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Solar: California's new gold rush

Green energy offers the prospect of an economic boon, but some worry the environmental, cultural cost is too high

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The Desert Sun

It's been called California's second gold rush: the clamor by large solar companies to stake a claim in southern California's open deserts and capture one of its most abundant resources — sunlight.

While many cheer the cleaner energy and economic possibilities utility-scale solar development may bring to a job-starved region, some environmentalists, Native Americans and others are critical of the process, saying it's running roughshod over threatened plant and animal species and culturally sensitive areas.

The California Energy Commission and federal Department of the Interior have approved eight major solar projects in Southern California since last year, including seven projects in the deserts north and east of the Coachella Valley. All but two of the approved plans utilize largely undeveloped public land managed by the federal Bureau of Land Management. The projects are expected to generate:

• Nearly 3,600 megawatts of non-carbon-emitting electricity, enough to power almost 1.8 million homes.

• Some 5,500 jobs during construction of the projects, and nearly 1,000 long-term operational jobs.

• More than $15.2 million in annual property taxes, and hundreds of millions more in sales taxes as the projects are built.

Another eight utility-scale solar projects are also in the permitting pipeline for Riverside and Imperial counties, promising an additional 2,173 megawatts of renewable energy generation. And long-range plans are in the works that could open up millions more public acres to solar development in six western states, with the largest proposed solar energy zone in Riverside County.

“California is the national leader in clean energy, and our great state is poised to become the world leader in renewable energy generation,” Gov.Jerry Brown said Monday.

Brown earlier this month signed a bipartisan bill to further increase California's

renewable energy portfolio standard, now requiring that utilities get one-third of their electricity from renewable sources by 2020, up from 20percent.

Critics contend the politically driven fast track to approving projects on tens of thousands of acres of public lands will cause irreparable damage to threatened plant and animal species, as well as to historic, prehistoric and culturally important sites.

“The irony is, in the name of saving the planet, we're casting aside 30 or 40 years of environmental law. It's really a type of frenzy,” said Christine Hersey, a solar analyst at Wedbush Securities who closely follows environmental concerns associated with solar projects.

It's an issue that pits green against green, environmentalists prioritizing the reduction of atmospheric emissions that contribute to climate change versus those most interested in threatened species and the near-pristine desert ecosystem.

“When you take a look at the political climate, the economy, and you add that to the recent media notoriety of the climate crisis — which I'm not a skeptic of at all — you've got a rather vicious cocktail where environmental groups don't really know how to handle this,” said Kevin Emmerich, a former park ranger turned biological consultant who lives in the Mojave Desert in Beatty, Nev., just across the border from California.

“A lot of them are thinking, ‘The climate's changing; the desert is disappearing anyway; we may have to sacrifice some in order to save the rest.' That support has helped expedite this process.”

The state of California and federal government are spurring the desert solar development, offering billions of dollars in federal loan guarantees, cash grants and tax breaks. On Monday, U.S. Energy Secretary Steven Chu announced $2.1 billion in federal loan guarantees for one project, a 1000-megawatt proposal near Blythe.

Another solar plant in development, Ivanpah in eastern San Bernardino County, received $1.37 billion in federal loan guarantees in February.

Janine Blaeloch, executive director of the nonprofit Western Lands Project, questioned the huge taxpayer commitment to the solar projects.

Blaeloch is a member of Solar Done Right, a coalition of public land activists, solar power and electrical engineering experts, biologists and renewable energy advocates critical of placing large solar projects on relatively unspoiled public land. She co-authored a report released earlier this month on governmental push for solar in the open desert, entitled “Wrong from the Start.”

She noted that corporate investors in companies developing solar projects in the California desert include Chevron, BP, Morgan Stanley and Goldman Sachs.

“It's big money and big oil,” she said. “It's the same people who have driven us into the hole we're in now trying to get us into another one.”

Gold mine in the desert

Perhaps ironically to some, the modern push for large-scale desert solar, it can be argued, started under former President George W. Bush and California Republican Gov. Arnold Schwarzenegger.

“The gold rush really started after George W. Bush signed the Energy Policy Act of 2005,” which provided tax incentives and loan guarantees for California desert solar development, Hersey said. “That's what really started the speculators.”

Under Democratic Gov. Gray Davis, California in 2002 passed a renewable energy portfolio standard calling for 20 percent of California's electricity to come from renewable sources by 2017. Schwarzenegger in 2006 moved the 20 percent target up to 2010.

Interest in solar development on federal land in the Southern California desert jumped from 20 applications in 2006 to about 150 the following year, said Greg Miller, BLM renewable energy program manager for the California Desert District.

