

Ivanpah solar plant, built to limit greenhouse gases, is burning more natural gas

Solar power plant was at the center of the Obama administration's push to reduce America's carbon footprint

DAVID DANIELSKI, The Press Enterprise, 1-20-17

The behemoth Ivanpah solar power plant built with federal subsidies to combat climate change is using increasing amounts of natural gas, a greenhouse-gas-emitting fuel, state and federal data show.

The most recent numbers from the California Air Resources Board show that in 2015, the plant's second year of operation, carbon emissions from Ivanpah's gas use jumped by 48.4 percent to 68,676 metric tons.

That's more than twice the pollution threshold for power plants or factories in California to be required to participate in the state's cap-and-trade program to reduce carbon emissions.

Carbon emissions data for 2016 won't be available until the end of this year, but data made public by the U.S. Energy Information Administration show that natural gas consumption at the plant increased by about 7 percent during the first three quarters of 2016 when compared to the same period in 2015.

The Ivanpah plant was at the center of the Obama administration's push to reduce America's carbon footprint by using millions of taxpayer dollars to promote green energy, but little was said about the plant's own carbon emissions before it began operating at the end of 2013.

The Ivanpah plant works primarily by having 352,000 mirrors focus heat from the sun onto three boilers mounted on towers, each taller than the length of a football field. Water in these boilers is turned into steam that then turns turbines to generate electricity.

But burning natural gas in smaller, auxiliary boilers also is part of the process.

Gas is burned at night to keep the system primed and to heat water used in the tower boilers. This allows electricity production to start up more quickly when the sun comes up each morning, plant operators said. Gas also is burned during periods of intermittent cloud cover.

A spokesman for the plant's operator, Houston-based NRG Energy, said natural gas use is increasing as expected while the plant boosts its overall electricity production.

"Ivanpah does use more gas when we operate more," said David Knox, the NRG spokesman, in an email. "The reason for this is that the more the units run, the more we use the auxiliary boilers to support that increased operation."

Approved in 2010, the Ivanpah plant was at the center of the Obama administration's push to bring alternative-energy projects to public lands. It received \$1.6 billion in loan guarantees and \$600 million in federal tax credits.

Given the high-level of public investment, the plant's natural gas use should have been better publicly disclosed before the project was approved, said David Lamfrom, California desert manager for the National Parks Conservation Association.

Lamfrom had opposed the project because it consumed about 5.6 square miles of mostly undisturbed public lands that was home to the desert tortoise, a species threatened with extinction. He also said it was too close – three miles – from the Mojave National Preserve, which is part of the national park system.

The Ivanpah plant would have had a tougher time winning approvals had people known the extent that it relies on a fossil fuel, said Lamfrom, describing it as a hybrid facility.

“The bottom line is the public didn't expect this project to consume this much natural gas,” Lamfrom said in a telephone interview. “We did not have full knowledge that this was what we were signing up for.”

Despite its gas use, Ivanpah still qualifies under state rules as an alternative energy source for its utility consumers, Southern California Edison and Pacific Gas & Electric, because no more than 5 percent of electricity produced at the plant stems from its day-time burning of natural gas, according to the California Energy Commission.