

Management Contract for ELECTROGAZ

**Utility Management Services
as part of
Restructuring, Privatisation and
Institutional Reforms of the
Electricity and Water Sectors**

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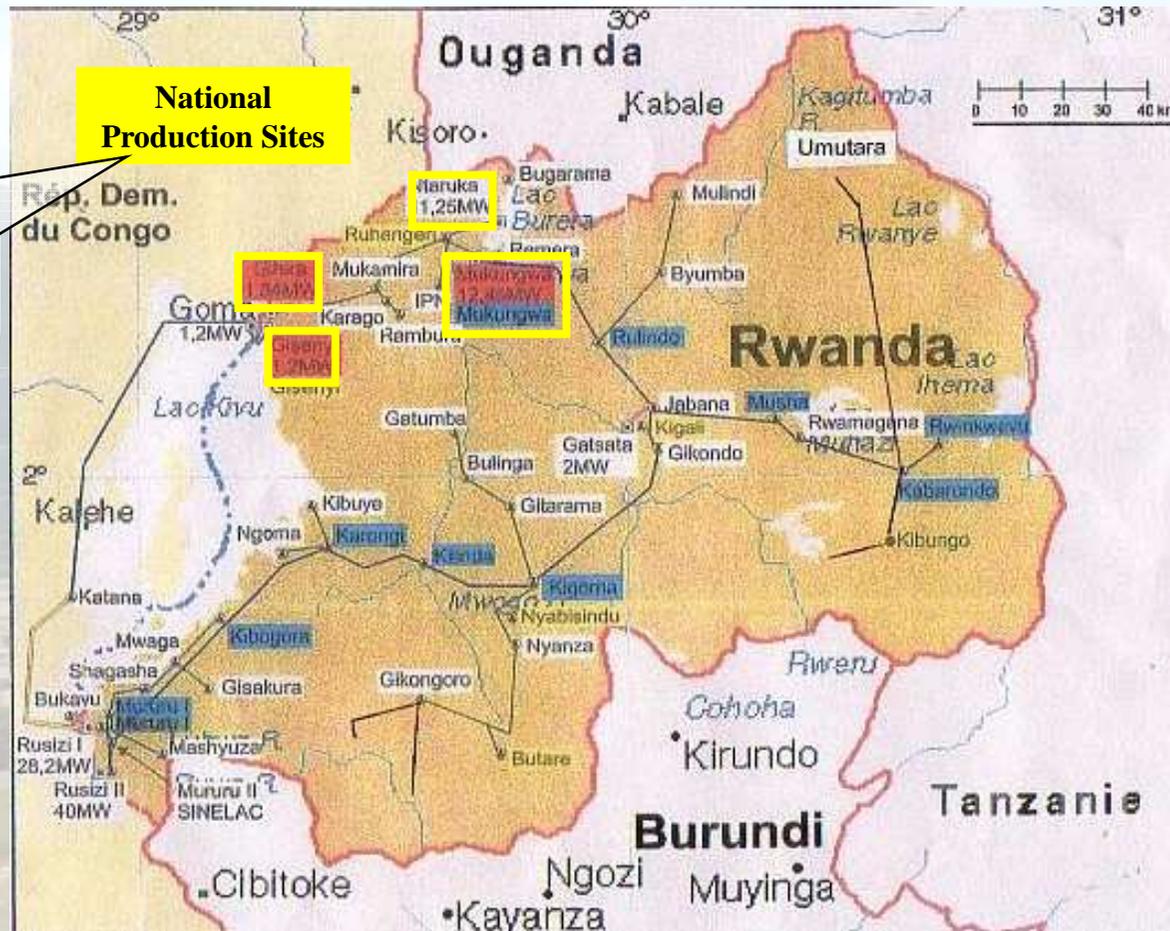
Background

- Long term efforts have been undertaken by the Government of Rwanda towards the Energy and Water Sector Reform
- The Energy and Water Sector Reform is embedded in the privatisation efforts for infrastructure in Rwanda
- This is the first step of the Privatisation process of the state-owned company Electrogaz

