

# NamPower

## Security of Power Supply

**Presentation at the  
Mining Expo and Conference**  
*“Mining Industry-Weathering the Storm”*

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27 April 2016

# Power supply overview



- Since 2015 Power supply to Namibia has improved
  - All supplies are firm
  - Eskom demand dropped to levels of 2008
  - Supplies to large power users linked to commodities has dropped
  - Eskom's maintenance regime has improved
  - New build (Renewables and coal) is coming on-line
  - Concluding negotiations for a firm bi-lateral supply agreement with Eskom offering a 24/7 firm supply to the value of 200MW
- The economic situation prevailing in SA has given Namibia a breather to enable us to implement the required base-load plant by 2019/20
- Higher cost of import contracts and introduction of new power supply infrastructure will impact on electricity tariffs
  - Will only stabilize with the introduction of a base-load plant in 2019/20

# Some of the key projects (cost drivers) over the next 4 to 5 years



- ❑ Kudu 2019/20: N\$12 billion
- ❑ Transmission Master Plan: N\$7 billion
- ❑ Short term critical power supply project (STCS)
  - ✓ Upgrading of existing power plants (Van Eck, Ruacana): N\$450 million
  - ✓ Imports (ZESA, Eskom, ZESCO and EDM): except for Eskom all USD denominated
  - ✓ PPA negotiations with Independent Power Producers : high cost plus full indexation
  - ✓ Demand side management, including free distribution of 1,000,000 domestic LEDs: N\$350 million
- ❑ Development of around 300MW medium to long term required solely for Namibia
- ❑ Option for a 40/80/120MW Short-term power plant in the Erongo region: Still in tender stage. Seen as an insurance policy

# Renewable Energy Projects



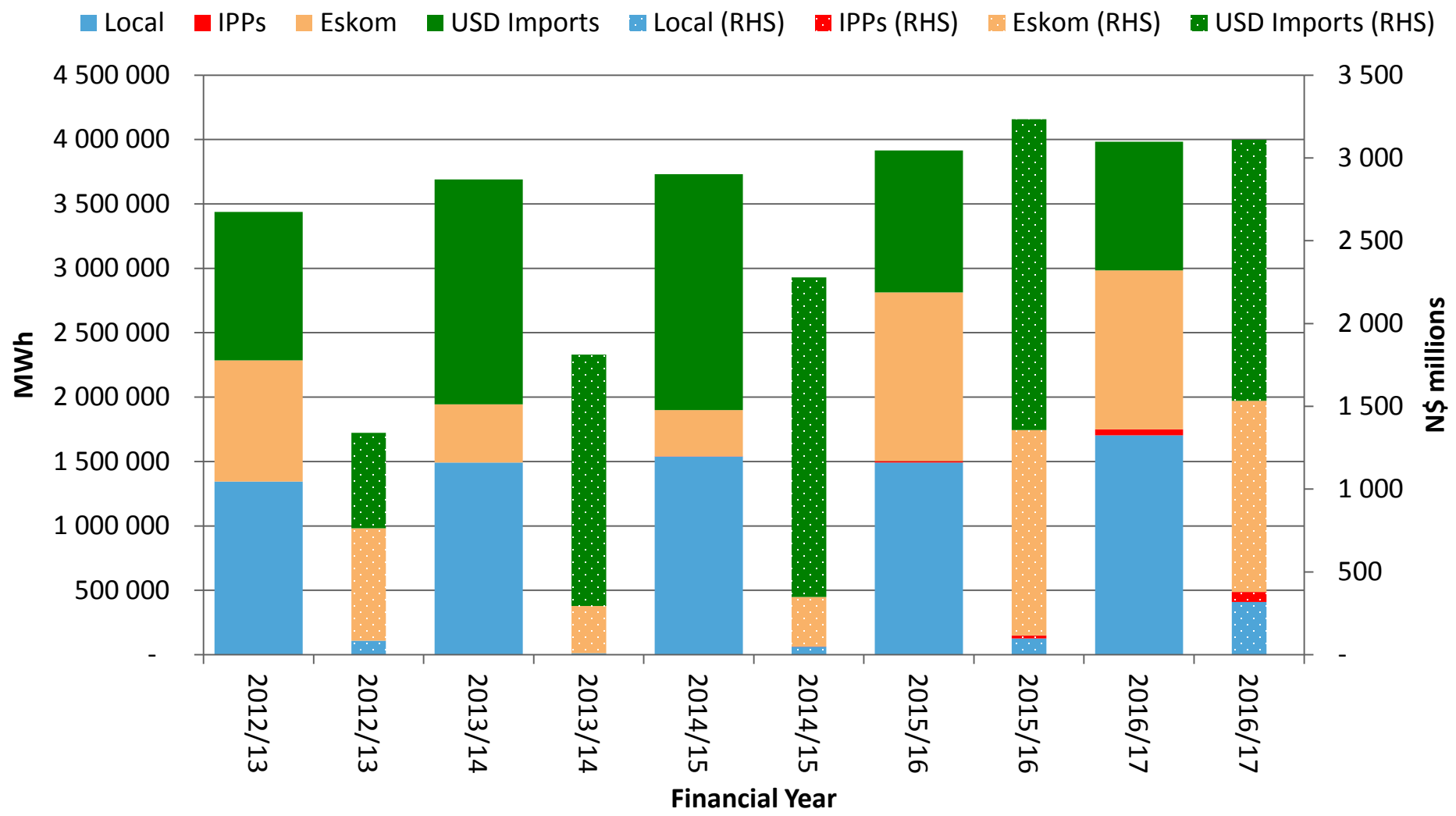
- ❑ Wind (44MW at Luderitz) – up for regulatory oversight
- ❑ Large Solar PV and CSP
  - 14 allocated through the REFIT program, 13 signed and foreseen that all will reach FC
  - No Implementation Agreement will be provided by Government
  - Feasibility study for the +/-125 MW CSP plant with storage commenced
  - 4.5 MW Omburu Solar PV plant commissioned in May 2015
  - 37 MW Solar PV tender at Hardap site to be issued within next 3 weeks
  - 70 MW (14 x 5MW) allocated through the REFIT program
  - Biomass (Invader Bush) – full feasibility study launched
- ❑ Demand side management (DSM)
  - Procurement and free distribution of 1 million LED bulbs commenced. LED Champion(s) to be appointed. 1st batch of 300k bulbs arrived
  - VPS

