

LIGHTING THE FUTURE

Waheeb Al-Azab, Arabian Yemen Cement Company Limited (Hadramout Cement), discusses the pioneering solar power project transforming energy use at a cement plant in Mukalla, Yemen.

In a historic step toward sustainable industrial development, Arabian Yemen Cement Company Limited (Hadramout Cement) has inaugurated the largest solar power plant in the city of Mukalla, marking a defining moment not only for the company, but for Yemen's energy and industrial sectors as a whole. With a total installed capacity of 13.75 MW, supported by a 5.7 MW/h battery energy storage system (BESS), this project establishes Hadramout Cement as the first cement plant in Yemen to operate on solar energy at this scale.

This achievement is far more than a technical milestone. It represents a strategic vision, a commitment to environmental responsibility, and



Hydramout Cement Solar Power Plant 13.75 MW.

a bold response to the rising challenges of energy costs and sustainability in a country facing complex economic and infrastructural realities. With an investment of approximately US\$11 million, the project delivers a near-zero carbon footprint for the plant's energy consumption, setting a new national benchmark for clean energy adoption in heavy industry.

A national model for clean energy investment

Solar power plants and solar energy technologies produce no air pollution or greenhouse gas emissions during operation. Their environmental value becomes even greater when they replace or reduce dependence on fossil fuels, which are not only finite, but also a major contributor to climate change and environmental degradation.

By harnessing solar energy, one of Yemen's most abundant natural resources, Hadramout Cement has demonstrated how industry can turn environmental challenges into opportunities. This project proves that renewable energy is not a luxury or an experimental concept, but a practical, reliable, and economically sound solution for energy-intensive industries such as cement manufacturing.

The plant's annual output is expected to reach 34 027 633 kWh of clean and green electricity, resulting in an estimated reduction of 21 439 tpy of carbon dioxide emissions. These figures translate directly into cleaner air, lower environmental impact, and a meaningful contribution toward global climate goals from within Yemen.

The journey toward renewable energy

The decision to adopt solar energy was not a reactive response to temporary circumstances, nor a decision driven by external pressure. It was a deliberate and well-studied strategic transformation.

Cement production is one of the most energy-intensive industrial processes, requiring continuous and stable power to operate heavy machinery, kilns, and complex electrical systems. Recognising this reality, Hadramout Cement relied on its in-house engineering expertise to conduct detailed technical and feasibility studies. The objective was clear: identify a renewable energy solution that could integrate seamlessly into the plant's existing power infrastructure without compromising operational stability or safety.

After extensive evaluation of available technologies and international contractors, REON Energy of Pakistan was selected as the execution partner. The choice was based not only on technical capability but also on a