Background

The Rwandan Electricity System

100 %
based
on
Hydropower



Lahmeyer International as Private Utility Operator

Lahmeyer International has a long standing history

- **As a privately operated company**
- **Independent from any association or affiliation with manufacturers.**
- **Exercising its business successfully since 1966**
- **Lahmeyer International has successfully been providing engineering services and management advice to utility companies, funding agencies and private investors and operators.**

Our understanding of Utility Management

- Any form of Privatisation can only be implemented with countries Government and population
- LI is a partner to develop ELECTROGAZ into a viable utility
- LI works *with* the people of ELECTROGAZ and with the people of Rwanda
- Reliable Management is a precondition to activate necessary investments in infrastructure

Objectives of the Contract in Rwanda

The major objective of the five years Management contract for the Rwandan Water and Electric Power Utility ELECTROGAZ is to achieve on the long run

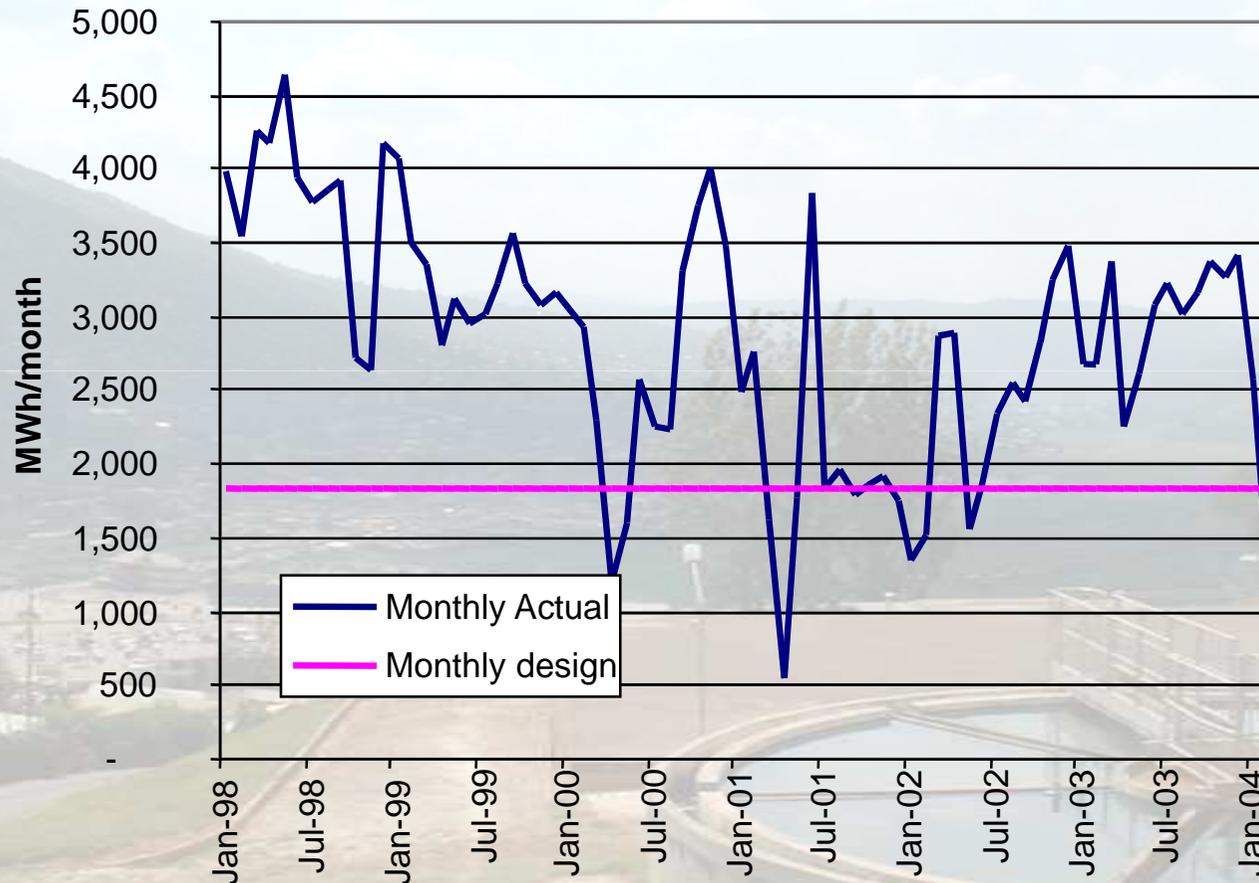
- Significant reduction in technical and commercial losses
- Extensive improvements in operational efficiency
- Increase access of the population to water and power services
- Financial self-sufficiency of ELECTROGAZ

