Progress in Implementing Governments Plan for Providing Adequate Power Supply

African Rift Geothermal Conference

Imperial Resort Beach Hotel, Entebbe

24 – 26 November 2008

Presentation by

Commissioner, Energy Resources Department

Ministry of Energy and Mineral Development, Uganda

OUTLINE OF THE PRESENTATION

1. Introduction and Background Information
2. Progress made in implementing the Plan to increase power supply:-
   - Short-term measures
   - Medium term Measures
   - Long-term Measures
3. Access to Rural Electrification
4. Conclusion

1.0 INTRODUCTION AND BACKGROUND INFORMATION

Policy Objective:

Government has set as the major priorities in the Energy sector as:

- to increase electricity generation capacity;
- to increase access to modern energy services and in particular Rural electrification; and
- to promote efficiency in energy utilization.

Background Information Cont,d

- In 2006 the country experienced Power supply deficit due to draught, lack of a new power plant and increased demand.

- In order to address the situation, Government formulated a strategic plan to meet the country's electricity supply and other energy needs in the Short, Medium and Long-term.

2.0 PROGRESS MADE ON THE STRATEGIC PLAN TO PROVIDE ADEQUATE AND RELIABLE POWER SUPPLY

2.1. Progress on Short Term Measures

2.1.1 Emergency and other Thermal Power Projects

- A total of 100 MW was procured and generated by Aggreko. Of this capacity 50 Mw at Lugogo has been retired. Government is providing a subsidy to make the tariff affordable.
- 50 MW high speed diesel plant has been installed at Mutundwe using IDA funds.
- Jacobsen As has installed a 50 MW Heavy Fuel Oil (HFO) plant on a Build Own Operate and Transfer (BOOT) basis at Namanve in the Industrial Park. The plant was officially commissioned on 5 Nov 2008.
- Further more, arrangements have been concluded with Electromaxx Limited to generate 10MW with HFO at Tororo.
- Invespro also plans to provide 50 MW of thermal from HFO.

2.1.2 Energy Efficiency Programmes

The major activities under this include:

- The procurement and distribution of 800,000 compact fluorescent lamps. As a result of this intervention the peak demand was reduced by about 30 MW.
- Energy Auditing for public institutions such as public schools, Government hospitals, National Water and Sewerage Corporation facilities, Government Buildings and high energy consuming enterprises started this month. The energy audit will come up with recommendations for investments to improve energy efficiency. Investments in the institutions will to be done early 2009.

2.1.3 Measures to reduce Power losses

- Power system losses, remains a major challenge currently estimated at about 39%.
- Measures Umeme is taking to address the problem of losses include;
  - Distribution network improvements.
  - Installation of a new billing system.
  - Improvements in meter reading.
  - Installation of prepaid meters so that electricity users can control their consumption.

2.3 Medium Term Plans for the Power Sub-sector(2006/07 – 2010/11)

2.3.1 Establishment of The Energy Fund

- To facilitate the smooth implementation of the strategic plan, an Energy Fund was established to enable government to speed up investments in hydro power projects and the associated infrastructure.
- To date about US$200 Million is in the Energy Fund

2.3.2 Status of the Bujagali Project

- With the creation of the Energy Fund, government was able to provide bridge financing to the Bujagali Project.
- That ensured that Salini maintains the negotiated EPC and Construction price, and that Salini works faster to accelerate the power plant's commissioning date.
- Commissioning of the first turbine of 50 MW is expected in mid 2010.
- Government has also provided US$17.5 million out of the Energy Fund to implement the Resettlement Action Plan (RAP) for the Bujagali Transmission lines.

BUJAGALI HPP – CONSTRUCTION WORKS CONT'D

BUJAGALI HPP – CONSTRUCTION WORKS CONT'D

BUJAGALI HPP – CONSTRUCTION WORKS CONT'D

2.3.3 Policy Framework for Renewable Energy

Renewable Energy Policy for Uganda 2007

- It aims to provide a framework to increase in significant proportions the contribution of renewable energy in the energy mix.

  Main features:

  - Introduced the feed in tariffs.
  - Standardized Power Purchase Agreements.
  - Obligation of fossils fuel companies to mix products with biofuels up to 20%.
  - Tax incentives on renewable energy technologies

2.3.4 Progress in the Development of Renewable Energy Projects

- Kakira Cogeneration: currently the project is providing a total of 12MW to the grid.
- Nyagak small hydropower project 3.5 MW will provide power to the West Nile region.
- Bugoye 13MW small hydropower project in Kasese district: construction has commenced.

