

# CERRO DOMINADOR

CONCENTRATED SOLAR POWER

**Commissioning of the  
first CSP power plant in  
Chile**

# Cerro Dominador Assets

- CSP+PV project
- 12 MW of BESS for additional flexibility through ancillary services
- 17.5 hours of thermal storage

110 MW

10,600  
heliostats, 140 m<sup>2</sup>  
each

243-meter high  
tower

In Commissioning



100 MW

392,000 PV panels

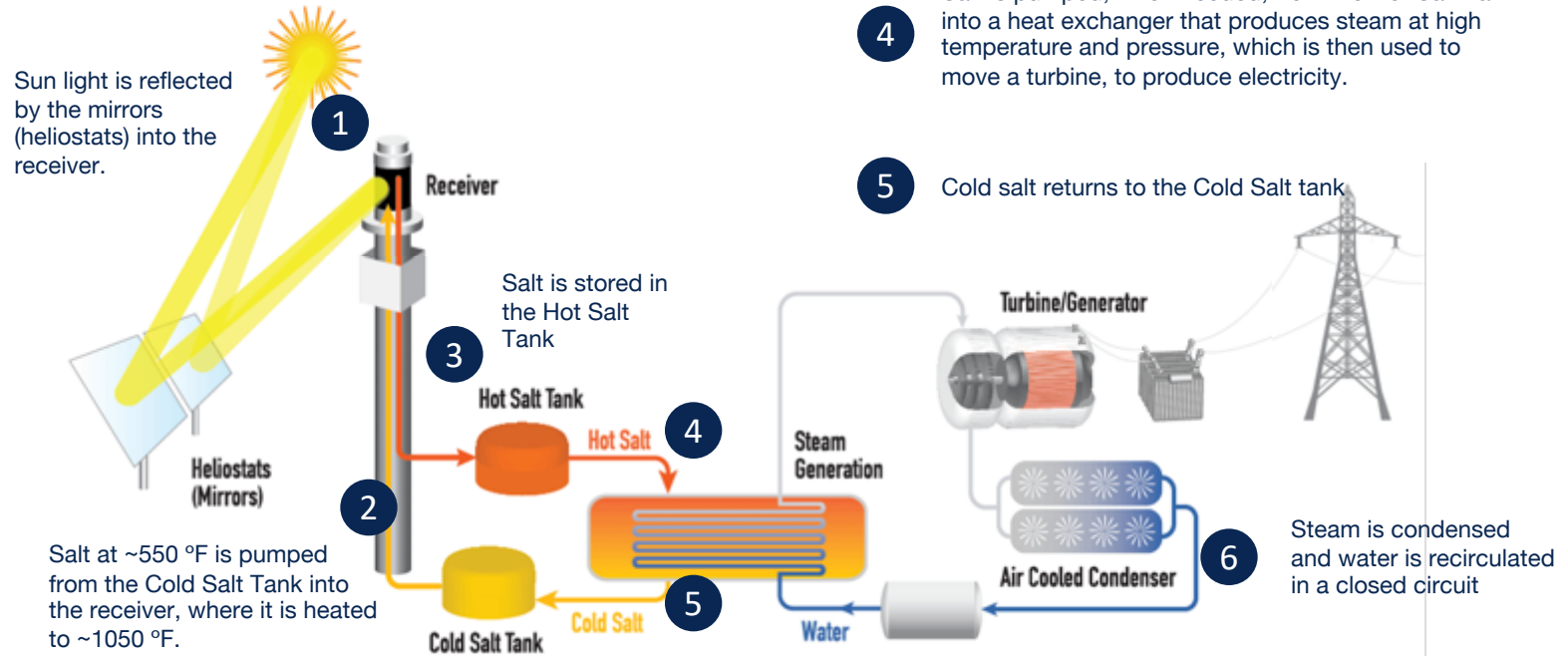
Single-axis tracker

300 hectares

In Operation



# CSP Brief Technology Description



## Solar Field

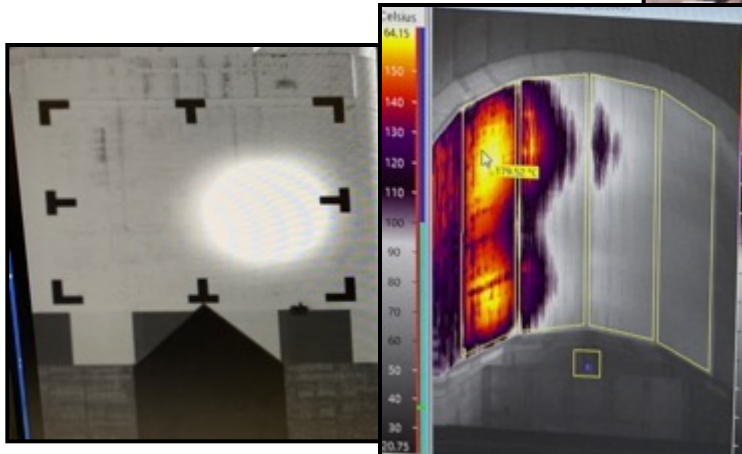
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- 10,600 heliostats
- 140 m<sup>2</sup> each
- Maximum distance to the tower ~1 mile



# Solar Receiver

- The solar receiver is located at the top of the solar tower
- Salt Inlet Temperature: 290°C
- Salt Outlet Temperature: 565°C
