

## ELECTRICIDADE demogambique

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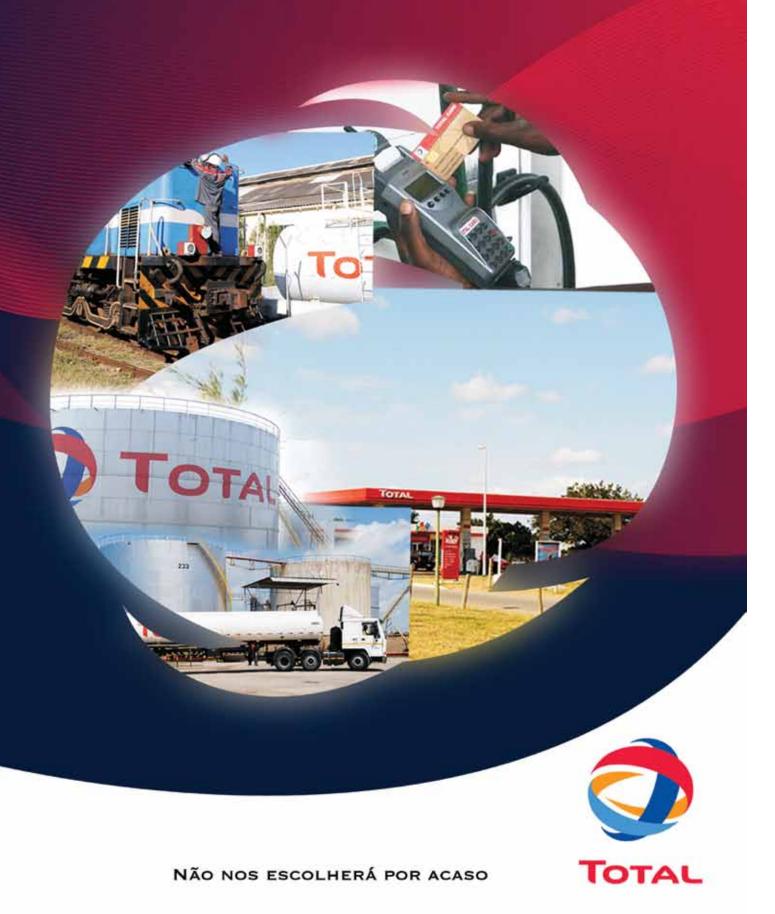
## aspirations

Mozambique has emerged from the hardships of civil war to become a fast-developing economic nation. That growth is hugely dependent on electricity; and this has put pressure on national supplier Electricidade de Moçambique to expand, as Carlos Yum, director of the Corporate Performance unit and Business Development, explains to Andrew Pelis

fter years of civil war, Mozambique is a country on a mission to develop into a 21st century economic powerhouse. Power supplies play an important role in building a sustainable future and central to that drive is Electricidade de Moçambique (EDM), the state-run electricity supplier. EDM's past, present and future are intrinsically linked to politics in the southern African country. The company was established in 1977, just two years after Mozambique gained its independence from Portugal, and was transformed into a public company in 1995, following economic restructuring.

Electricidade de Moçambique

## TOTAL MOÇAMBIQUE S.A.R.L.



At the time of its launch, EDM faced a mountain of operational challenges to deliver a trio of objectives aimed at generating, transmitting and distributing electricity to a growing nation. While that may have seemed a straightforward plan, achieving these goals was anything but easy in one of Africa's largest countries, which spans an area of 800,000 square kilometres.

Throughout the 1970s and 1980s, EDM embarked on an extensive programme to rebuild and expand through the Motraco System. transmission lines across Mozambique, many of A shortage in gualified technical staff in the early which had been destroyed, simply did not exist, days presented a further problem for EDM, resulting or did not link the regions prior to independence. in the creation of an in-house training department



"One of our first jobs was to merge all of the based in Maputo and Chimoio, which to this day generation centres across the country and create provides training in areas such as management, a centralised system as industry and household customer service and commerce, as well as consumption increased," explains Carlos Yum, technical skills. "The planning of courses is usually director of the Corporate Performance unit and carried out by each business unit, according to Business Development at EDM. "Before and present and future needs," says Yum. during the war, the south of the country used a lot The establishment of a national electricity of coal power and the transmission grid was still transmission network has laid the foundations for very limited with lots of diesel isolated generation hydroelectric power in Mozambigue; and financial schemes. We therefore had to extend transmission support from overseas investment has helped

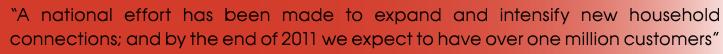
lines to enable the electrification programme to be implemented."

