

**61<sup>st</sup> AMEU CONVENTION**  
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**Regulation in the electricity crisis**

**Lesley Ferrando**

**Regulatory Reform**

**National Energy Regulator of South  
Africa**

As in any difficult time, South Africans turned to humour to deal with a serious situation – and a plethora of cartoons, jokes, and one-liners surfaced almost immediately after the load shedding started - such as

- Did you hear they're going to change the National Anthem – to “Hello Darkness My Old Friend”  
and
- What did South Africa have before candles? .....Electricity!

- Delivery of Backup Generation Unit



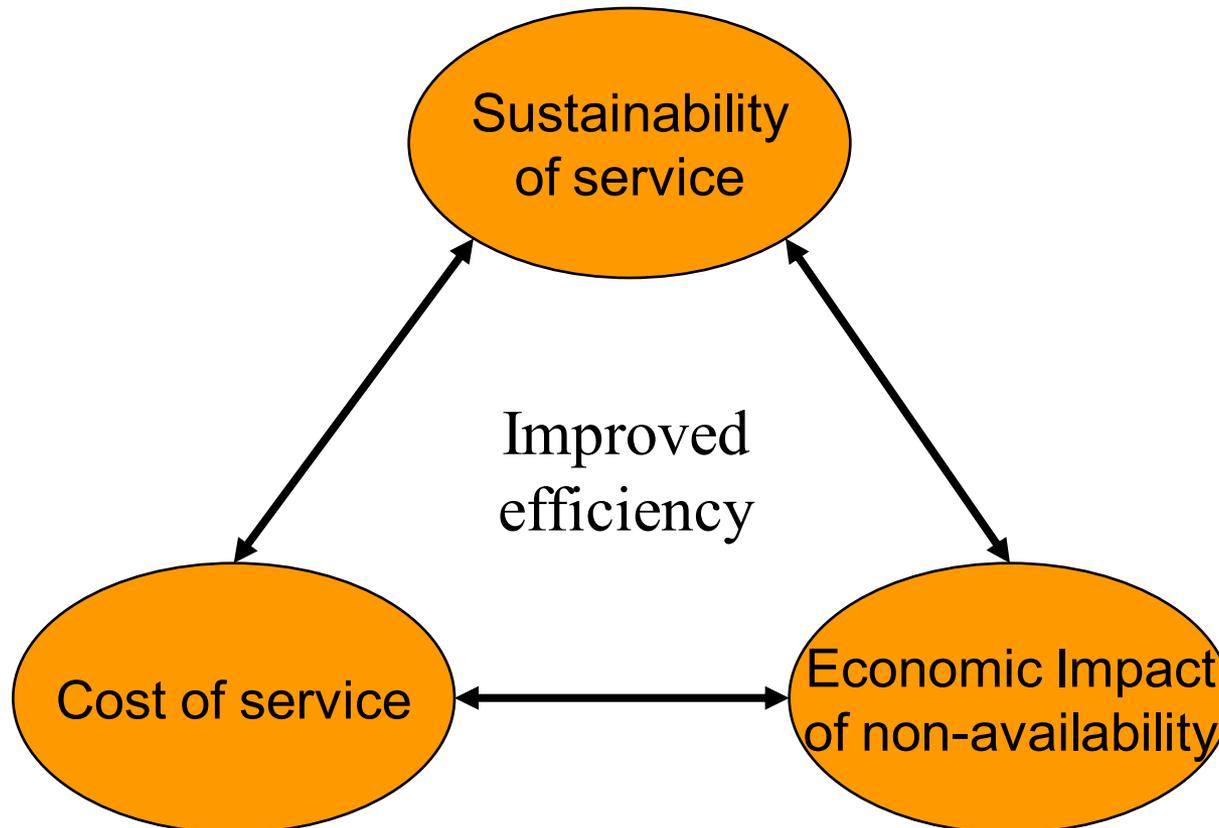
# REGULATION PRESENTATION

- South African Energy Regulation
- Shortage of Supply in 2008
- Inquiry into load shedding
- National Integrated Resource Planning
- Power Conservation Programme (PCP)
- Electricity Prices
- Legislation
- Data – Regulatory Reporting Manuals
- Single Buyer
- Questions

# Why Regulation?

- Regulation is necessary in situations where competition is non-existent, or existing but imperfect
- Regulation seeks to simulate competitive markets and derive the benefits of such markets
- Role clarity:
  - Policy making is Government's job
  - Running the utility is their management's job
  - Regulator must ensure that utilities are operating their businesses in line with government's policy for the benefit of customers

# KEY ELEMENTS OF ECONOMIC REGULATION



# ENERGY REGULATOR

NERSA consists of:

- 9 Regulator Members (4 full time / 5 part time)
- Full-time: CEO and one member primarily responsible for each of 3 industries regulated
- Part-time members include Chairperson and Deputy Chairperson