“We had what we called a land rush,” he said.

BLM had previously approved use of federal desert lands for things such as power line corridors — never anything of the size of solar energy projects, Miller said.

“We were kind of learning as we were going,” he said.

In 2008, Schwarzenegger signed Executive Order S-14-08, streamlining renewable energy permitting and collaborating with federal agencies to develop the Desert Renewable Energy Conservation Plan, to facilitate desert energy development while maintaining natural resources conservation.

The push for solar has continued and expanded under Democratic President Barack Obama, whose administration has made green energy a priority, Hersey said.

“They can't do it fast enough,” she said.

Schwarzenegger and U.S. Interior Secretary Ken Salazar in October 2009 signed a memorandum of understanding between the state and Department of Interior that, among other things, developed a fast-track permit approval process allowing as many large-scale solar projects that could to begin construction by Dec. 1, 2010, making them eligible for American Recovery and Reinvestment Act, or federal stimulus, funding.

The fast-tracking “demonstrates how separate government processes can be coordinated without cutting corners or skipping any environmental checks and balances in the projects,” Salazar said Oct. 25 as he announced approval of the Blythe solar project.

BLM Director Bob Abbey in October acknowledged what was at stake.

“With something as momentous as the introduction of large-scale solar development on the public lands, we have one chance to do things right,” he said. “That's why we did complete environmental analyses on these projects with

expanded opportunities for public participation.”

But Blaeloch questions that assertion.

“They are not saying to the public, ‘We want to know how you feel about this;' They're saying, ‘We're going to do this and you can comment on it if you want,'” she said.

“These solar plants will introduce a huge amount of damage to our public land and habitat. The sites will be turned into permanent industrial zones. Even if the plants are dismantled after their life is expired, you cannot restore the desert to what it was.”

Solar Done Right's report contends government officials could take advantage of already disturbed lands such as brownfield sites and former agricultural fields. The U.S. Environmental Protection Agency identified hundreds of thousands of acres of such sites, with the potential to generate 920,000 megawatts of solar electricity, the report notes. Distributed generation on rooftops is another option, Blaeloch said.

“I think those are really good questions to ask,” said Amy Fesnock, BLM's chief wildlife biologist in California.

“BLM doesn't have the ability to say, ‘Go build this on private land.' We don't have authority on private land. We can only assess the projects that are presented to us, on lands over which we have authority.”

BLM stands to bring in more than $10.2 million a year in rental fees from the solar companies permitted or nearing approval to locate in the desert, along with more than $25 million in additional megawatt capacity fees.

Hashing out the details

Though projects are approved with thick, multi-volume environmental impact statements, many details aren't yet resolved and are being worked out on the fly as work commences, including final plans on what will ultimately happen with endangered desert tortoise found on solar project sites.

Preliminary plans include moving the tortoise to other habitats, known as translocation — a controversial practice that top tortoise biologists say leads to high mortality rates.

A panel of independent scientists in October prepared a report for officials working on the Desert Renewable Energy Conservation Plan, that concluded: “In general, moving organisms from one area to another ... is not a successful conservation action and may do more harm than good to conserved populations by spreading diseases, stressing resident animals, increasing mortality, and decreasing reproduction and genetic diversity.

“Transplantation or translocations should be considered a last recourse for unavoidable impacts, (and) should never be considered full mitigation for the impact.”

In approving Ivanpah, California Energy Commissioners stated, “We assume that a substantial number of translocated tortoise may perish.”

But commissioners concluded the proposed mitigation efforts will make the impacts acceptable.

“Whether to approve this project or not is a policy decision to be made by the Energy Commission, after considering all the relevant factors, including scientific opinion,” they stated. “Input from the Advisory Panel is informative but we are not bound by any policy recommendations it makes.”

In addition to tortoise, the commission listed numerous other impacts from Ivanpah: loss of multiple-use lands, loss of habitat for the threatened Mojave milkweed and desert pincushion, increased traffic on Interstate 15 and degradation of scenic vistas. However, the commission found, the “project benefits outweigh the significant impacts identified.”

“The project helps address a global climate change problem of paramount importance and responds to state laws requiring a shift to renewable electricity sources,” the energy commission's Ivanpah decision states.

“Overriding concern” citations were used by the energy commission in the approval of other desert solar projects as well, said Jim Andre, a desert botanist with UC-Riverside's Granite Mountains Desert Research Center in eastern San Bernardino County.

