



To Provide Low-cost, High-quality, and Clean Energy!



QUARTERLY UPDATE

Q1. 2023

PROJECT REFERENCE »»

In Cosin Solar we promote engineering application of core CSP technologies and equipment. We have created multiple industry benchmarks through putting into operation 110MW projects. So far, our CSP projects under construction has reached 700MW, widely located in Qinghai, Gansu, Xinjiang, Jilin and other provinces in China.

Operational Projects

- SUPCON SOLAR Delingha 10MW Molten Salt Tower CSP Plant
- SUPCON SOLAR Delingha 50MW Molten Salt Tower CSP Plant
- POWERCHINA Gonghe 50MW Molten Salt Tower CSP Plant

Project under Construction

- Jinta ZhongGuang Solar “CSP + PV” Pilot Project 100MW CSP Project



Projects Awarded

- CTGR Qinghai Qingyu DC 100MW CSP Project
- CGN New Energy Jixilugu DC 490MW Hybrid Project (100MW CT CSP)
- Xinjiang Turpan CSP + PV Integrated Project (100MW CT CSP)
- Jixi Base Jixilugu DC 1.4GW Hybrid Project Unit 1 100MW CSP
- CGN New Energy Delingha 1GW Hybrid Project (200MW CT CSP)

50MW

SUPCON SOLAR Delingha 50MW Molten Salt Tower CSP Plant

- One of China's first batch of CSP Demonstration Projects. The plant started construction in March 2017, was synchronized to the grid on December 30, 2018 and reached full-load operation on April 17, 2019.
- In 2022, the plant's cumulative actual power generation reached **146.4 GWh, i.e. 100.26%** of the designed annual power generation(146GWh), setting the highest operation record among the tower CSP plants worldwide.
- The plant has passed the complete technical evaluation by **Fichtner**, an independent German engineering consulting company. According to the assessment report, the design of the plant corresponds to **state-of-the-art design of similar plants** in the world and has good operation performance and advanced quality with the level of other international peers.

Installed Capacity
50MW

Storage
7 Hours with Molten Salt

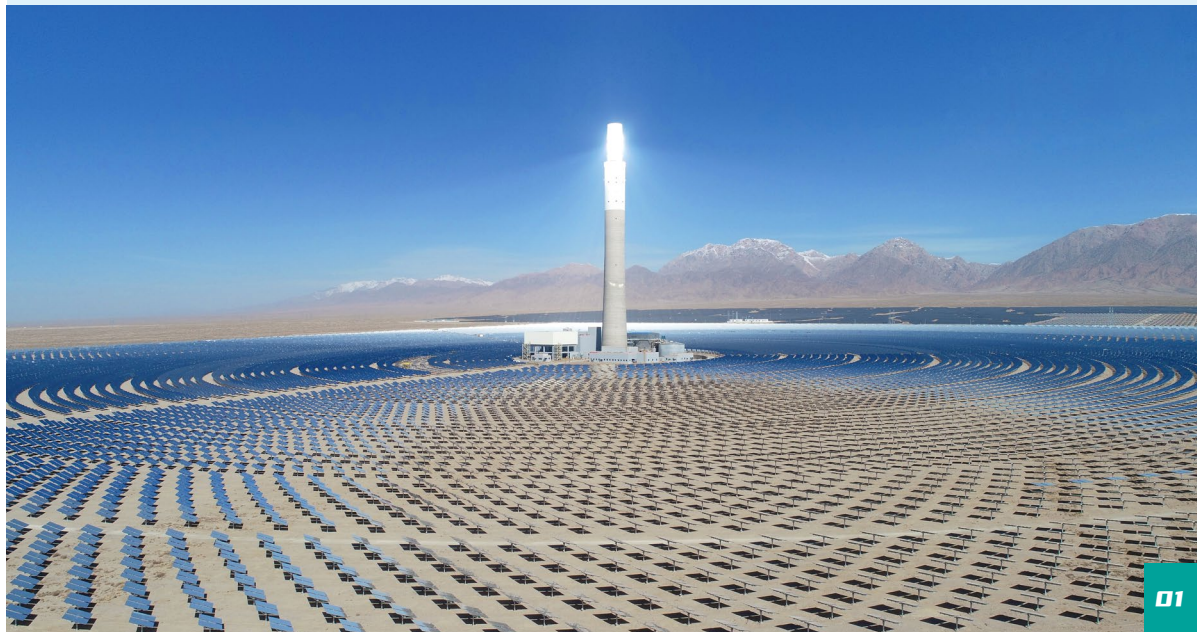
Land Area
2.47km²

Electricity Output
146GWh/year

Heliostats
542,700m²

Coal Saving
46,000 tons/year

CO₂ Emission
121,000 tons/year



Installed Capacity
100MW

Storage
8 Hours with Molten Salt

Land Area
3.62km²

Electricity Output
209GWh/year

Heliostats
767,820m²

Coal Saving
480,000 tons/year

CO₂ Emission
131,000 tons/year

100MW

Jinta ZhongGuang Solar “CSP + PV” Pilot Project 100MW CSP Project

- The 700MW project has 100MW CSP hybrid with 600MW PV.
- The 100MW tower CSP, with an 8-hour molten salt thermal storage, uses solar thermal tower technology 100% **developed by Cosin Solar.**
- The project commenced construction on March 25, 2022, and the tower reached the top on November 9, 2022.



