



# 15MWh Solar Energy Storage Unit for Cement Plants





## Overview

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Switzerland-based Synhelion and Mexican construction materials supplier Cemex have started building a high-concentration solar tower designed to produce synthetic fuels for a cement production facility near Madrid, Spain.

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Cement offers unique properties that make it suitable for renewable energy storage: Abundance and Low Cost: Cement is widely available, making it more affordable than rare metals used in conventional batteries. Durability: Cement-based systems are highly resistant to environmental degradation.

Taiwan Cement has just commissioned a 107MWh energy storage project at its Yingde plant in Guangdong province, China. Subsidiary NHOA Energy worked on the installation and has been promoting it this week. The battery storage works in conjunction with a 42MW waste heat recovery (WHR) unit, a 8MWp.

Synhelion's solar tower technology harnesses energy from a field of solar mirrors and concentrates it onto a receiver. The receiver converts the solar radiation into high-temperature process heat, which is then directed to a thermal chemical reactor. This reactor produces syngas, which is a mixture.

Cemex and Synhelion report prospective scaling of a high-temperature process to industrially-viable levels, where solar energy supplants fossil fuel combustion. This marks a significant milestone in the companies' journey toward the world's first fully solar-powered cement plant. An early 2022.

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### [Design of solar cement plant for supplying thermal energy in ...](#)

In the present work, the authors have attempted to design a solar cement plant for supplying solar energy to the cement industry. A case study was done, which investigated a ...

### [Producing cement with solar energy](#)

In the CemSol research project, a team of scientists is developing and demonstrating a solar-heated calcination plant to produce cement. This process produces ...



### [Synhelion starts building solar tower for cement production](#)

Switzerland-based Synhelion and Mexican construction materials supplier Cemex have started building a high-concentration solar tower designed to produce synthetic fuels for ...



## Concrete Storage

Storage design for a 50 MW el parabolic trough solar thermal power plant of the ANDASOL-type with thermal oil as the heat transfer fluid and an overall design storage capacity of 1100 MWh ...



**5 Years warranty**



### Utility-scale battery energy storage system (BESS)

Utility-scale BESS system description -- Figure 2. Main circuit of a BESS Battery storage systems are emerging as one of the potential solutions to increase power system flexibility in the ...



### Cement Industry Solar Update - Cement Optimized

Cemex and Synhelion will now take further steps toward building a solar-driven industrial-scale pilot cement plant. "I am convinced ...



### Lucky Cement Limited Announces 34 MW Solar Power Project ...

The project set to be installed at Lucky Cement's Pezu plant in Khyber Pakhtunkhwa will hold not only Pakistan's largest on-site captive solar plant but also the ...





## [JinkoSolar Supplies 72 Units of BESS for Japan ...](#)

Work has been completed on a 5.24MW / 15MWh battery energy storage system for a 'solar -plus-storage microgrid' in Southern ...



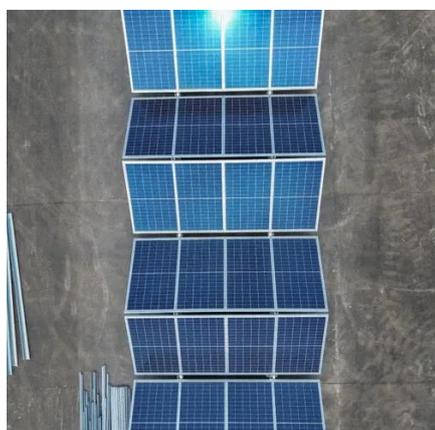
## [Cement Applications in Renewable Energy](#)

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This article explores how cement is being applied in renewable energy storage, highlighting innovations in thermal, electrical, ...

## [STORING ENERGY AT SCALE AT CEMENT PLANTS , BUHLE ...](#)

BUHLE POWER specializes in energy storage systems, storage containers, battery cabinets, photovoltaic solutions, telecom solar systems, road system solar, and outdoor site energy ...



## [Cement Applications in Renewable Energy Storage Systems](#)

This article explores how cement is being applied in renewable energy storage, highlighting innovations in thermal, electrical, and chemical storage solutions that could ...



## [NHOA commissions 107MWh storage system at Chinese cement plant](#)

The commissioned project, which is paired with waste-to-energy and solar PV generation. Image: NHOA. Storage systems provider NHOA Energy has put into operation a ...



## [Energy demand flexibility potential in cement industries: How ...](#)

The result reveals that the demand flexibility potential of the case study cement plants is about 495 MWh per day, constituting approximately 28 % of the daily total electrical ...

## [Huaqiang TeraSolar 15MW Fresnel Concentrating Solar Power ...](#)

This page provides information on Huaqiang TeraSolar 15MW Fresnel CSP project, a concentrating solar power (CSP) project, with data organized by background, participants, and ...



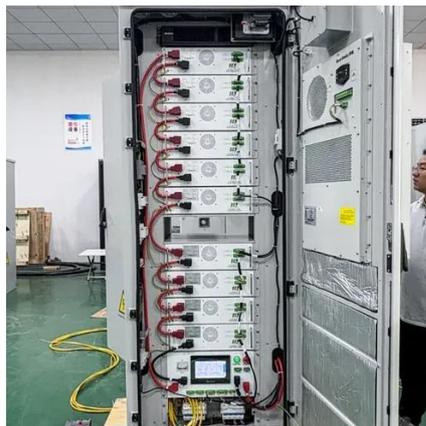
## [Reducing carbon emissions in cement production through ...](#)

Simulations show that the use of a solar calciner operated at 1000 °C increases energy savings, while shifting the production capacity towards daytime improves the overall ...



## Producing cement with solar energy

In the CemSol research project, a team of scientists is developing and demonstrating a solar-heated calcination plant to produce ...



## Solar Photovoltaic System Cost Benchmarks

The U.S. Department of Energy's solar office and its national laboratory partners analyze cost data for U.S. solar photovoltaic systems to develop ...



## Taiwan Cement plant has 107MWh battery commissioned

Nhoa Energy, a unit of Nhoa SA, formerly Engie EPS, has announced the commissioning of a 107.3MWh energy storage project at a Chinese plant of Taiwan Cement ...



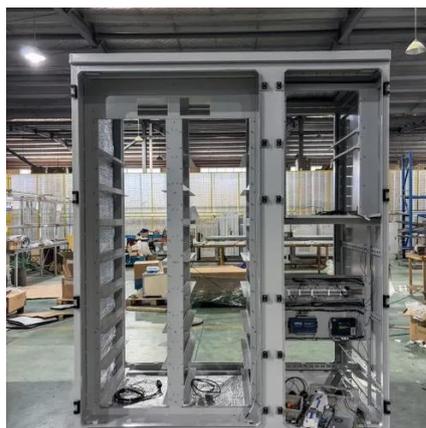
## Synhelson starts building solar tower for cement ...

Switzerland-based Synhelson and Mexican construction materials supplier Cemex have started building a high-concentration solar ...



## [CEMEX and Synhelion achieve breakthrough in ...](#)

The Synhelion and CEMEX R& D teams set up a pilot batch production unit to produce clinker from concentrated solar radiation by ...





## Contact Us

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For inquiries, pricing, or partnerships:

<https://iceeng.co.za>

Phone: +27 11 568 9402

Email: [info@iceeng.co.za](mailto:info@iceeng.co.za)

Scan QR code for WhatsApp.

