



## Chile becomes the first country in Latin America to inaugurate a Concentrated Solar Power Plant



*Source: Presidency of the Republic of Chile*

Cerro Dominador is the name of the project that is located in the Antofagasta-Chile region and that gives life to the first Concentrated Solar Power Plant (CSP) plant in Latin America. The infrastructure has more than a thousand hectares of surface and with an installed capacity of 110 MW of thermal generation added to 100 MW of photovoltaic. This clean energy that will supply around 380 thousand homes uninterrupted 24 hours a day thanks to its innovative technology.

**"It is a step towards a world that is cleaner, more sustainable and with a good quality of life,"** expressed the president of Chile, Sebastián Piñera, during the inauguration ceremony that took place on June 8, 2021, in the middle of the Atacama Desert, an area that has one of the highest levels of solar radiation in the world.



Source: Presidency of the Republic of Chile

"Today we live a key moment in the fight against climate change and projects like this are in line with what we want as a country."

Minister of Energy and Mining of Chile, Juan Carlos Jobet.

"Chile is leading the global transition towards clean and innovative energies. Like the one generated by this plant that produces energy 24/7.

Innovation and new technologies will be essential to achieve the goal of carbon neutrality by 2050, and that is why we will continue working to launch and promote projects that improve the quality of life of Chileans and contribute to the decarbonization of the planet.

Chile has some of the best solar and wind resources in the world; renewable resources that will slow down global warming. We have to take advantage of Chile's potential to achieve better energy and the country we want: dynamic, sustainable and with development focused on the well-being of people," highlighted the Head of Energy.



Power generation to supply

**380.000**  
HOMES



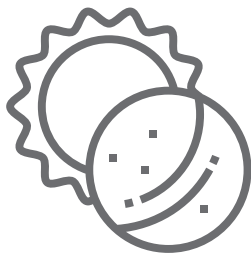
**-640.000**  
tons of CO<sub>2</sub>

This project, in combination with the photovoltaic plant that has been in place since 2017, will be able to avoid the emission of nearly 640,000 tons of CO<sub>2</sub> per year, equivalent to the circulation of 135,000 vehicles per year.



"What is interesting and revolutionary about this plant is that it can generate energy both day and night, thanks to the storage of thermal energy," mentioned Minister Jobet, explaining that "photovoltaic energy as we know it until now is relatively easy to install and it is getting cheaper and cheaper, but it doesn't work at night. Concentrating solar energy can achieve the same efficiency as a coal or gas power plant."

*Source: Cerro Dominador Project*



Minister Juan Carlos Jobet explained that this is a very ambitious project that began in 2014 and finished its construction at the end of 2020. "Today we are inaugurating it after a successful process of gradual synchronization with the National Electric System."

Also present at the opening event were the Minister of the Environment, Carolina Schmidt; the Undersecretary of Energy, Francisco López and the Mayor of the Antofagasta Region, Rodrigo Saavedra.

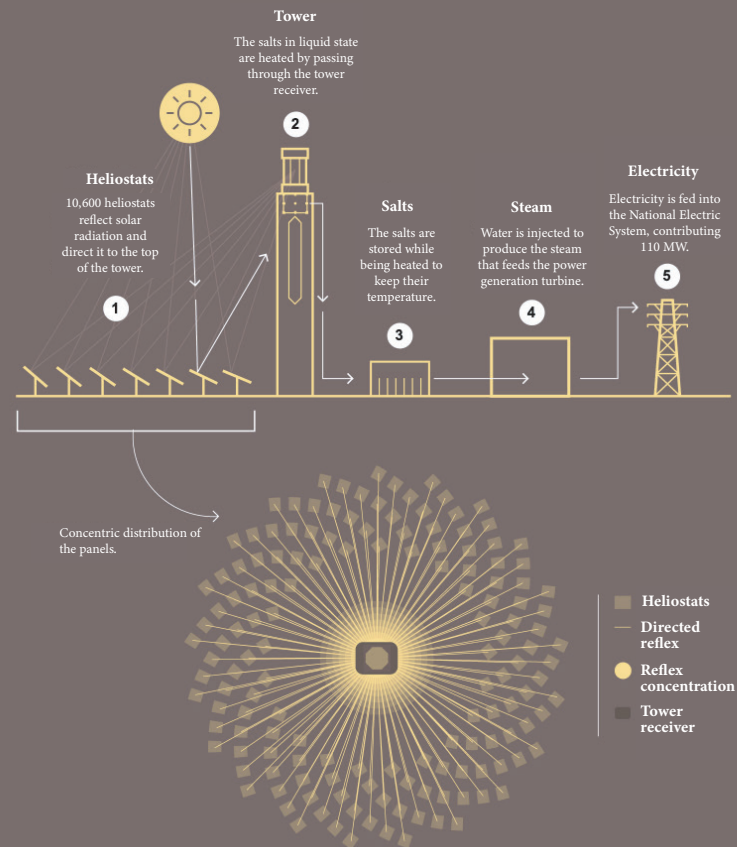
## How does the Concentrated Solar Power Plant in Chile work?

The Solar Concentration Plant uses 10,600 mobile mirrors (heliostats), capable of following the movement of the sun, each with a surface area of 140 m<sup>2</sup> and a weight of 1.8 tons, spread over more than a thousand hectares, which reflect sunlight towards the top of a 250 meter high tower, where there are salts in a liquid state that are heated when passing through the tower receiver (tower hat). Source: Cerro Dominador Project

The salts are stored while they are heated to maintain their temperature; the hot salts help to generate steam that in contact with an electrical generation turbine produces the final energy.

An important calculation to obtain the required energy is the amount of heliostats that are needed, their size and the configuration of the number of mirrors.

To maintain an optimal reflectivity value, each of the 10,600 heliostats must be cleaned regularly. Each heliostat is made up of 32 mirrors or facets.



Source: Planta de concentración solar (elmercurio.com)



Source: Cerro Dominador Project