- 16 absorber panels consisting of a group of parallel tubes



# Salt Tanks

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- Cold Salt Tank
  - carbon steel
  - ~50.4 m. diameter
  - ~14 m. height
- Hot Salt Tanks
  - stainless steel
  - ~36.3 m. diameter
  - ~14 m. height



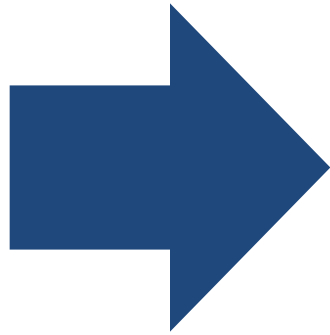
# Steam Turbine & Balance of Plant

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- Skoda 113.5 MW gross steam turbine generator

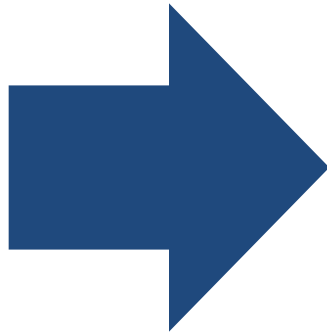


# Taking the plant to its full potential



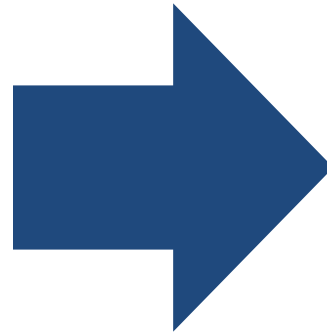
## Synchronization

- This is the beginning of the process, when we start generating electricity.
- We operate at ~20% capacity factor.



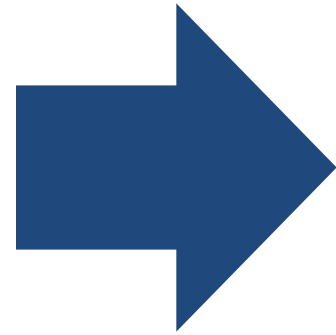
## Initial Adjustments

- Detailed adjustments and tests.
- We operate at ~50% capacity factor.



