

Sun-drenched Calif. desert also ripe for big wind development

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The Bureau of Land Management is working to significantly expand wind power production on federal land in California, targeting seven commercial-scale projects that could be approved and under construction by the end of next year.

California ranks third nationwide, with 3,177 megawatts of installed wind power capacity, according to the latest National Renewable Energy Laboratory data. But wind farms on federal land account for only 234 MW, according to BLM, and the agency hasn't approved construction of a wind project in California since 2005.

That stands in sharp contrast to the federal government's investment in solar energy in the Golden State, where more than 33,000 acres of federal land is expected to host solar plants over the next five years, generating enough electricity to power more than 1 million homes.

But the addition of seven major wind projects on federal lands would help diversify the renewables landscape for California. If fully built, turbines and associated infrastructure would cover more than 41,000 acres, producing an estimated 1,400 MW of electricity.

The California projects are a key component of the Obama administration's effort to meet a goal, set forth in the Energy Policy Act of 2005, to approve roughly 10,000 MW of new renewable energy projects on federal land by 2015.

Interior Secretary Ken Salazar told *Land Letter* last week that BLM is on track to meet the 10,000 MW permitting goal by the end of next year -- three years ahead of schedule. The successful completion of those projects, he said, would represent "the equivalent amount of power that is generated from 30 coal-fired power plants."

Three of the seven priority wind power projects in California are set to be approved this year, and could begin construction by year's end. They cover 36,000 acres of federal land and have a total capacity to produce 735 MW -- enough to power nearly 300,000 homes.

The scale of that development has some environmentalists concerned that a rush to build new wind farms, like the solar energy boom that began two years ago and continues today, could further transform the fragile desert landscape.

"The first wave was solar, and it appears now the second wave that's going to hit with a vengeance is wind," said Jeff Aardahl, a biologist and the California representative for Defenders of Wildlife.

Ocotillo Express

The largest wind project to move forward in the permitting process is the Ocotillo Express Wind Energy Project in Imperial County near Interstate 8, just north of the U.S.-Mexico border.

BLM last month released a draft environmental impact statement (EIS) for the Ocotillo project, which is open for public comment through Oct. 5. A final EIS is expected this fall, said Jeff Childers, BLM's National Environmental Policy Act coordinator for the project.

"We're definitely very excited about the project," said Matt Dallas, a spokesman for San Francisco-based Pattern Energy Group LP, the project developer. "We think we're really on the leading edge with our environmental mitigation initiatives and other things we're doing on the project."

The project calls for stringing together 155 wind power turbines across 12,436 acres of Mojave Desert land managed by BLM. It would be built in two phases: Phase I would include about 137 wind turbines capable of producing 315 MW of electricity; Phase II would involve 18 wind turbines that could generate up to 150 MW, according to the draft EIS.

Pattern Energy already has a power purchase agreement with San Diego Gas & Electric for the 315 MW that is expected to be produced by Phase I of the project.

A chief selling point for the Ocotillo project is the Sunrise Powerlink 500-kilovolt transmission line, which is under construction and would cross the proposed wind farm site, allowing the plant to ship electricity to load centers across Southern California, said Greg Miller, the renewable energy program manager for BLM's California Desert District.

Pattern Energy wants to complete Phase I and bring it online by the end of 2012. And the company believes it has chosen a site and developed a plan that should allow it to meet that goal, said Glen Hodges, Pattern Energy's senior project developer.

"We started with a site that we thought would have low risk of environmental issues, and confirmed that through over two years of extensive on-site environmental studies," Hodges said in an email response to questions.

But the company has had to meet a number of environmental challenges, including limited groundwater supplies.

Coyote Wells Valley Groundwater Basin, over which the project would sit, is already overdrawn and cannot serve as a realistic source of water for the project, according to the draft EIS.

To obtain the 16 million gallons of water needed during the estimated three-year construction of both phases of the wind farm, developers would either need to purchase the water from a private well owner near Pine Valley, about 50 miles west of the project site, or from the Imperial Irrigation District from canals near Dixieland, 20 miles east of the project site.

In each case, the water would be trucked to the site, according to the draft EIS.

Hodges said the company has "secured a viable off-site source for construction water." And once the wind farm is built, it will consume only 13 million gallons of water over the 40-year life of the power plant, according to the draft EIS.

High-tech mitigation

The project must also address concerns about wildlife habitat fragmentation and potential impacts to birds, including raptors and golden eagles, according to the draft EIS.

The project would also displace a number of sensitive species, including the flat-tailed horned lizard, burrowing owl and peninsular bighorn sheep.

For bighorn sheep, the project would directly affect about 173 acres of what the Fish and Wildlife Service has identified as "essential habitat" for the sheep, though the land in question is unoccupied, according to the draft EIS.

Pattern Energy has agreed to a mitigation plan that includes hiring on-site biologists during construction and revegetating areas after construction within the essential habitat area.

The company would also install a 50-foot-tall "biological monitoring observation tower" offering high-resolution video and night-vision images to help monitor bighorn sheep migrating through the area. The tower would also be equipped with an advanced radar system designed to track sheep as well as migratory birds, raptors and eagles, according to the draft EIS and company officials.

The radar equipment will "allow for adaptive management" after the plant is built, Hodges said, including powering down specific turbines when eagles and other birds are approaching the wind farm.

"It's a significant endeavor the project proponent has proposed," said Cedric Perry, BLM's project manager for the Ocotillo Express project in Moreno Valley, Calif.

Aardahl, the Defenders of Wildlife biologist, said he was encouraged by the degree of mitigation measures included in the proposal.

"I would say it appears that Pattern Energy is taking extra measures to address some of the notable potential adverse effects," he said, "such as the effect of turbines on birds, particularly golden eagles."

The permitting pipeline

Two other high-priority wind power projects for BLM in California this year are the Tule Wind Energy Project and the Walker Ridge Wind Project.

BLM issued a draft EIS for the Tule Wind project in December, and is close to releasing a final EIS for the project this month, Childers said. The Tule Wind project would cover 15,493 acres and have the capacity to power about 80,000 homes.

Regulators are set to release a draft EIS this fall for the Walker Ridge project -- the only one of the seven projects not to be sited in the Southern California desert region. Walker Ridge would cover 8,157 acres in north-central California and have the capacity to power about 28,000 homes.

In addition to this year's priority projects, BLM has identified four additional projects in Southern California that it will make a priority for approval in 2012. The sites cover 5,700 acres of BLM land and have a total capacity to produce 667 MW -- enough to power more than 250,000 homes.

The 2012 priority list is not finalized, and more wind power projects could be added to the list, said Miller, the BLM renewable energy program manager.

That would be just fine with the wind power industry, which has struggled to gain a foothold on federal lands in California, said Tom Vinson, senior director for federal regulatory policy with the American Wind Energy Association.

"While the Department of Interior has permitted several large solar projects over the last year or so, approval of wind energy projects by BLM has been modest to date," Vinson said.

"We are hopeful that the pace will pick up, as public lands are an important opportunity for renewable energy in the western U.S. But the reality is that there is plenty of private land for wind energy development, so if the time, cost and other hurdles to development on public lands are too great, then wind energy developers will look elsewhere."