



Massive Solar Plant A Stepping Stone For Future Projects



by Lauren Sommer
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The largest solar power plant of its kind is about to turn on in California's Mojave Desert.

The Ivanpah Solar Electric Generating System will power about 140,000 homes and will be a boon to the state's renewable energy goals, but it was no slam dunk. Now, California is trying to bring conservationists and energy companies together to create a smoother path for future projects.

To get the best view of the Ivanpah solar project, you have to go up to the top of a 400-foot concrete tower. Below, close to 200,000 mirrors shimmer across a dry, dusty valley.

"It's very exciting," says Dave Beaudoin, the construction manager for the \$2 billion project located about an hour southwest of Las Vegas. Each mirror is about the size of a garage door, and it's mounted on a pole so it can be pointed at the tower.

"We can keep the sun's energy — the rays of the sun — targeted back to the solar tower," Beaudoin says.

All of those mirrors generate about a thousand degrees of heat. It isn't the solar technology most of us think of: dark panels on rooftops. These mirrors heat a giant boiler on top of the tower, where water turns into steam. Beaudoin says that steam powers a turbine that generates electricity.

“This is definitely cutting-edge. It’s nothing I’ve ever done before,” he says.

It’s been a bumpy road, however, and it took years to get permits from almost a dozen state, federal and local agencies. The project became political fodder after getting a federal loan guarantee, like the bankrupt solar company Solyndra.

And then there’s the desert tortoise.

In all, developers found nearly 200 tortoises onsite, many more than expected. Finding and relocating them has cost around \$55,000 per tortoise. Critics like Ileene Anderson have watched closely.

“I’m not a big fan of the super large projects,” Anderson says.

Anderson is with the Center for Biological Diversity, one of the groups concerned about the loss of desert habitat. She says after California set a goal of getting a third of its electricity from renewable sources by 2020, there was a rush to build big solar farms in the desert.