Tasks of the Utility Management Contract

- **Operational Improvement Plan**
- **Commercial Improvement Plan**
- **Tariff Policy Development Plan**
- **Technical Improvement (Power, Water)**
- **Training Program and Staff Development**
- **Financial Improvement Plan**

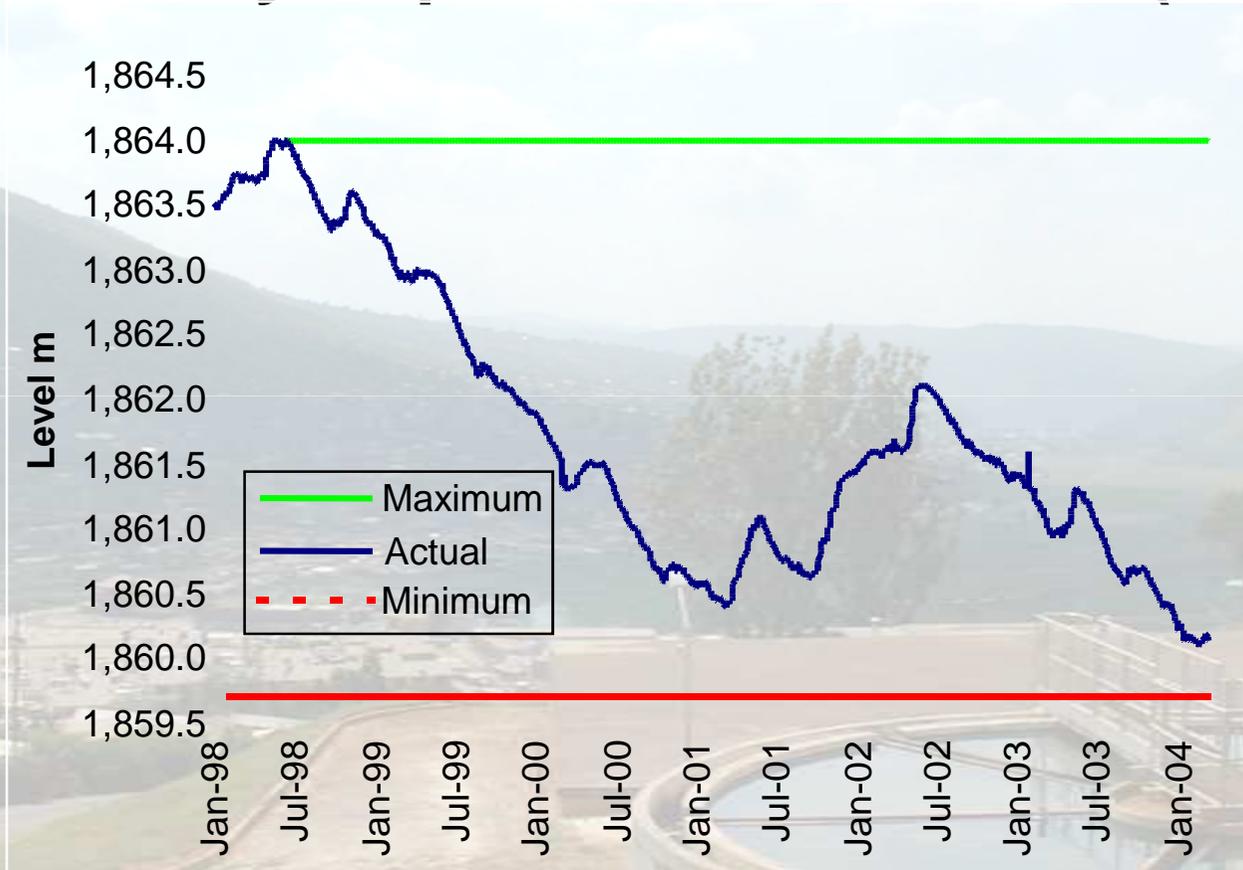
Background

Overuse of Hydropower – Ntaruka, usage in MWh



Background

Overuse of Hydropower - Lake Bulera (Ntaruka)



Overuse of Rwanda's main power stations has led to a draw-down of Reservoirs (unsustainable production levels)

