

# Solar Energy Faces Tests on Greenness

Todd Woody, New York Times, 2-24-11

SAN FRANCISCO -- Just weeks after regulators approved the last of nine multibillion-dollar solar thermal power plants to be built in the Southern California desert, a storm of lawsuits and the resurgence of an older solar technology are clouding the future of the nascent industry.

The litigation, which seeks to block construction of five of the solar thermal projects, underscores the growing risks of building large-scale renewable energy plants in environmentally delicate areas. On Jan. 25, for instance, Solar Millennium withdrew its 16-month-old license application for a 250-megawatt solar station called Ridgecrest, citing regulators' concerns over the project's impact on the Mohave ground squirrel.

At peak output, the five licensed solar thermal projects being challenged would power more than two million homes, create thousands of construction jobs and help the state meet aggressive renewable energy mandates. The projects are backed by California's biggest utilities, top state officials and the Obama administration.

But conservation, labor and American Indian groups are challenging the projects on environmental grounds. The lawsuits, coupled with a broad plunge in prices for energy from competing power sources, threaten the ability of developers to secure expiring federal loan guarantees and private financing to establish the projects. Only one developer so far, BrightSource Energy, has obtained a loan guarantee and begun construction.

Like so many of this state's troubles, the industry's problems are rooted in real estate.

After President George W. Bush ordered public lands to be opened to renewable energy development and California passed a law in 2006 to reduce carbon emissions, scores of developers staked lease claims on nearly a million acres of Mojave Desert land. The government-owned land offered affordable, wide-open spaces and the abundant sunshine needed by solar thermal plants, which use huge arrays of mirrors to heat liquids to create steam that drives electricity-generating turbines.

But many of the areas planned for solar development — including the five projects being challenged — are in fragile landscapes and are home to desert tortoises, bighorn sheep and other protected flora and fauna. The government sped through some of the required environmental reviews, and opponents are challenging those reviews as inadequate.

“There's no good reason to go into these pristine wilderness areas and build huge solar farms, and less reason for the taxpayers to be subsidizing it,” said Cory J. Briggs, a lawyer representing an American Indian group that has sued the United States Interior Department and the Bureau of Land Management to stop five of the solar thermal plants. “The impacts to Native American culture and the environment are extraordinary.”

The risk that the suits will succeed in blocking construction could make it more difficult for the builders to get federal loan guarantees or attract private financing.

Officials with the Loan Programs Office of the United States Energy Department did not respond to requests for comment. However, department guidelines classify litigation risk as a significant factor to be considered when qualifying renewable energy projects for a loan guarantee.

Brett Prior, a solar analyst with the GTM Research firm, said commercial lenders also viewed the suits as a negative. “In general, there are more projects chasing project finance than there are funds available, so the

investment banks can be selective when deciding which projects to support,” he said. “Projects with lawsuits pending will likely move to the back of the queue.”

The conflict over the California projects has already accelerated a shakeout among competing solar technologies.

Tessera Solar announced last week that it had sold its 709-megawatt Imperial Valley solar dish project, which had become the target of two lawsuits. The buyer, AES Solar, develops power plants using photovoltaic panels like those found on residential rooftops. The move follows Tessera’s sale of its 663.5-megawatt Calico solar dish power plant in late December, a week after the company lost its longstanding contract with a utility. Calico is the subject of three lawsuits, and the project’s new owner, a New York firm called K Road Power, said it planned to abandon most of the Tessera solar dishes and instead use photovoltaic panels.

Solar panels convert sunlight directly into electricity. They are based on an older, less efficient technology, but because of intense competition from Chinese panel makers, prices are plunging. Photovoltaic projects are also not subject to extensive environmental review by state regulators, but are instead approved by local officials.

As a result, photovoltaic projects are now more attractive to utilities. For instance, since January, Southern California Edison has signed contracts with developers to build eight photovoltaic farms that will generate 1,081 megawatts of electricity. Tellingly, seven of those projects will be built on private land.

Photovoltaic technology is also familiar to financiers. On Jan. 21, the Energy Department, which considers the creditworthiness of a technology when reviewing projects, granted a \$967 million loan guarantee to the developer of a 290-megawatt photovoltaic project that will supply electricity to a California utility.

But while photovoltaic farms consume far less water than solar thermal power plants and can be more easily installed, they often require more land and will probably prompt the same type of scrutiny if proposed for environmentally fragile landscapes.

“The real concern is that if these solar thermal projects don’t get done in a timely fashion in 2011 and 2012, prices will come down and it’ll make more sense to go photovoltaic,” said Ted Sullivan, an analyst with Lux Research in New York.

Solar thermal developers never expected to run into such difficulties. But federal law requires that projects on public lands undergo extensive environmental review and allows citizens to sue to enforce those laws. Three of the four solar thermal power plants that have escaped legal challenge are planned for private land.

The Sierra Club and a union group filed separate petitions on Dec. 30 with the California Supreme Court to overturn the California Energy Commission’s licensing of the Calico project, claiming the 7.2-square-mile power plant would devastate the imperiled desert tortoise and other wildlife.

“The task at hand is to bring clean energy online, which includes large-scale renewables,” said Bill Corcoran, the western regional director for the Sierra Club’s Beyond Coal campaign in Los Angeles. “But as we looked at all of the fast-track projects, Calico was far and away the most harmfully located project.”

Meanwhile, an American Indian tribe, the Quechan, obtained a federal court injunction temporarily halting Tessera’s 709-megawatt Imperial Valley Solar Project. The tribe says the Interior Department did not adequately consider the impact of the project on its ancestral lands and on wildlife that figure in the tribe’s creation story.

The American Indian group represented by Mr. Briggs, La Cuna de Aztlan Sacred Sites Protection Circle Advisory Committee, on Dec. 27 sought an injunction against five solar thermal power plants on similar grounds. Besides the two Tessera solar farms, it seeks to block the 370-megawatt Ivanpah power plant from BrightSource, the 1,000-megawatt Blythe project from Solar Millennium and the 250-megawatt Genesis Solar station from NextEra Energy Resources.

The same day, a union group sued the Interior Department in Federal District Court in Los Angeles, saying that the agency had not adequately evaluated if the Genesis project would divert water from the Colorado River.

David C. Briery, a spokesman for the Bureau of Land Management, said the government could not comment on the litigation.

Sandy Louey, a spokeswoman for the California Energy Commission, said in an e-mail, "We are confident in the integrity of our decision and look forward to defending our position in court."

A spokesman for BrightSource Energy said it would not comment on pending litigation. A representative for Solar Millennium's American subsidiary said the German developer did not expect the litigation to keep it from getting a federal loan guarantee.