2.3.4 Renewable Energy Projects Cont'd

- Mpanga 18MW small hydropower project in Kamwenge district:
- Buseruka 10MW Small hydropower project in Hoima District:
- Kikagati 10MW small hydropower project in Isingiro distrrict:
- 5 MW Ishasha small hydropower project in Kanungu:
- Kisizi micro hydro power project in Rukungiri district is being upgraded from 60KW to 300KW (0.3mw).

2.3.4 Renewable Energy Projects Cont'd

- Other co-generation: The two sugar industries namely Lugazi and Kinyara with current generation capacities of 1.6MW and 1.7MW respectively will have their capacities upgrated in order to supply to the minigrid.
- Lugazi has potential to produce 8MW while Kinyara can produce 10MW.

2.3.5 The Early Production Scheme

Government has negotiated with Tullow oil to commence moderate oil production in the short to medium term.

- The EPS is expected to start production in the third quarter of 2009 and it has the following components:-
- A modest production of 4,000 barrels of oil per day (bopd).
- A topping plant (mini-refinery) to process the above crude oil to produce diesel, kerosene and Heavy Fuel Oil (HFO).
- A generation unit that will generate 50-85MW of electricity.
- A 273km transmission line from Kasio-Tonya through Fort Portal to Nkenda Sub-station near Kasese.
- Production of Diesel and kerosene which will be transported by road tankers for distribution to the local market.

2.3.6 Status of the Karuma Project

- Government intends to develop the Karuma project at the same time with Bujagali as a strong public-private partnership.
- This plant will provide an additional 150 -200 MW.
- Construction is scheduled to commence in 2009 with commissioning expected in 2011.

2.3.7 Status of the Isimba Project

- Isimba site 15km downstream of Kalagala site is being developed as a complementary project to the Bujagali and Karuma project
- The project is being developed as a public sector project with a line of credit from the Indian Government.
- The project will be estimated to have a capacity of at least 100MW and construction is planned to commence at the end of 2009.

2.4 Long-term Measures (2012 – 2025):-

- The development of large hydro power sites, namely, Ayago North (300MW), Ayago South (200MW) in 2012 – 2020 and Uhuru (300MW)
- Interconnection of the regional power grid;
- Use of new (like geothermal) and renewable sources of energy as well as biomass, like peat.
- Use of fossil fuels locally produced to generate thermal power

3.0 ACCESS TO RURAL ELECTRIFICATION

- The Program to increase access to modern energy services through rural electrification has been implemented since 2001.
- The main targets for rural electrification are district headquarters, production areas and communities which create nuclei for rural social and economic transformation.
- Government has extended electricity services to Kibaale, Karungu and Kalangala Districts. The scheme in Kibaale and Kalangala will also serve Muzizi Tea Plantation and Kayonza Tea Factory respectively. In addition, several community schemes are at different levels of construction.

3.0 Access to Rural Electrification Cont'd

- Government has commenced the implementation of the following major rural electrification schemes:- Corner-Kilak-Kalongo - Pader-Abim; Fort - Portal-Karuguta – Bundibudgyo-Nyahuka; Rugombe – Kyenjojo - Katoke; Muntume - Kagadi; Masaka - Bukakata; Kyotera - Mutukula and Kasensero; Mbarara – Kikagate - Ntungamo; Soroti-Kaberamaido; and extension of West Nile minigrid.

3.0 Access to Rural Electrification Cont'd

- Interim measures to supply electricity to Moroto Municipal Council and Moyo Town Council are in advanced stages following the procurement of new robust 750kVA diesel generators.
- The two district headquarters will be on power supply this year.
- Detailed designs for a high voltage transmission line (132KV) from Opuyo (Soroti) to supply Katakwi, Moroto, Katikekile, Amudat, Nakapiripirit and Namalu are in progress.
- The extension of Gulu-Adjumani-Moyo line is being packaged.

4.0 CONCLUSION

- Investment in the energy sector is one of the priority area for Government.
- Government has made progress in implementing the plan to provide adequate and reliable power supply.
- Development of Geothermal resources is part of Governments strategy for providing power in the long-term.

Thank You for Listening to Me !!!