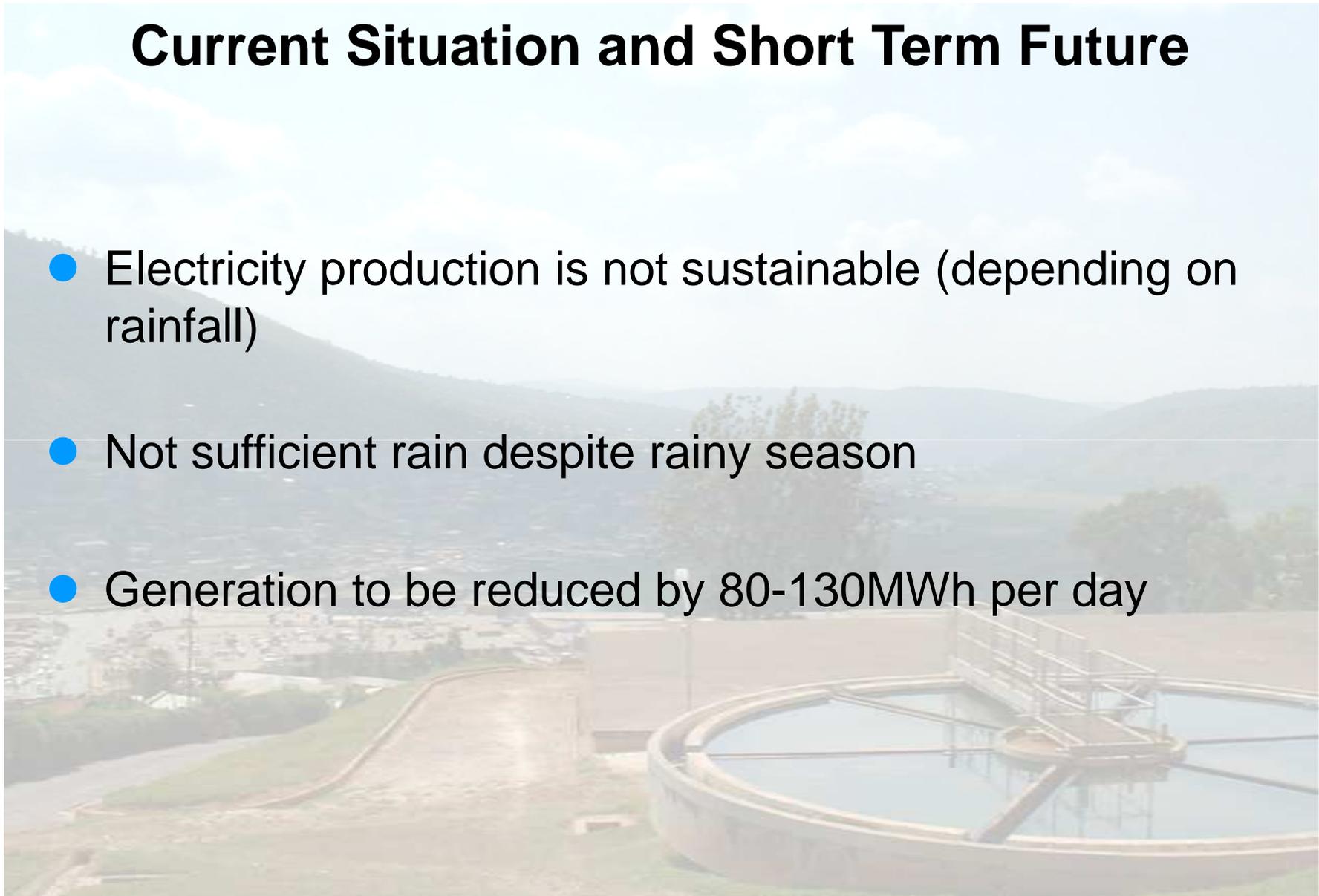
Background

Water level in Bulera Lake



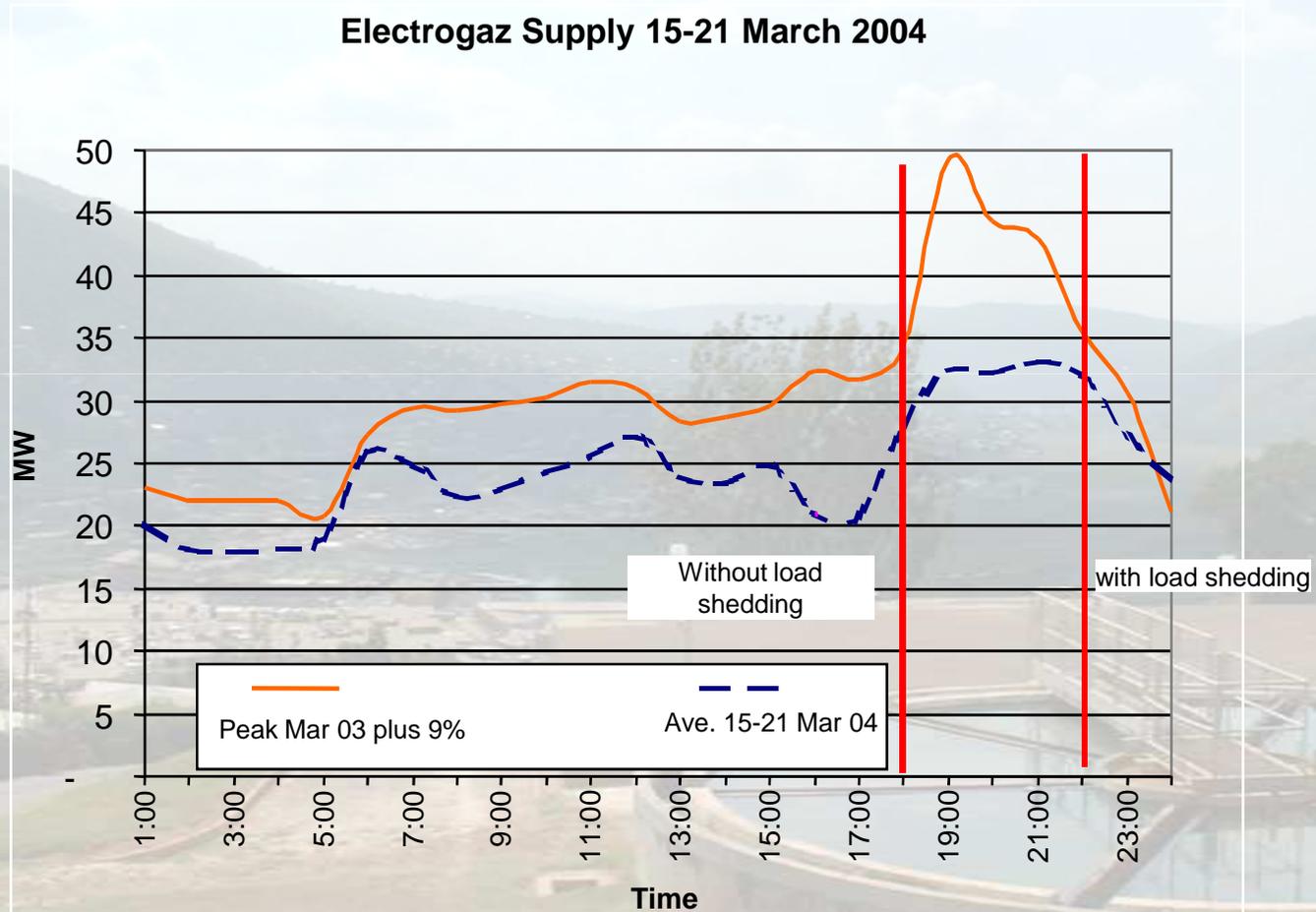
Current Situation and Short Term Future