# SECRETARIAT

## Electricity Regulation Division:

- Electricity Pricing and Tariffs Department (PTE)
- Licensing and Compliance Department (LCE)
- Regulatory Reform Department (RR)
- Electricity Infrastructure Planning Department (EIP)

# **NERSA FUNCTIONS**

- Issuing of licences with terms and conditions;
- Setting and/or approving tariffs and prices;
- Monitoring and enforcing compliance with licence conditions;
- planning for the country's future electricity demand/needs (National Integrated Resource Plan);
- promoting alternative electricity generation technologies e.g. Renewable Energy, Cogeneration ;
- promoting demand side management and energy efficiency initiatives;

## **NERSA FUNCTIONS (2)**

- Dispute resolution including mediation, arbitration and the handling of complaints;
- Setting of rules, guidelines and codes for the regulation of the three industries;
- Promoting the improvement of the efficiency of the energy industry;
- Consulting with government departments and other bodies with regard to industry development and regarding any matter contemplated in the three industry Acts; and
- Performing any activity incidental to the execution of its duties (such as Ad-hoc inquiries).

# **ELECTRICITY SUPPLY SHORTAGE**

- Cape Supply Constraints – 2006
- Convergence of Factors – January 2008
- Extensive, ongoing supply shortage
- Massive consequences
- Customers forced to be more energy wise

# LOAD SHEDDING INQUIRY

Period:

- 1 November 2007 – 31 January 2008

# AD-HOC INQUIRY SUBCOMMITTEE

Work streams:

- Load shedding
- Primary energy
- Plant Maintenance
- Supply/demand balance
- Legislation and Licence conditions
- Customer communication and coordination
- Government's National Electricity Emergency Programme
- Financial and Economic implications
- Communication - communication plan to consider how the findings of the inquiry should be communicated.

# KEY FINDINGS

Load Shedding Inquiry Report finalised in May 2008

- **High unplanned maintenance** and load losses combined with the usual **high planned maintenance** of generating units during the period resulted in reduced generating capacity being available from 1 November 2008 to 31 January 2008. **Poor coal quality, wet coal and low stockpile** levels contributed to the unplanned generation plant outages and load losses in the period.

# KEY FINDINGS

- In previous load forecasts, **Eskom had planned for the current growth rate**. However, the implementation of **measures to provide for the growth** has been **inadequate and slow**. In particular, there have been **delays** in returning the mothballed generation plant to service and the implementation of energy efficiency and demand management initiatives remain behind targets. Eskom's new build programme is experiencing delays of at least a year.

## KEY FINDINGS

- **Inadequate primary energy procurement** and power station production planning impacted coal stockpile levels in the period. **Coal stockpiles** were allowed to decline to **unacceptably low levels** and there was a reluctance to obtain supplementary coal due to its high cost and impact on Eskom's financial position.
- **Eskom was correct in declaring a *force majeure*** on 24 January 2008. Prior to load shedding, Eskom did use other emergency options such as demand market participation (DMP) and interruptible loads extensively prior to load shedding.

# KEY POLICY RECOMMENDATIONS

- The Government's National Electricity Emergency Programme (GNEEP), including the Power Conservation Programme (PCP), should be coordinated and led by a centralized high-level government unit with authority to take action.
- The procurement of new private generation capacity, independent power producers (IPP's) and co-generation, should be managed and coordinated centrally by a professional entity independent from Eskom.

# KEY POLICY RECOMMENDATIONS

- There is a need for a national strategy to be developed by Government for the acquisition and management of coal to ensure security of supply.
- National Government should consider formulating a policy that will balance Eskom's commercial decisions and the national security of electricity supply in order to avoid national crises.
- The role of Eskom in the Government's National Electricity Emergency Programme (GNEEP) should be clarified considering that Eskom has to focus on returning the system to normality and on its new generation build programme.

# KEY POLICY RECOMMENDATIONS

Load Shedding Inquiry Report finalised in May 2008

The Energy Regulator also recommended further investigation in the following areas:

- Primary energy management and in particular coal management in Eskom.
- The availability, adequacy and optimum utilization of Eskom's generation plant in emergency and in view of the mid-life of these plants.

# **NATIONAL INTEGRATED RESOURCE PLANNING (NIRP)**

# NIRP

- The National Integrated Resource Plan (NIRP) is an essential regulatory tool which provides key information for the economic regulation process of the Energy Regulator.
- It is important to have an independent view against which to make regulatory decisions.
- This plan is the responsibility of NERSA's Electricity Infrastructure Planning Department (EIP).

# NIRP

- Maintaining adequate reserve margin is of critical importance (<7% to 19%)
- NIRP3 - currently being updated by reviewing the underlying assumptions.
- Constantly changes occurring to the factors underlying this planning tool (such as demand growth and progress on the build programme), but it gives a fairly clear picture of the generation capacity required in the future.
- Despite current initiatives, supply constraints could be experienced until at least 2013 and probably later.

