

VALE | Mozambique



At a glance

10MW



Diesel power modules

- RAPID INSTALLATION TO SUPPORT MINE CONSTRUCTION
- PLANT CONFIGURED TO SWITCH INSTANTANEOUSLY TO ISLAND MODE IN EVENT OF GRID FAILURE
- FULLY COMPLIANT WITH CUSTOMER'S RIGOROUS EHS REQUIREMENTS

Challenges

- INADEQUATE POWER SUPPLY FROM LOCAL GRID
- PERMANENT COAL-FIRED POWER STATION STILL UNDER CONSTRUCTION
- NEED FOR RAPIDLY AVAILABLE SUPPLEMENTAL POWER

Background

During much of the early 21st century, the Mozambique economy was growing at an annual rate of 6% or more – largely stimulated by foreign investment in the mining and oil and gas industries. One of those investors, Brazilian mining giant Vale, needed a reliable source of backup power for the construction phase of its mining operation in the province of Tete, Mozambique. The interim power solution required transportable generating units and rapid mobilization, ultimately leading to a seamless, uninterrupted supply of power to cover peak demand. The plant would serve to fulfill demand requirements until Vale could construct a large coal fired power station, which would provide all on-site power.

Solution

In 2011, local subsidiary Vale Moçambique Limitada selected APR Energy to rapidly mobilize, install, and commission the 10MW turnkey plant. Using diesel-fired power generation modules, APR Energy's project engineers created a customized solution that included the implementation of a volumetric fuel measurement system and design of a 2-kilometer overhead line from the plant to nearby substation. APR Energy configured the plant to operate in base load parallel with the grid, with the capability of instantaneously switching to island mode in the event of grid failure. In addition, APR Energy collaborated with Vale's environment, health and safety (EHS) managers to ensure that the installation fully complied with company standards.

Outcome

APR Energy's power generation units provided reliable, dedicated power to Vale's Moatize Coal Project throughout the critical commissioning phase of the mine site. APR Energy's site engineers worked closely with Vale operations staff to develop a training program for the operation and maintenance of the units. In 2012, after training the local workforce, APR Energy transferred operation of the power plant over to Vale Moçambique Limitada to ensure a reliable and long-term power solution for the mine site.