- Electricity production is not sustainable (depending on rainfall)
- Not sufficient rain despite rainy season
- Generation to be reduced by 80-130MWh per day



Current Situation and Short Term Future

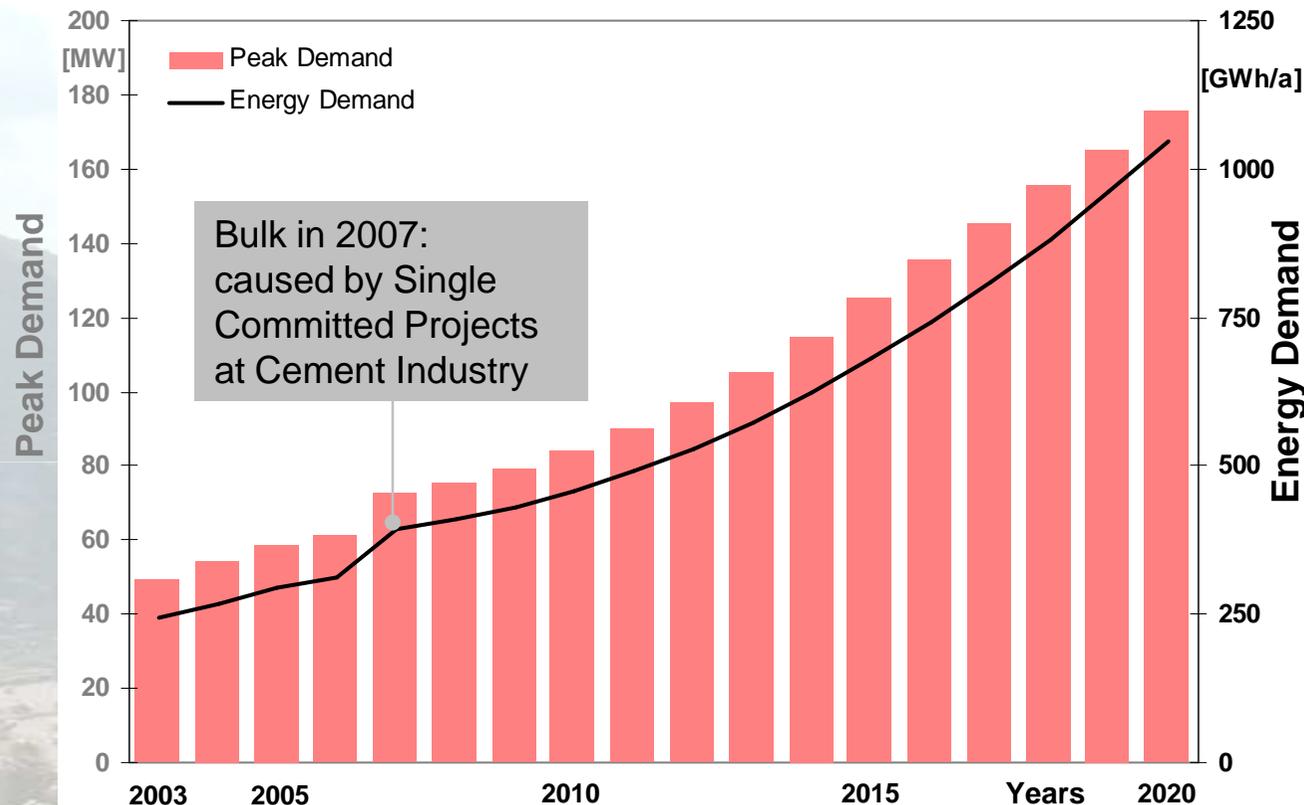
Load shedding would need to be increased



