Eskom's Investment Programme (and related subjects)

26 May 2010

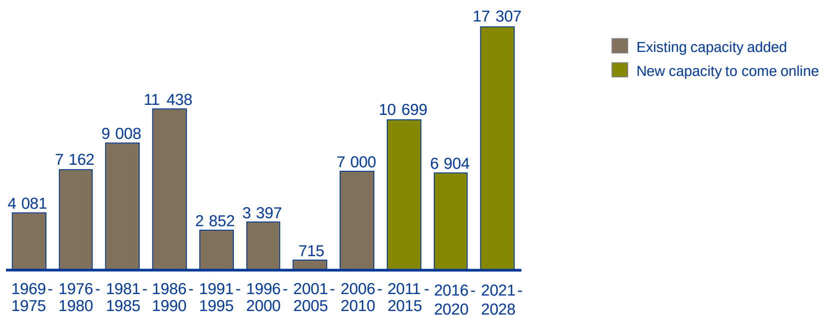
Eskom

1. Investment in new generation capacity

Ultimately, electricity tariffs need to be aligned with long term economic growth

Total system capacity added per 5 -year period

MW



From 2011 to 2020, we are playing catching and meeting new growth requirements
From 2021 to 2028, we are starting to replace existing fleet and meeting new growth requirements

Short to Medium Term outlook

- Since 2008 there has been an improvement in the short-term security outlook due to:
  - Reduction in energy demand linked to global recession and efficiency measures
  - Improvement in Eskom's generation plant performance and increased coal stockpile levels.
  - Building of open cycle gas turbines in the Cape and return to service of Camden power station and units at Grootvlei and Komati power stations.
- Demand expected to return to 2007 levels in 2010
- The power system will be tight in post winter 2010 and in 2011 as we go back into our generation maintenance season
- Within the year, we plan to sign up Medium Term Power Purchase Programme (MTPPP) and phase 1 of the Renewable Energy Power Purchase Programme (REFIT)
- Adequacy of supply in 2011 and beyond is a serious concern that we have to address

Securing supplies for the FIFA World Cup

- Anticipate an increase of 275 MW over the period
- Total demand of 37.24GW expected
- We expect to have sufficient generation capacity over this period.
- If required, we will run Open Cycle Gas Turbines (OCGT's).
- Voluntary participation of customers to reduce demand
- Increased imports and decreased exports to SAPP
- Only critical maintenance will take place

We are confident that the electricity needs of the the FIFA World Cup will be met, but we must not be complacent

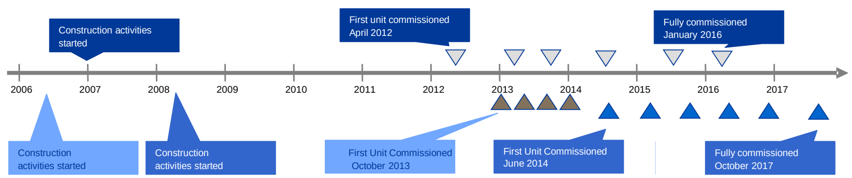
Long term Electricity outlook

- 20GW of additional generation capacity is required by 2020 and up to 40GW by 2030.
- Eskom's current build programme and well advanced IPP projects could contribute at least 14 GW by 2017 to this requirement.
- Possible requirement for a third base-load power station by 2017.
- Continued focus is needed on energy efficiency to maintain a healthy reserve margin and create time to make decisions.
- Role of nuclear and renewable energy to fulfil the energy needs of the country will have to be concluded in the coming year to 2 years

The National Integrated Resource Plan currently being prepared by government will address these issues

The first units for Medupi, Kusile and Ingula will come online between 2012 and 2014

Eskom



Medupi Power Station

- Execution partner: PB Power
- Coal supply: exxaro
- Boiler: HITACHI
- Turbine: ALSTOM
- Enabling Civils: Roshcon
- Main Civils: Murray & Roberts, Grinaker-LTA
- Generator transformers: SIEMENS