## Final Adjustments

- Last changes to the operation
- We reach ~80% capacity factor



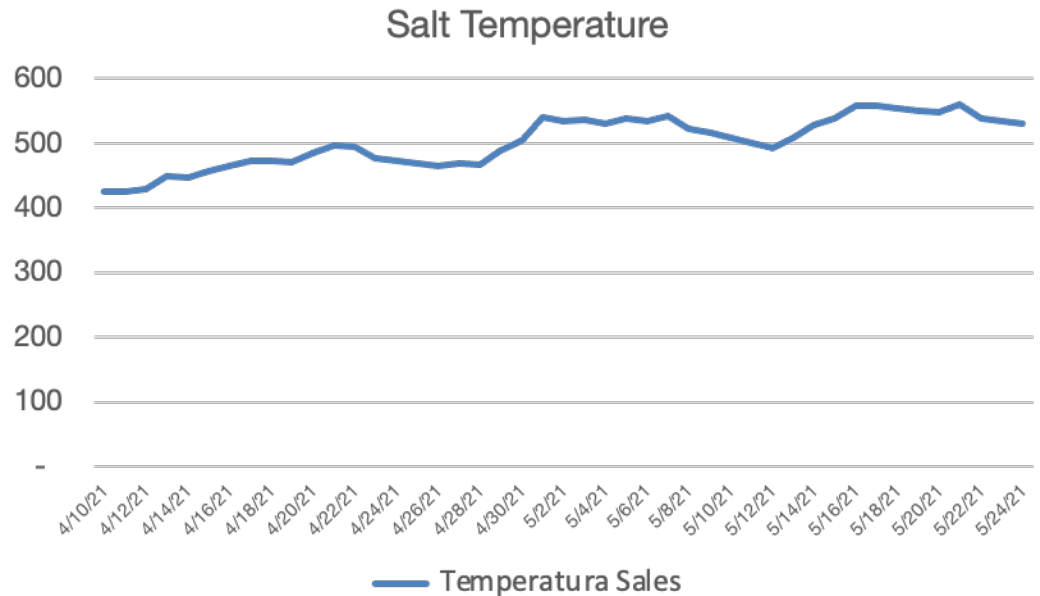
## Commercial Operations

- We operate the plan in accordance with the system requirements at full load.

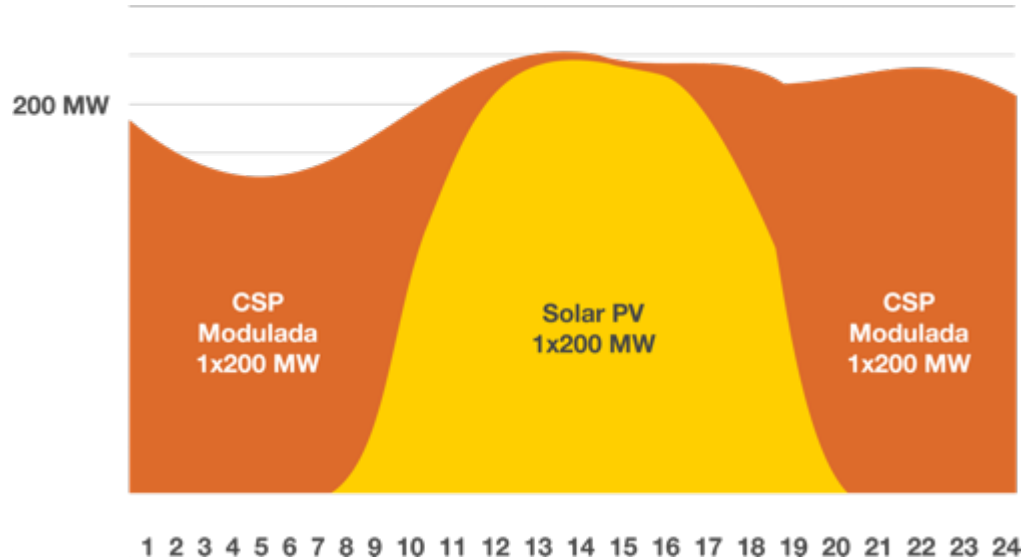


# Key Milestones

- April 10 – Synchronization
- April 12 – 25 MW
- April 21 – 71 MW
- April 22 – 80 MW
- April 30 – 95 MW
- May 6 – 102 MW
- May 21 – ~113 MW



# CSP/PV is the best option for 24/7 power



**Because CSP is the perfect complement of PV to get to 24/7 clean power at the most competitive pricing**

# Transition fuels?



CSP TIENE UN POTENCIAL EQUIVALENTE A 22 VECES LA CAPACIDAD ELÉCTRICA TOTAL INSTALADA ACTUALMENTE EN EL SISTEMA ELÉCTRICO NACIONAL.



Potencial de CSP → 587 GW

Fuente:  
Min. Energía / GIZ, 2014: "Energías Renovables en Chile."

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