

HFO power plant rescues south Cameroon

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The Limbe power station.

Cameroon gets more than 90% of its power from hydropower plants. After three years of severe drought Wärtsilä was contracted to supply a new 85 MW HFO power plant to meet the shortfall in the south of the country. The plant's high reliability has eliminated the need for load-shedding.

The years 2001 to 2003 were exceptionally dry in Cameroon. Coupled with an increase in the demand for electricity from all sectors of the population, this led to a serious shortage of power in the dry season. The consequent load-shedding was deeply unpopular.

A project was therefore started by AES Sonel, the country's power utility owned 54% by AES Corporation of the USA, to provide new permanent power generation capacity to address the urgent electricity shortage during the dry season in the southern interconnected grid. The utility decided to invest in a heavy fuel oil (HFO) power plant at Limbe to cover the energy shortfall in a country where more than 90% of the power generation capacity comes from hydropower plants.

The Limbe power station generates approximately 85 MW of power to cover

the projected shortfall in electricity in the southern region of Cameroon. The power generation plant operates between intermediate load and baseload during the dry season (November to May). During the wet season, the plant is expected to be primarily in standby mode, but is likely to operate at peak demand.

Fast-track delivery

After considering various options for the location, it was decided to build the 85 MW power plant adjacent to the Sonara refinery at Cape Limboh. Wärtsilä was selected after a bidding process for engineering, procurement, transportation, erection on site (including civil works), installation, testing and commissioning of the plant, and for providing performance guarantees.

Wärtsilä succeeded in commissioning the plant within 12 months of order, despite facing tough ground conditions, strenuous transportation to this rather remote area and the need to build 80-metre-high exhaust stacks. The power plant complies with all environmental criteria set by the World Bank and local regulations.

Financial support

Wärtsilä's solution also included financing. Wärtsilä Development & Financial Services actively supported AES Sonel in arranging the debt financing for the project. The plant was financed by two international financing institutions, Emerging Africa Infrastructure Fund (London) and FMO (The Hague), and a Dutch commercial bank together with Finnvera (the Finnish Export Credit Agency).

AES Sonel was also supported by local financial institutions including Standard Chartered Bank in Cameroon, which provided more than half of the construction funding, as well as Ecobank, Afriland First Bank and the Commercial Bank of Cameroon.

Since its commissioning in September 2004, the plant has played a very important role in the system with its high reliability, what prevents load-shedding. ■

Basic data of the Limbe power plant:

Total electricity output 85.4 MW
Electrical efficiency 46.9%
Engine type 5 x Wärtsilä 18V46
Year of commissioning 2004