Kusile Power Station

- Execution partner: BLACK & VEATCH
- Coal supply: ANGLO COAL
- Boiler: HITACHI
- Main Civils
- Turbine: ALSTOM
- Enabling Civils: Roshcon
- Generator transformers: SIEMENS

Ingula Power Station

- Roadworks: GRINAKER-LTA
- Civil works: Murray & Roberts
- Infrastructure: Afriscan, B&E Quanza
- Dam construction: Concor- WBHO-Edwin-Silver Rock

SOURCE: Eskom Build Programme

2010/06/04

7

2. Investment in network capacity

Distribution mandate and key facts

"Distribution's role is to manage the retail business and optimally operate and maintain the South African distribution network, while playing an active role in the restructuring of the electricity distribution industry (EDI)"

Distribution business	Customer Service business	Wires/Network business
Total Dx Staff: 16 703	Staff: 2,849	Staff: 11,445
Total Sales : 121TWh	Customers : 4,336,831	No of Transformers: 333 551
Revenue : R 28,171 bn	No of Customer Service Areas: 25	No of Field Service Areas: 36
Total assets: R37 bn	Walk in centres: 102	Technical Service Areas: 229
Opex: R 12.6bn	Call centres: 6	Kilometers of Line: 353 285km
Asset value: R37bn Assets (NBV) Capex investment: R7.7bn	Billing Centres:3	No. of Substations: 3,134

Impact of current economic environment

- Pressure on Eskom expenditure – Capex and Opex
  - Meeting customer requirements
  - System strengthening
  - Refurbishment
  - Universal access
- Increased incidence of theft of assets
- Increasing rate of non-technical losses
- Electricity demand levels not expected to be affected by price increase
- Increased risk of non-payment and customer default
- Increased adoption of energy efficiency measures by customers

Non technical losses

- Non technical losses account for 4.3TWh (R1.2bn) per annum (2.3%)
- Vast majority of theft in residential areas.
- Specific ring fenced areas have high losses - eg in one area the losses are 55% and hence require specialised actions
- “Ghost Vendors” using stolen Credit Dispensing Units to sell to our customer (15 recovered last year)

Chiawelo Project

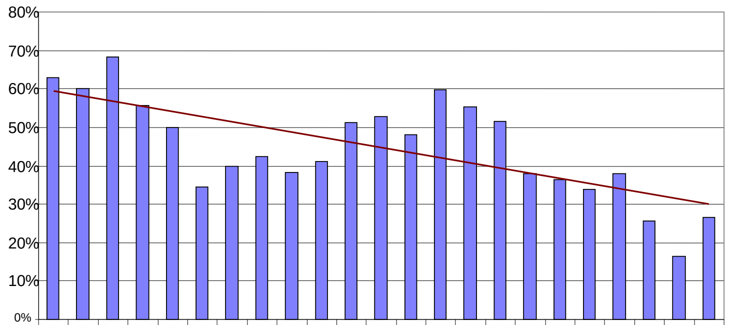
Old switch Kiosk

Old & new switch Kiosk

Attempted illegal connection -- failed

Up to 12 split meters in a Kiosk

Chiawelo Secure Metering : Energy Losses



	Mar 2008	Apr 2008	May 2008	Jun 2008	Jul 2008	Aug 2008	Sep 2008	Oct 2008	Nov 2008	Dec 2008	Jan 2009	Feb 2009	Mar 2009	Apr 2009	May 2009	Jun 2009	Jul 2009	Aug 2009	Sep 2009	Oct 2009	Nov 2009	Dec 2009	Jan 2010
Split Metering	63%	60%	68%	56%	50%	35%	40%	42%	38%	41%	51%	53%	48%	60%	55%	51%	38%	36%	34%	38%	26%	16%	26%