“A decision is being made to waive significant impacts and to go forward with these projects as quickly as possible, without even acknowledging the science,” he said.

It's a similar story with cultural resources.

A June Energy Commission staff report on the Genesis solar project looked at cumulative impacts on cultural sites from past, present and likely future solar development.

“This analysis estimates that more than 800 sites within the I-10 corridor, and 17,000 sites within the Southern California Desert Region, will potentially be destroyed,” the report stated. “Mitigation can reduce the impact of this destruction, but not to a less-than-significant level.”

An economic boon

But large-scale desert solar development proponents say use of the BLM-managed lands provides an opportunity to shape projects in ways that minimize negative impacts that other tracts of land might not.

First Solar, a company based in Tempe, Ariz., is nearing final approval of its Desert Sunlight project, a photo-voltaic solar plant planned north of Desert Center, a tiny community about 50 miles east of Indio off Interstate 10.

The project at its inception secured 19,000 acres of BLM land, studied it with

biologists and archaeologists, then scaled and modified the project footprint to minimize impacts to biological and cultural resources, First Solar project director Kim Oster said.

Removed were a bighorn sheep movement corridor, a potential desert tortoise corridor, an area of threatened foxtail cactus and “significant prehistoric resources,” she said.

“To combat climate change, changing our energy use has to be part of the solution. It will provide a significant solution to global warming for the future, while providing green jobs now.”

First Solar on Monday informed Desert Center community leaders of plans to provide a $350,000 community development fund for locally identified priorities such as local school and library improvements.

“Everybody around here thinks it's a great project,” said Ken Statler, owner of McGoo's Country Store in Desert Center.

“They're willing to help out the county and the area. There are no jobs available out here.”

The solar construction and ongoing operational jobs will “undoubtedly” help his store, Statler said.

“Where else are they going to get anything?” he said. “We had two other mini-marts out here and they closed down. You can't get gasoline; it's closed down.

“We need some life out here in the desert. That will definitely help us.”

Desert Center resident John Beach earlier this month landed a job in procurement with NextEra's Genesis project.

The currently proposed projects “bring an economic boost to an area that has very high unemployment and not very much in the way of business,” he said.

But community members generally are more apprehensive about what may be coming later, Beach said.

Federal agencies are currently working on an overarching framework for solar development on public lands in six western states, including California, called a solar programmatic environmental impact statement.

The plan calls for creation of 24 federally designated solar energy zones, areas deemed most likely to work for large-scale solar development while minimizing environmental and cultural impacts. The largest of the zones, at 202,000 acres, is in eastern Riverside County's open deserts.

“That's not reasonable,” Beach said.

“We're going to end up having a disproportionate share of all of the projects and having no more open desert. People are saying that doesn't sound right.”

But the federal report recommends opening up even more land to solar development than the 667,384 acres currently under consideration across western states. Another 21.5 million acres of federal land could be considered for renewable energy development, including 1.7 million more acres in California, with 205,000 acres of the total in the deserts surrounding the Coachella Valley.

Though more than a dozen major solar projects have been approved or are nearing approval, the work on considering the cumulative impacts of them all is in many ways only beginning.

The Desert Renewable Energy Conservation Plan is not scheduled for completion until next year.

“The goal of the DRECP is to approach renewable energy in a more organized fashion. The question really is, will that be in place in time to be of benefit to the planning?” said Gail Barton, principle planner for Riverside County and the county's representative on the committee developing the plan.

Solar projects are currently being considered “consistently with the law,” Barton said.

“Is that the best kind of planning? Probably not. With more comprehensive planning, you tend to look more thoughtfully at things.”

In December, after approving seven large desert solar projects, the California Energy Commission solicited applicants to conduct a study examining the “cumulative biological impacts framework for solar energy projects in the California desert.”

A Sierra Club lawsuit against the Calico solar project in San Bernardino county was dismissed by the California Supreme Court April 13. Legal challenges remain on other solar projects, filed by both environmentalists and tribal members who claim they were not properly consulted, and that the projects fail to protect species and cultural sites as required under federal law.

To many in the rest of the country, local concerns about the desert solar projects' impacts aren't the priority.

“Societally, this is the kind of change that helps the whole country, the whole world,” said Kenneth Zweibel, director of the George Washington University Solar Institute in Washington, D.C.

“There's much bigger value in helping the whole society, the whole world, than in the local issues. Something you are trying to protect is being changed, but it's helping so much in terms of climate change, energy self sufficiency and clean energy, it's a sacrifice that's appropriate to take.”

Additional Facts

Coming tomorrow

Species threatened by project