100MW

CTGR Qinghai Qingyu DC 100MW CSP Project

- The total installed capacity of CTGR Qinghai Qingyu DC Phase II Section 3 project is 1000MW, including PV of 900MW and Tower CSP of 100MW. The 100MW CSP project adopts solar thermal tower technology fully developed by Cosin Solar.
- EPC by Powerchina Northwest, Cosin Solar, and Energy China ZTPC.
- Cosin Solar will participate in the overall design and project management, and be responsible for the technical scheme of the solar block, equipment supply, as well as related commissioning and trial operation guidance services.

- The total installed capacity of the Project is 490MW, including 130MW PV, 260MW wind power and 100MW CT CSP. The 100MW CT CSP, with an 8-hour molten salt thermal storage, will adopt the solar thermal tower technology fully developed by Cosin Solar.
- Cosin Solar has won the bid for Solar Field and MSR System equipment supply for the Project, and will provide advanced Solar field and MSR system and related services for the 100MW CSP part out of the project.

100MW

CGN New Energy Jixilugu DC 490MW Hybrid Project

100MW

Xinjiang Turpan CSP + PV Integrated Project

- The total installed capacity of project is 1000MW, including 900MW PV(AC side) and 100MW CT CSP. The 100MW CT CSP, with a 12-hour molten salt storage system, **will adopt the molten salt tower CSP technology fully developed by Cosin Solar.**
- EPC by Zhejiang Power Designing Institute, Cosin Solar, and Zhejiang Huaye Power Engineering.
- Cosin Solar will mainly be responsible for the technical scheme, equipment integration and supply, related commissioning and operation guidance services of the Solar field and MSR system, and also provide necessary technical support for other systems.

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- The total installed capacity of the Project is 1.4GW, including 400MW PV, 800MW wind power and 200 MW tower CSP. The Project is divided into 2 units, with Tongyu County and Da'an Municipality each plan 100MW CSP. **Cosin Solar has captured all the purchase orders for the solar field and MSR systems of the Project.**
 - Cosin Solar has won the bid for Solar Field and MSR System equipment supply for the Project, and will provide advanced Solar field and MSR system and related services for the 100MW CSP part out of the Project.

100MW

Jixi Base Jixilugu DC 1.4GW Hybrid Project Unit 1 100MW CSP

200MW

CGN New Energy Delingha 1GW Hybrid Project

- The total installed capacity of project is 1000MW, including 800MW PV and 200MW CT CSP. The 200MW CT CSP, with a 6-hour molten salt storage system, **will adopt the molten salt tower CSP technology fully developed by Cosin Solar.**
- Cosin Solar has won the bid for Solar Field and MSR System equipment supply for the Project, and will provide advanced Solar field and MSR system and related services for the 100MW CSP part out of the project.



UPCOMING EVENTS



China International CSP Station Conference CSPPLAZA 2023 Annual Conference



June 12—13th, 2023



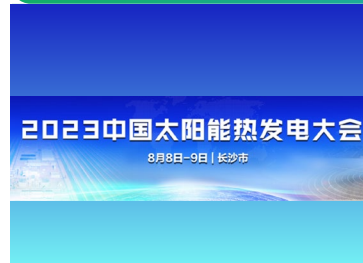
Hangzhou, China



Conference organizer: Cosin Solar & CSPPLAZA

CONFERENCE INVITATION: We sincerely welcome all the friends from the industry to attend the conference.

China Solar Thermal Electricity Conference 2023



August 8—9th, 2023



Changsha, China



Conference Organizers: Cosin Solar & Powerchina Zhongnan

CONFERENCE INVITATION: We sincerely welcome all the friends from the industry to attend the conference.

A Global Leading Provider for Molten Salt Tower CSP

- The former SUPCON SOLAR, officially renamed into Cosin Solar Technology Co., Ltd. ("Cosin Solar" for short) in July 2021
- Founded in 2010, focus on tower CSP and energy storage technology
- Independent R&D with fully patented technology and homebred equipment
- Technology consultancy, equipment integration, engineering services, etc
- Development, investment, construction, commissioning, operation of projects, etc



Youtube: Cosin Solar



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Website: www.cosinsolar.com