## IN BRIEF...

# Mozambique Energy Sector Support

Mozambique has three transmission systems for electric energy. The northern system is fed from Cahora Bassa (Hidroeléctrica de Cahora Bassa, HCB) on the Zambezi river in Tete. HCB supplies energy to Zimbabwe and South Africa via 400 kV AC and 533 kV DC lines respectively, and Mozambique (Tete, Zambezia and Nampula) via a 220 AC line. The central system is fed from two hydroelectric stations in Manica province and supplies electricity to Manica and Sofala, particularly to Beira city. The northern and central systems have recently been linked together by a 110 KV AC line. The southern system feeds Gaza and Maputo from South Africa.

Some additional hydro stations and a number of diesel plants feed into the grids or into local systems. The national power utility, Electricidade de Moçambique, EDM, operates all plants and distribution networks except HCB which is a separate entity in which Mozambique has only a minority shareholding (18%). In 1998 the southern grid began to receive power from HCB transmitted through South Africa via the DC line. Mozambique is guaranteed 200 MW from HCB at a low cost. Today this quota has almost been fully utilised. Recently an aluminium smelter, MOZAL, started operations in Maputo. MOZAL alone uses more electric energy than all the rest of Mozambique. The smelter is fed through two separate 400 KV AC lines from South Africa. These are owned by a separate company, MOTRACO, with South African ESKOM as a majority owner and

EDM and the Swazi utility as minority owners. EDM participates in the Southern Africa Power Pool (SAPP) activities, but is in a weak position vis à vis neighbouring South Africa and its strong power utility, ESKOM.

### Swedish support

Sweden has supported the sector with SEK500m from the country allocation since the late seventies. In addition, some regional funds have been made available for international transmission lines. Some investments were of strategic importance. An example are the gas turbines installed in Beira as a standby facility to secure power to Beira and its harbour in spite of repeated sabotage to the transmission lines feeding the city. Technical assistance to EDM has been provided both at the central and operative levels. Present programme support to EDM is based on a cost sharing formula with Sweden supplying 80% of funds, or a total of SEK15m (2003-2006). The programme should develop EDM's capability to plan, operate and maintain its plants and networks in accordance with new SAPP and market requirements. There is also a Swedish direct advisory support to the Ministry of Mineral Resources and Energy (MIREME). The advisers will support the Ministry over a two year period (SEK3.7m) in matters regarding power exchange within the Southern African Power Pool region and the development of the Mozambican electricity market.

A rural electrification project to supply energy to the Morrumbala area in Zambezia province is under construction (SEK43m). The construction of a transmission line Guruè – Cuamba – Lichinga, including distribution systems in Cuamba and Lichinga towns, and related rural electrification schemes have started.

Sweden and Norway are financing the project. The Swedish contribution is SEK120m and Norway's contribution is NOK189,1m. Norway administers the project on the same principles as if it were the sole donor. The construction period is estimated at 28 months starting in September 2002.

#### **Objectives**

The purpose of the programme support to EDM is to strengthen EDM's capacity to manage its network and operations within the SAPP. This involves meeting the requirements of the SAPP system regarding systems planning and operation of the existing and future interconnections to the southern African grid. The programme should also build up competence and experience in business development and commercial/financial handling of contracts and legal affairs within the energy sector. The advisors to MIREME are to be a supporting resource to the Minister and the Ministry's general development of the Mozambican electricity market.

The objective of the rural electrification projects is to stimulate the local economy and enhance human welfare through providing electric energy to households, medium-sized industrial consumers and small-scale commercial consumers in addition to a number of non-commercial consumers such as schools, hospitals and administrative establishments.

#### Results

Previous support to EDM has yielded results in the form of a higher level of professionalism among the cadres of EDM on all levels. The commercial operation of EDM has also improved. In the field of power economics the support has resulted in better conditions of trade with the co-operating partners in SAPP, particularly ESKOM.

A socio-economic impact study of a Swedish financed rural electrification project in the Nampula province (inaugurated 2000) shows that in a short time electrification had stimulated the expansion of economic activities. The quality of service at hospital and health clinics has improved, electricity has facilitated emergency treatments at nights and has improved the maternity ward.

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