



45.0 MWE POWER GENERATION AQUA POWER

OWNER
Aqua Power

LOCATION
Mtwara, Tanzania

PRODUCT
Three Titan 130 (15.0 MWe) Gas Turbine Generator Sets

CUSTOMER VALUE
Sustainability, Fast Reliable Power

Aqua Power, an independent power producer, needed to quickly replace expensive diesel power for Dangote Cement, the largest cement production plant in Tanzania. The cement plant was commissioned in 2015 and was forced to run on emergency diesel generators due to limited grid power (18MW) and poor infrastructure (33KV, 15MVA).

To deliver fast and reliable power, Aqua Power purchased three Solar Titan 130 Generator Sets each with a capacity of 15 MWe. These units were then successfully deployed to Mtwara, the port city of southeastern Tanzania, located near the border of Mozambique. The Power Plant was commissioned within a record time of Seven (7) Months including a 70 Bar gas connection and 4km transmission line. The power travels from the power plant through kilometers of underground cables to the cement factory feeding the Kiln, Raw Mills, Crushers etc in Island Mode. Aqua Power is capable of supplying power both to Dangote Cement and the National Grid with two independent outgoing feeders.

45.0 MWe Power Generation



PLANT DATA

Three Titan 130 (15.0 MWe) Gas Turbine Generator Sets

One Pressure Reduction Skid from 90bar to 30 bar

Advanced Scada Controls

Natural Gas Fuel



OUR PRODUCTS & SERVICES

Parts Supply

Relocation, Start-up and Commissioning

Operating and Maintenance Training

Long-Term Service Agreement, including Insight Platform

RAPID DEPLOYMENT

INCREASED PRODUCTION

AFFORDABLE POWER



The three Titan 130 turbines, combined with auxiliary equipment (gas pressure reduction station, black start diesel generator, transformers and medium voltage auxiliaries) provide reliable power, which enable Dangote Cement to run at full capacity, producing 2 million tons of cement per annum. This solution allowed Aqua Power to cut costs, resulting in approximately \$20 million USD per annum in savings.

Since the installation, production capacity has increased from 25% to 100% and emissions have been reduced. Another critical requirement for Dangote Cement is the ability to handle rapid power demand fluctuations and load steps. Due to its high inertia, the Titan 130 gas turbines are capable of adapting large load steps (both on-loads and off-loads).

To allow growth, Aqua Power positioned its gas power plant along the gas pipeline and 132KV transmission line, creating a future possibility to supply power into the grid as well. As part of the deployment, Solar provided Aqua Power with operations and maintenance training, and a comprehensive service agreement, which leverages Solar's Insight Platform. This diagnostic technology maximizes plant availability and provides an opportunity to minimize the downtime required to perform scheduled maintenance.

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