One of EDM's main projects was the creation of the Central Northern transmission system that connected all the central and northern provinces with more than 1,000 kilometres of transmission lines. The company also developed a 500 MW interconnection power line between Mozambique and Zimbabwe, as well as an interconnection to South Africa and Swaziland



to bankroll a number of key projects to aid the growth of power supply. The investment is timely, as Mozambique has an abundance of natural energy resources, including approximately 10,000 MW in the Zambezi valley alone (hydroelectric); and there is also coal potential beyond 4,000 MW.

EDM itself is facing ever-increasing power demand every year as the country's economy grows, which puts added pressure on its operations. "A national effort has been made to expand and intensify new household connections; and by the end of 2011 we expect to have over one million customers," says Yum. "At the same time, over the last three to



four years we have seen the arrival of a number of industrial customers who require medium and high voltage supply which has needed us to deliver on reliability and quality of supply as well.

"Overall demand is growing on average by 15 per cent each year and we expect this to continue for at least the next five years. That puts pressure on how we deal with customers commercially as well as our approach to infrastructure improvements and medium and long term development plans."

In order to develop resources, mainly for export, the government of Mozambique has launched several major initiatives, including the development of generation projects and an extra-high voltage transmission system for the evacuation of power to neighbouring countries

within the Southern African Power Pool. "There is pressure on both infrastructure and In this environment and tasked with raising operations," he says, "and we will have to look at capital, EDM recently received a commitment greater automation in the future as our customer from the World Bank of US\$100 million, and the base becomes bigger and more mature. The European Investment Bank of up to €100 million. challenge will be our institutional development and Part of the funding is currently being used to finance infrastructure; and we have to attach financing the project's development activities, including issues to this when making long term decisions. It a strategic regional environmental and social is a good problem to have, mind you." assessment; a strategic regional environmental Over the next five years EDM is looking at an investment programme that will extend beyond and social framework; an environmental and social impact assessment; a technical and economic US\$500 million in both a domestic and regional feasibility study; and an institutional capacity context. "This will not only be spent on new infrastructure but will also reinforce existing assessment and capacity building programme.

Operations at Cahora Bassa are working at higher capacities following the restoration of the transmission link to South Africa, while other large hydroelectric plants in Mozambique have continued to operate at less than full capacity including Mavuzi, Chicamba and Corumana. The challenge is to increase that capacity, which Yum says is where so much of the current planning and investment is concentrated.

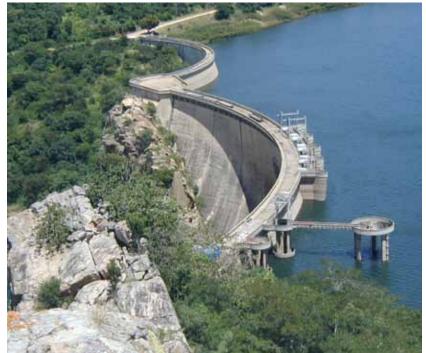


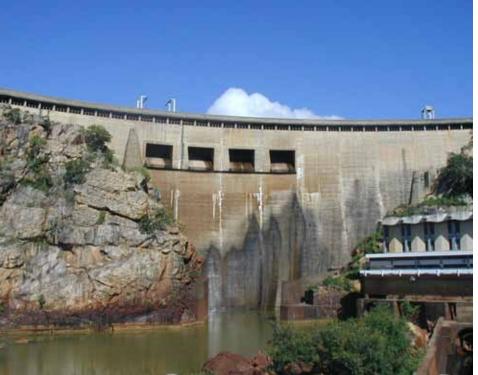
Meanwhile, to meet current demand, EDM operates two isolated power systems - the Central Northern system and Southern system-with a total installed generating capacity of 233 MW nominally; plus a 2,075 MW hydroelectric power station at Cahora Bassa, which sells electric power mainly to EDM and Eskom.











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systems (like our Maputo and other main important load centres and distribution network) to help improve reliability and quality of supply,"

says Yum. "In fact those issues will be very much the focus of our day-to-day activities and our management and financial decisions. We will also look to connect new distribution points to the



the ideal partner



With so much infrastructure improvement already underway, Yum is conscious that EDM does not lose sight of the importance of renewable energy, which he feels will play an important role in the future. "The renewable segment is one we have started to look at and is a relatively new issue to consider. We foresee that the need to generate renewable power is inevitable; and we are currently reviewing our options and opportunities. We will need to look at this issue from an economic perspective and also the impact this will have on supply. We also need to focus on developing more hydro.

"At EDM we have a saying: 'With energy we build the future'. With considered investment we will continue to help support and develop Mozambique's economic future," he concludes. www.edm.co.mz •

network including a second line that connects the Centre to the North system-that is now undergoing a feasibility study."

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