Possible Future Implications

- **Loss of income for Government (taxes)**
- **Loss of employment in the Rwanda industries**
- **Loss of reputation of Rwanda for Tourism and as a Conference destination**
- **Damage to investor confidence**
- **Decrease of Security**

Rwanda's Electricity Demand (2003-2020)



Facts:

- The average Energy Demand Growth Rate is 8 % p.a.
- An extensive electricity generation expansion program is required

Planned Structure of Rwanda's Energy Supply System until 2020

- **Less Load Shedding in 2005, full supply from 2006**
- **System Reserve according to International Standards:**

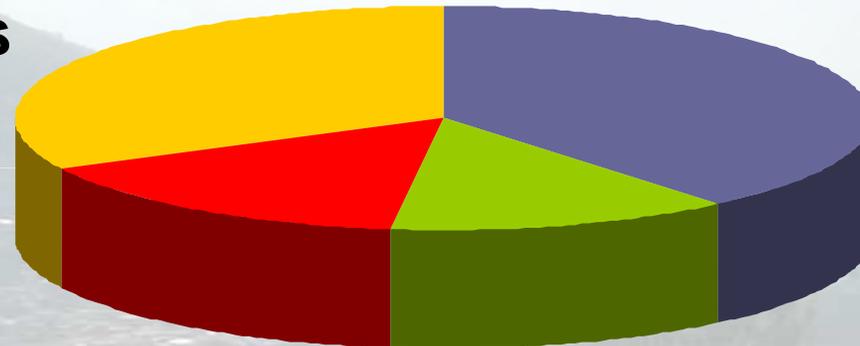
**beginning in 2007: Adequate Back-Up-Capacity
(in particular Fast Track Diesel Units)**

- **Electrification Rate higher than 20 per cent in 2020**
- **Diversified Energy Supply System**

Vision for Rwandas Electricity System in 20 years

32 %
Hydro Power
Imports

39 %
Hydro Power
Domestic



16 %
Methane Gas Power
Domestic

13 %
Diesel Power
Domestic

Results (1) Commitment of Donors

- **World Bank + Nordic Fund** **25 Mio.\$ + 6 Mio.€**
Emergency Project Diesel Generators (Hybrid), T&D
 - **African Development Bank** **20 Mio.\$**
Rehabilitation Power and Water Facilities, 10 Mio.\$ each
 - **European Union** **19 Mio.€**
“Karengue” Water Treatment Rehab./Extension + Infrastructure
 - **BADEA + OPEC Fund** **10-15 Mio.\$**
Rehabilitation Hydro Power “Mukungwa”
 - **Netherlands** **6 Mio.€**
Diesel Gen. Sets, Rural Electrification
 - **Belgium** **4 Mio.€**
Substations, Rehabilitation of Micro Hydro Power
 - **Germany** **???**
- Discussed:**
- **World Bank** **15-25 Mio.\$**
Mid/long term Energy Projects, Methane Gas Energy

Results (2)

- **The Management Contract is the means to activate and steer large infrastructure investments needed**
- **Tax exemptions for Diesel Fuel could be achieved**
- **The Electricity Tariff has successfully been adjusted (from 42 FRW to 81 FRW, still flat) without major riots**
- **A new Tariff Structure is being prepared and discussed**
- **Power Purchase Agreements are being revisited**

Thank you for your attention