Meeting Customer Demand

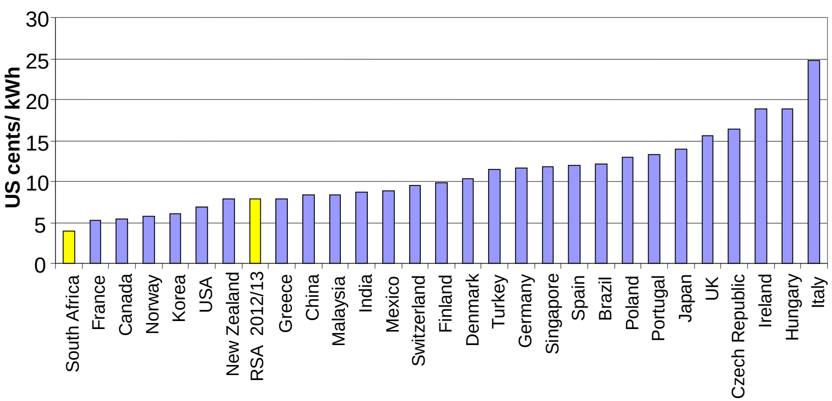
- Direct customer application increasing
  - Need to connect as energy becomes available
    - Encourage energy efficiency
    - Negotiate delay in connection if possible for large customers
  - Expect expenditure to increase from R1.8bn to R3.4bn in next 5years
- Strengthening required due to growth
  - Approximately 1000 constrained feeders in Eskom Distribution which cannot accommodate more load.
  - Most of these feeders require sub-transmission infrastructure to rectify.
  - Expect expenditure to increase from R3.1bn to R5.4bn in next 5 years.

Refurbishment and Reliability

- Estimate backlog to be in order of R10bn at present based on age and performance analysis.
- R1.4bn per annum will ensure backlog does not increase.
- Intend to remove backlog in ten year period.
- Refurbishment to increase from R1.5bn to R2.3bn per annum over next 5 years.

3. Other considerations

International Price Comparison of Industrial Tariffs (Indicative)



Source : Recent NUS Survey Analysis assumes R/$ exchange rate remains constant and electricity prices of other countries do not increase in real terms
Despite the steep tariff adjustments South Africa will remain competitive.

Climate Change Priorities

- Diversify our energy mix to lower carbon emitting technologies
  - Renewable Energy Feed In Tariff (REFIT)
  - Eskom wind and solar plant
- Avoid stranded coal fired power stations
- Realise benefit from the carbon market and green financing options
- Research into technologies which are adapted to our local conditions such as concentrating solar power, underground coal gasification
- Increase our resilience to the negative impacts of climate change and implement adaptation strategies
- Effective collaboration on the various issues related to climate change such as border tax adjustments, local legislation and research
- The country’s new climate change policy is being developed we must work together to ensure that it is practical and implementable

The Business Case for Energy Efficiency

Issues	Supply	Demand
Cost (R/MWh)	±R4000/MWh (OCGT's)	±R1000/MWh (DSM)
Price Path Implications	Upward pressure	3-5% pa reduction (DSM only)
Responsible for Funding	Eskom	Eskom + end consumer
Delivery Timeframes	Long Term (3 years +)	Short Term (1-3 years)
Country Objective : Climate	Negative	Positive
Country Objective : National Productivity	-	Positive
Ability to control Delivery	Eskom control	Various dependencies
Alignment to Eskom Mandate	Eskom mandate	Interaction with agencies req
Available Capacity to close the gap	Sufficient	Limited

The financial advantages of a fundamental shift towards demand management are compelling. The benefits in terms of security of supply drives the urgency of our interventions here.

4. Conclusion

What to expect from South Africa's power sector is:

- Commitment to security of supply
- Substantial investment at each point in our supply chain, guided by an Integrated Resource Plan
- Entry of independent power producers
- Commitment to long term climate change mitigation
- Unprecedented focus on energy efficiency programmes
- Sustained competitiveness of the South African electricity sector (albeit at a reduced level)
- Successful power delivery to the FIFA World Cup

A request to the CIDB:

Please use your considerable influence to ensure new homes are built with Solar Water Heating

Empowering
The South African dream

Thank You

Powering Team South Africa

2010/06/04

Eskom Holdings Limited Reg. No. 2002/015527/06

28