

Heliostats reflect sunlight onto boilers in towers during the grand opening of the Ivanpah Solar Electric Generating System in the Mojave Desert near the California-Nevada border February 13, 2014. REUTERS/Steve Marcus

Airplane pilots hit by 'nearly blinding' glare from massive Calif. solar facility

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Airplane pilots cruising over southern California have been complaining about a "nearly blinding" glare emanating from a massive government-funded solar thermal facility.

The Ivanpah solar energy plant in San Bernardino County is the world's largest solar thermal plant and has 173,500 large mirrors that reflect sunlight onto boilers in three 459-foot towers. A feat of modern engineering — to green energy advocates, but a flying hazard to pilots.

The Federal Aviation Administration's Aviation Safety Reporting System (ASRS) got two anonymous complaints in August that mentioned a "blinding glare" coming from the Ivanpah solar facility. One complaint came from a Los Angeles air traffic controller and the other from a small transport plane pilot that took off from an airport in Boulder City, Nevada.

"The FAA is aware of potential glare from solar plants and is exploring how to best alert pilots to the issue," an FAA spokesman told The Daily Caller News Foundation.

Dozens of flights per day fly over or near the Ivanpah solar facility on routes between the Las Vegas area and Southern California. On its initial climb leaving Boulder City airport, the pilot of the small transport plane "experienced a very bright, intense light from three solar complexes which interfered with their ability to scan for traffic," according to the ASRS filing.

"[T]he Co-pilot and I were distracted and momentarily blinded by the sun reflecting off of mirrors at the solar power plant facility located near the CA-NV border near the town of Primm," the pilot wrote to ASRS. "This solar power plant which I believe is still under construction consists of three massive circular arrays of thousands of mirrors oriented inward toward a central tower."

"From the pilot's seat of my aircraft the brightness was like looking into the sun and it filled about 1/3 of the co-pilots front windshield," the pilot added. "In my opinion the reflection from these mirrors was a hazard to flight because for a brief time I could not scan the sky in that direction to look for

other aircraft."

"Daily, during the late morning and early afternoon hours we get complaints from pilots of aircraft flying from the northeast to the southwest about the brightness of this solar farm," wrote the Los Angeles air traffic controller in August.

"On this particular morning, an air carrier complained about the brightness and reiterated that it was 'nearly blinding," the controller continued. "I have no idea what can be done about this situation, but being a passenger on an aircraft that flew through this airspace and saw it for myself, I would say that something needs to be done. It is extremely bright and distracting."

In August, the Ivanpah solar facility was still being built. During the time of the complaints, the facility's developer BrightSource Energy "was testing and calibrating the mirror assemblies, called heliostats, but it is unknown if that had anything to do with the reflection," reports the Press-Enterprise. The Ivanpah facility was brought online last December.

Ivanpah's co-owner and operator, NRG Energy, was notified of the "blinding" complaints this week and said it would respond within 10 days. The FAA received the complaints last November and the Clark County Department of Aviation was notified of them at the end of January.

BrightSource's environmental impact study for Ivanpah included mitigation measures for glare issues related to the site's reflective mirrors. The aviation community actually raised such worries during the environmental review process.

Ivanpah's environmental impact study found that the solar thermal plant could cause temporary blindness to pilots flying within 3,300 feet of the heliostats, which compromises safety. BrightSource had to develop a heliosat position plan to mitigate the potential harm from Ivanpah's glare.

"At the right angle, you will get the intensity, which is similar to looking at a car headlight at night. If you were to look away you'd still have that shape in your vision," Chad Davies, president of Riverside Air Service, told the Press-Enterprise.

"If you see a reflection, you turn your head, you don't look at it," said Phil Shallenberger, who regularly flies over the project to refuel his plane. "It's not going to stay there long. When you move, it goes away."

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