

15MWh West African Solar Container Used in Cement Plants





Overview

This work describes the implementation of concentrated solar energy for the calcination process in cement production. Approach used for providing solar energy includes the utilisation of a solar tower sy.

Can solar energy be used in cement manufacturing?

Gonzalez and Flamant (2013) designed a hybrid model that uses solar and fossil fuel energy to fulfill the thermal energy requirement for cement manufacturing. Concentrated solar thermal (CST) is a potential replacement for 40%–100% of the thermal energy needed in a conventional cement plant.

Can a solar power system save CO₂ in cement industry?

Concentrated solar power system is designed for cement industry. Substitution of required thermal energy ranging from 100% to 50% is studied. 7600 heliostats with 570 ha land required for 50% conventional energy replacement with solar energy. Selected conventional cement plant could save 419 thousand tons of CO₂ annually.

Which cement plant is used for solar thermal application?

Location and DNI availability of the investigated plant A conventional cement plant (Kotputli Cement Works (KCW), an UltraTech Cement Limited manufacturing unit) at Kotputli, Jaipur, Rajasthan, was investigated for solar thermal application.

Can solar clinker be used for cement production?

For the first time ever, CEMEX and Synhelion successfully connected the clinker production process with the Synhelion solar receiver, producing solar clinker. This revolutionary innovation is an initial step to develop fully solar-driven cement plants.



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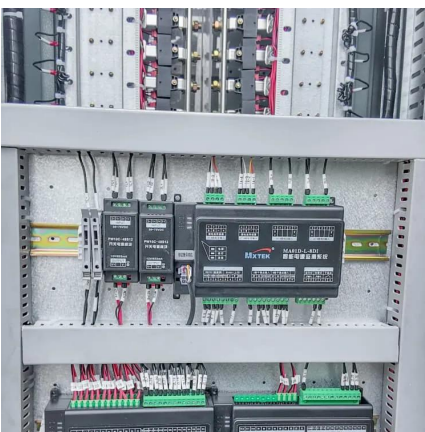
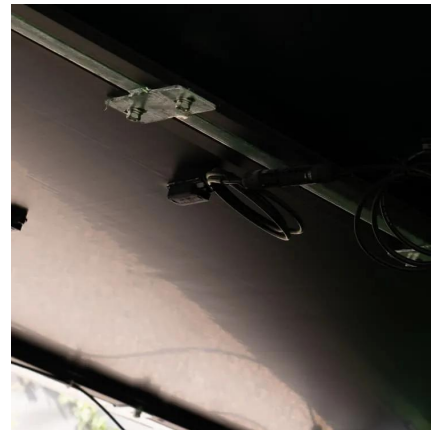


[Bamburi Cement builds two solar power plants](#)

Dec 4, 2023 · Bamburi Cement is building two solar photovoltaic power plants, which will provide up to 30 per cent of the cement producer's total power requirement. According to Market ...

[Kenya Cement Plant Adds 10MW Solar](#)

Oct 1, 2025 · The project may also encourage further private-sector adoption of renewable energy in East Africa's heavy industries. Source: Solar Finance Africa Quick Take: Kenya's Mombasa ...



[Bamburi Cement to build solar power plants at Athi River ...](#)

Dec 7, 2023 · Frontier Energy subsidiary Momnai Energy has begun building two solar power plants at sites belonging to Bamburi Cement. One 14.5MW plant will be situated at the ...

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

Nov 10, 2023 · This work describes the implementation of concentrated solar energy for the calcination process in cement production. Approach used for providing solar energy



includes ...



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

Feb 2, 2022 · CEMEX and Synhelion announced today the successful production of the world's first solar clinker, the key component of cement, a significant step towards developing fully ...



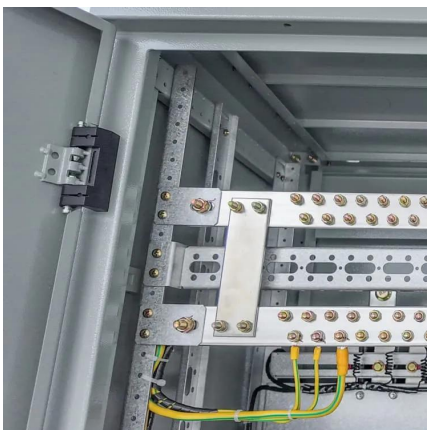
[Equator Energy Commissions 10 MW Solar Plant for Mombasa Cement](#)

Sep 26, 2025 · Equator Energy has commissioned a 10 MWp captive solar power plant at Mombasa Cement's Vipingo facility in Kilifi County, Kenya. The project ranks among the ...



[Greening the Concrete Jungle: Solarizing Cement Factories](#)

An innovative and efficient solar power plant solution has been developed for cement factories. On an annual basis, solar PV systems in cement plants may save 22,941 tonnes of CO2.





[Equator Energy powers Kenyan cement plant with 10-MW solar ...](#)

Oct 3, 2025 · Equator Energy commissioned a 10-MW solar park for Mombasa Cement in Kenya, cutting costs, emissions, and grid dependence at an energy-intensive facility.

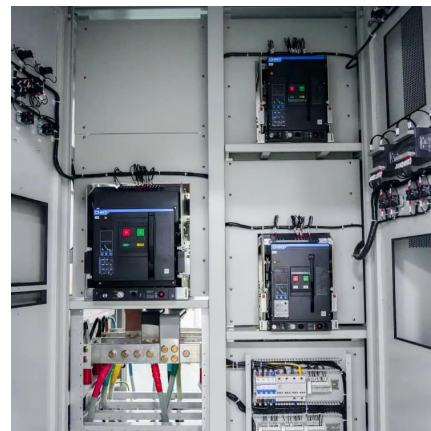


[Producing cement with solar energy](#)

Mar 2, 2022 · This is where the CemSol project comes in, short for "solar production of cement with integrated CO₂ capture". The team of scientists is developing a process in which the ...

[African Cement Makers Explore Renewable Energy](#)

Oct 28, 2025 · In Kenya, Mombasa Cement chose a 36 MW wind farm by Vestas for its Kilifi plant. At Mombasa's Vipingo plant, a solar farm (10 MW) was added in 2025. Devki Cement (Kenya) ...



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