.

The project will probably be a wind power bellwether, affecting the way renewable energy deals are financed, the development of new electricity storage systems and how governments regulate the industry, said Billy Gamboa, a renewable energy analyst with the California Center for Sustainable Energy.

"It's a super-mega-project — it'll definitely set a precedent for the rest of the state and have a pretty large impact on the wind industry in general," he said.

The project's developer, New York-based Terra-Gen Power, plans to coax three gigawatts of power from the wind farm over the next eight years. It has led some industry experts to predict that California might have a shot at reclaiming the wind energy crown from competitors such as Texas and Iowa.

"Alta's an absolutely enormous project in probably the most promising wind resource area that remains in the state," said Ryan Wiser, a renewable energy analyst at Lawrence Berkeley National Laboratory. "It's the single biggest investment in California wind project assets in decades and is likely the largest the state is ever going to see."

Southern California Edison agreed in 2006 to buy 1,550 megawatts of electricity from Alta over

25 years, one of the heftiest power purchase agreements ever signed. That would be enough energy to serve 275,000 homes and is twice the capacity of the country's largest existing wind farm, a 735-megawatt project in Texas.

Terra-Gen is building Alta as a collection of wind farms; it has finished funding and started building the first group of five. The cluster's 290 turbines will be scattered across 9,000 acres, most of which are leased from private landowners. As early as next year, executives said, the turbines could start producing enough power to boost California's wind energy output more than 25% while creating thousands of local jobs.

By 2015, another batch of farms, with roughly 300 turbines — some with blades spanning nearly the length of a football field — is expected to be producing an additional 830 megawatts. Beyond that, details are scarce.

"The first Alta phases are very real, but future phases might be a little less tangible," said Matt Kaplan, a senior analyst with IHS Emerging Energy Research. "We've seen California utilities sign a lot of power purchase agreements for not necessarily the most realistic projects."

For years, Alta seemed to some like just another ambitious pipe dream tied up in red tape and stymied by a lack of transmission lines to carry the energy to customers.

The project was originally conceived as the Alta-Oak Creek Mojave initiative in the early 2000s by Australian infrastructure fund Allco Finance Group. But when the firm went bankrupt in 2008, Terra-Gen bought control of Alta for \$325 million.

The permitting process took about three years, said Steve Doyon, vice president and head of development for Terra-Gen.

Along the way, Terra-Gen had to abandon several proposed sites because of landowners' concerns about noise and frosty turbine blades slinging chunks of ice. Some worried that the skyscraping structures could malfunction and collapse or impede firefighting efforts.

Last year, a petition opposing part of the project collected more than 1,000 signatures. The Federal Aviation Administration also jumped in, saying that some of the proposed turbines would interfere with flights at the nearby Mountain Valley Airport.

"We're not against green energy in any way, but there just comes a time when you say that this is my community and I don't want turbines encroaching in full view," said Merle Carnes, president of the Old West Ranch Property Owners Assn. "There's room somewhere else."

The Alta project had other big hurdles. California has been falling behind in the wind power race, increasing its capacity just 7% in 2008 while Texas and Iowa each doubled theirs.

Pockets where high wind is common — such as the Altamont Pass in Northern California and the San Geronio Pass near Palm Springs — ran out of space early on, crammed with small turbines using inefficient old technology, analyst Wiser said. That has led to just "drips and

drabs" of installation over the last two decades. The Tehachapi area is one of the few windy regions left with room to grow, he said.

Edison has been making headway on its Tehachapi Renewable Transmission Project, connecting alternative-energy projects such as Alta to electricity-hungry city centers. The utility is trying to meet a statewide goal for investor-owned utilities to use renewable energy for 33% of all power supplied to customers by 2020.

Previously tight-fisted investors also are more confident about financing renewable energy projects. Terra-Gen recently secured \$1.2 billion in funding for the Alta project.

Vestas-American Wind Technology said last week that it would deliver 190 turbines to Alta, the largest order ever for the turbine-making company. It was unable to land any contracts last year because of the credit crunch.

The industry is not out of the woods yet: In the first half of 2010, newly added wind capacity in the U.S. tumbled 70% compared with the same period last year to just 1,200 megawatts, the American Wind Energy Assn. said Monday.

But for now, experts said, the Alta project seems to be on track.

"I'm not seeing any great big red flags there," Wisner said.

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