



## Mining

### Case History

Cummins South Africa

#### Where:

Nickel-Cobalt mining and processing plant, Madagascar

#### Specified:

30 x **STAMFORD®** P7 alternators for use in 1,250 kVA gensets

#### Purpose:

Delivering 37.5 MVA of reliable power to the site, operating 24/7 for the anticipated project life of 27 years.

Super-mine opts for **STAMFORD®** P7 alternators.

The largest capital project in the history of Madagascar, the Ambatovy Project, has deployed generator sets equipped with **STAMFORD®** P7 alternators to help meet its requirement for prime power. They play an essential role as part of a \$15 million combined mine and processing project that is set to make a substantial contribution to the country's future prosperity.

In total, 30 gensets using **STAMFORD®** P7 alternators were installed at the site, and have since ensured the supply of power that is crucial to this project, which has the potential to sustainably boost the economy of Madagascar and the standard of living for its people.



30 x 1,250 kVA gensets power the site



The gensets all employ **STAMFORD®** P7 alternators

The Ambatovy Project represents one of the country's biggest capital spends. It is a large tonnage nickel and cobalt project with annual production capacity estimated at 60,000 tons of nickel, 5,600 tons of cobalt and approximately 190,000 tons of ammonium sulphate. The project has an estimated project life of 27 years, and is one of the world's biggest lateritic nickel mines.

The **STAMFORD®** P7 alternators used on the project are from a range of modern and versatile alternators that have become a popular choice for applications requiring reliable power in harsh environments. Available from 910 to 2,750 kVA, the P7 range can be supplied in 4 pole or 6 pole, single or two bearing AVR controlled versions. Permanent Magnet Generator (PMG) technology is fitted as standard, and the range's 2/3 pitch windings avoid excessive neutral currents.

The gensets into which the **STAMFORD®** P7 alternators are fitted are actually a rental-spec design. However, thanks to the durability of their components and their ability to operate reliably in the harsh environmental conditions of the project, the customer felt confident in purchasing the gensets outright. Support, service and a commitment to delivering and setting up in a short time frame were further key factors in the decision to purchase.

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The 1,250 kVA gensets, equipped with Cummins KTA50-G3 engines, provide 37.5 MVA of power and operate 24/7 from two plants, each supplying 18.75 MVA. Each plant is equipped with 15 x C1250 D2R units for prime power, 15 x 0.4 kV/11 kV step-up transformers, two 20ft containerised MV cells including Digital Management Control system DMC300s and MV switchgear.

The Ambatovy project is already contributing greatly to the local economy – around 12,000 workers were hired directly and indirectly during the construction phase alone. A local development programme provides a human resources registration centre with occupational and technical training programmes for small to medium sized local companies. More than 200 public hearings were held to examine the project's social and environmental issues, which led to the adoption of environmental conservation models based on World Bank guidelines.

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