

World's Biggest Solar Thermal Power Plant Fired Up in California

Source: grist.org

Published: September 25, 2013



Business Wire / [Ivanpah on Tuesday](#).

The 3,500-acre [Ivanpah Solar Electric Generating System](#) is a startling sight in the Mojave Desert. Three sprawling units each contain a circular array of mirrors reflecting rays from the sun toward a 459-foot central tower. Water in the tower is heated by the rays to produce steam, which spins turbines and — voila — electricity is produced.

It all seems a bit magical, but as of Tuesday, [the world's largest solar thermal power plant began](#) feeding energy into a power grid for the first time.

How much energy? Once fully operational, the project is expected to produce 377 megawatts of power that will be sold to two Californian utilities, helping the state's electricity sector meet ambitious, state-mandated renewable energy goals. During some days it could provide enough power for more than 200,000 homes.

Partners in the project include NRG Energy, BrightSource Energy, Google, Bechtel and, of course, you and me. The federal government leased public land to the effort and backed it up with one of those loan guarantees that you [heard so much about](#) in 2011 and 2012.

It's not just the loan guarantee that made this a controversial project. Some environmentalists have been angered by its impacts on the desert ecosystem, [focusing on displaced desert tortoises](#).

Others have questioned why a solar plant that uses water would be built in the desert — instead of one that uses photovoltaic panels.

But with the historic “first sync” of one of the power plant’s three units on Tuesday, it might be a good idea to put those questions aside for now and just celebrate the achievement of a massive solar milestone in California. By [John Upton](#)