# Other Cost drivers

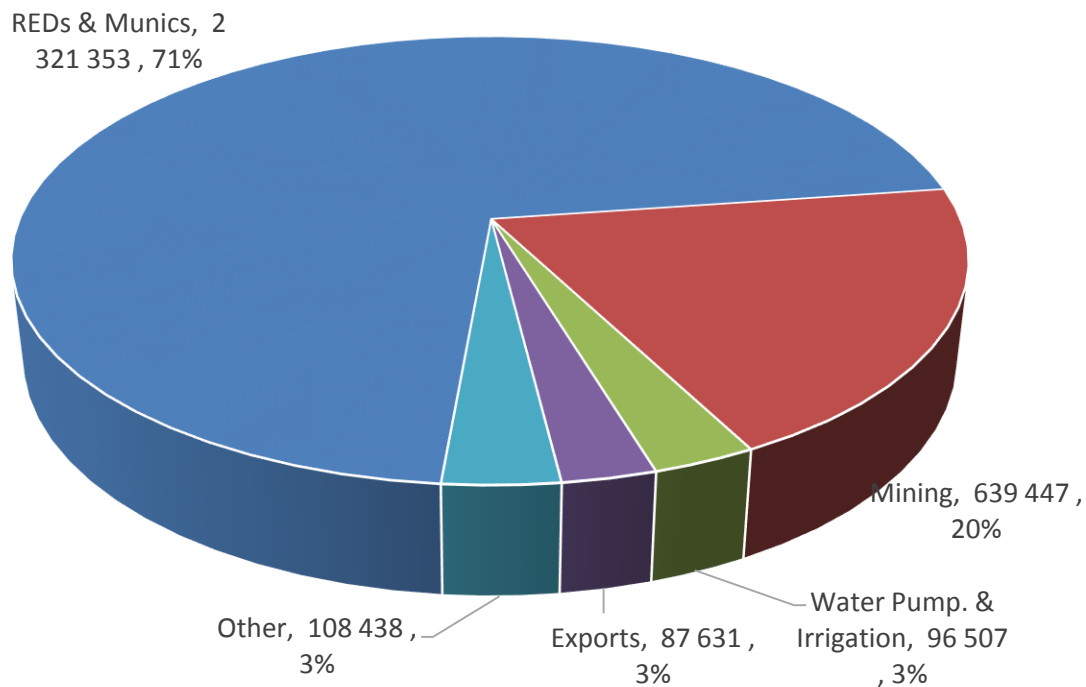


- High cost of import contracts
- Devaluation of local currency against US dollar
- Higher returns by the private sector (IPPs)
- Introduction of renewable energy generation (initially)
- Increased use of coal and HFO (diesel)
- Fuel costs increases higher than inflation
- Reinvestment into aging infrastructure

# Energy mix vs Cost of Energy



# Energy Consumption (MWh)



## Note:

- NamPower bulk supplier - Distribute to REDs, Municipalities & Mines.
- Mining sector 20% of energy consumption.
- Currently Back-to-Back agreement with Eskom for supply to Skorpion mine (not included in energy sales).

# Opportunities to Cooperate



- ❑ VPS (Virtual Power Stations) – utilising stand-by generators from customers to generate power during system emergencies
- ❑ Co-generation during peak and standard periods (05:00 – 22:00 during week), Sunday excluded
- ❑ Renewables with storage or ability to generate during peak periods welcome
- ❑ Load shifting to off-peak periods
  - No maximum demand charges apply



# Conclusion



- The power supply situation is under control, but a firm domestic base-load plant by 2019/20 is non-negotiable
- The cost of supply will continue to increase mainly due to the higher cost of imports and introduction of new generation capacity during the next 5 years
- Electricity tariffs will consequently continue to increase at a high rate per year after which the prices will stabilize after the introduction of a base-load plant(s) in 2019/20
- NamPower has so far been successful in keeping the lights on mainly thanks to the support and cooperation from its stakeholders. We assure our stakeholders that with this continued support NamPower will be able to continue to deliver on its national mandate of powering the nation and beyond.

***End***



**Thank you**