

South Australia energy project to use solar thermal tech, integrated molten salt energy storage

August 16 2017, by Nancy Owano



Credit: SolarReserve

(Tech Xplore)—A 150 megawatt solar thermal plant near the town of Port Augusta, South Australia, is in the news; the facility, known as Aurora, is from SolarReserve. This is a US-based company that is a

developer, owner and operator of solar power projects. A project description in brief:

"Aurora will deliver 495 gigawatt-hours of power annually – providing fully dispatchable [baseload](#) electricity to the network when electricity is needed most. Storage will enable the solar thermal station to operate just like a conventional coal or gas power station, reliably generating electricity day and night – except without any emissions."

The [project](#) is to be located approximately 30 kms north of the town on a vast pastoral station.

The company said "under normal operating conditions the plant will have a capacity of about 135MW, with the ability to increase that output in favourable conditions, such as in the [evening](#)."

ArsTechnica's Megan Geuss said "the plant does have the [ability](#) to increase its output to 150MW when needed. 'Our technology is incredibly flexible to the needs of the grid operators,' SolarReserve spokesperson Mary Grikas told *Ars*."

Reports said the solar thermal plant was the biggest of its kind in the world. Rich Haridy in *New Atlas* said there were "a couple of other giant solar thermal facilities around the world, but none have as large a single-tower power [output](#) as this proposed Aurora facility in Australia."

The Guardian said the project will create about 700 jobs, 650 of which will be construction jobs.

The news release noted "50 full-time, permanent jobs" required for operations and maintenance.

As for project costs, *Renewables Now* said the total cost of the Aurora

[Solar](#) Energy Project is AUD 650 million (USD 511m/EUR 433m).

"Solar Reserve has a track record in solar thermal, already operating the 110MW Crescent Dunes [project](#) in Nevada," said *The Guardian*.

When is Aurora happening? Reports said work will start in 2018. It will be ready in 2020.

What is solar thermal all about?

The company uses giant mirrors—heliostats— to direct sunlight to a thermal tower that heats molten salt, which can be stored in tanks for hours at high temperatures, said Geuss. "That molten salt can be pushed through a heat exchanger, where it will create steam to generate power, even when the Sun isn't shining."

Unlike batteries, the company said, [molten salt](#) lasts for 40 years or more, without degradation or need for replacement; it also costs less than batteries.

Why this SolarReserve facility matters: Researchers can learn more. "SolarReserve will be establishing a research partnership with South Australian universities to advance solar thermal [research](#) and education in South Australia," said the news release.

Meanwhile, *Greentech Media* said, "renewables are growing fast in South Australia. The state currently gets 46 percent of its electricity from [renewables](#)."

More information: www.businesswire.com/news/home ... alian-Government-150

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