THE MCA-MALAWI INFRASTRUCTURE DEVELOPMENT PROJECT

The Infrastructure Development Project (IDP) is being funded by the Millennium Challenge Corporation (MCC) of the government of the USA. USD 257.1 million – more than two-thirds of the USD 350 million MCC Compact - will be used to fund infrastructure works that will improve the reliability, stability and quality of the power grid.

The IDP will focus on the following activities to improve ESCOM’s generation, transmission and distribution capacities:

1. ESCOM’s Generation Capacities

Work on the 50-year old Nkula A Hydropower Plant is urgently needed in order to extend its useful life and increase capacity by 12 MW from 24 MW to 36 MW. The Malawi Compact will rehabilitate, upgrade and modernize through:

- Refurbishing turbines, generators and accessories, and replace obsolete control equipment with state of the art digital systems
- Refurbishing the Nkula A hydro power plant intake
- Replacing the 66 kV switch gear

2. Transmission Network Upgrade

The existing power transmission system has reached the limits of its capacities, placing a major constraint on the possibilities to make any new connections in the centre or north of the country, in particular, and to improve the quality of the power supply. The transmission system is effectively the backbone of an energy system. As the bulk of the generation capacity is in the south of the country, a high capacity transmission network is needed to transport electricity to distribution stations in the centre and north of the country. The MCA-Malawi Compact will build a high capacity (400 KV) line from Phombeya in Balaka to Nkhoma in Lilongwe; and a 132 kV line from Chintheche in Nkhata-Bay to Bwengu in Mzimba in the north of the country. The works will include:

- Construction of a 173 km 400 kV power line from Phombeya to Nkhoma (south to centre). This will increase ESCOM’s capacity to transport electricity generated in the south further up country (129 km)
- Construction of a 132 kV line from Chintheche via Luwinga to Bwengu in the north (129 km). A similar line will be constructed in the centre from Nkhoma to Bunda junction (30 km). These will enhance ESCOM’s capacity to transport electricity to these areas.

- Construction of major substations at:
  - Phombeya 400 kV
  - Nkhoma, - 400 kV
  - Chintheche – 132 kV
  - Luwinga – 132 kV
  - New Bwengu – 132 kV
  - Bunda Junction– 132 kV

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THE MCA-MALAWI INFRASTRUCTURE DEVELOPMENT PROJECT

- Reinforcement of the 66 kV transmission network around Lilongwe (31 km) by replacing wooden poles and conductors with lattice towers and a higher conductor rating
- Building of a new 66 kV line in Bwengu. (3 km.)

3. Distribution Network Upgrade, Expansion and Rehabilitation

Finally ESCOM urgently needs to expand its capacity to supply electricity at the local level in order to be able to connect more customers and ensure a more regular and quality supply. To this end the Compact programme will be used to:

- Build new substations in
  - Ntonda (Blantyre)
  - Kang’oma (Area 23)
  - Lilongwe City Centre
  - Area 25
  - Sonda (Mzuzu)
- Upgrade existing network connections
- Replace switchgear in 8 substations
- Replace transformers and switchgear in – 4 substations
- Replace 5.5 km of 11 kV underground cable
- Expand the capacity of existing sub-stations
- Upgrade transformers in existing substations
- Install a new System Control And Data Acquisition master station in Chichiri, and integrate 13 existing substations. This helps the operator better control and manage the system.

All of this will increase system capacity, making it easier to connect new customers in these areas without reducing the quality of power for those already connected. The Infrastructure Development Programme is due to be completed in 2018.

PROJECTS FUNDED UNDER THE MALAWI COMPACT

The goal of the Millennium Challenge Corporation Compact is to reduce poverty through economic growth. The Millennium Challenge Account - Malawi (MCA - Malawi) is the manager, administrator and implementer of the Compact’s three projects:

- The Infrastructure Development Project (IDP)
- The Power Sector Reform Project (PRSP), and
- The Environment and Natural Resource Management (ENRM) Project.

Construction work on the Infrastructure Development Project is due to commence in late 2015 and to end by 2018.