# NIRP

- The Energy Regulator approves generation licence applications, and has revised internal processes to ensure that the time required to assess and approve generation licences is minimized.
- This year the Energy Regulator has approved the applications for Eskom's Medupi and Bravo Power Stations as well as the return to service of Komati and Grootvlei.
- Programmes to secure capacity from IPPs –
  - the Pilot Cogen National Programme (PNCP)
    - finalized in September 2008
    - Energy Regulator awaiting a close out report from Eskom.
  - the Medium Term Power Purchase Programme (MTPPP)
  - Multi Site Baseload IPP Programme.

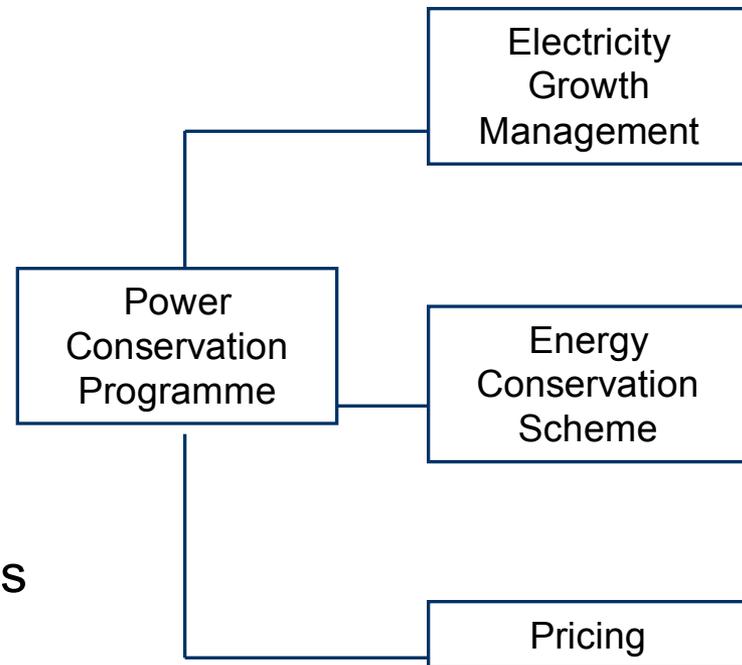
# **POWER CONSERVATION PROGRAMME (PCP)**

# Power Conservation Programme

South Africa's energy crisis has resulted in a government plan to ensure that a 10% reduction in energy consumption is achieved and sustained. The Power Conservation Programme (PCP) is designed to accelerate capture of the 10% overall energy savings through behaviour change that will ensure sustainable development and meet the country's energy needs.

# Power Conservation Programme (2)

- Key issues to ensure nation-wide success of the programme:
  - Acceleration of the regulatory process
  - Involvement of municipalities
  - National co-ordination and monitoring
  - Stakeholder alignment
  - Overall governance
- NERSA has been involved, together with other stakeholders, in the process of providing the enabling regulatory framework for implementation of the PCP



# Power Conservation Programme (3)

## NERSA's involvement in the initiative:

- Initially led National Electricity Response Team (NERT)  
Legal and Tariffs work group
  - Extensive workshops and consultation with participating stakeholders on establishment of fundamentals of PCP; clarifying each stakeholder's role
    - Electricity Growth Management (Eskom, DTI and DME)
    - Energy Conservation Scheme (Eskom and DME)
    - Pricing strategy (Eskom)
- Feedback given to municipalities at NERT meetings by Legal & Tariffs chairperson

# Power Conservation Programme (4)

## NERSA's involvement in the initiative (contd):

- Extensive consultation with DME and contribution to the draft Electricity Regulations on Deviation from Approved Tariffs (*Government Gazette no. 31339*)
  - Stakeholder comments received on first draft. Liaising with DME on amendments to be made
- Draft Energy Conservation Scheme rules have been developed
- Need to ensure rules can be applied through municipalities and resellers for uniform implementation

# Power Conservation Programme (5)

## Current status:

- A general public debate took place in Johannesburg on Thursday 24 October 2008,
- Highlighted the real concerns of industry stakeholders regarding the practical implementation and far reaching economic impact
- A workshop with participating stakeholders will be arranged soon, after which the regulatory process including public consultation will be followed before the Rules are promulgated.

# **ELECTRICITY PRICES**

# ELECTRICITY PRICES

- December 2007 - Energy Regulator approved a 14.2% increase for Eskom
- Almost immediately - Eskom's revised application for a 60% nominal increase
  - additional primary energy costs
  - and accelerated demand side management to ease the shortage of supply.
- The Energy Regulator's decision on 18 June 2008 - 27.5% increase
  - all available sources of funding be utilized, including government and international capital, rather than passing the full burden onto electricity tariffs.

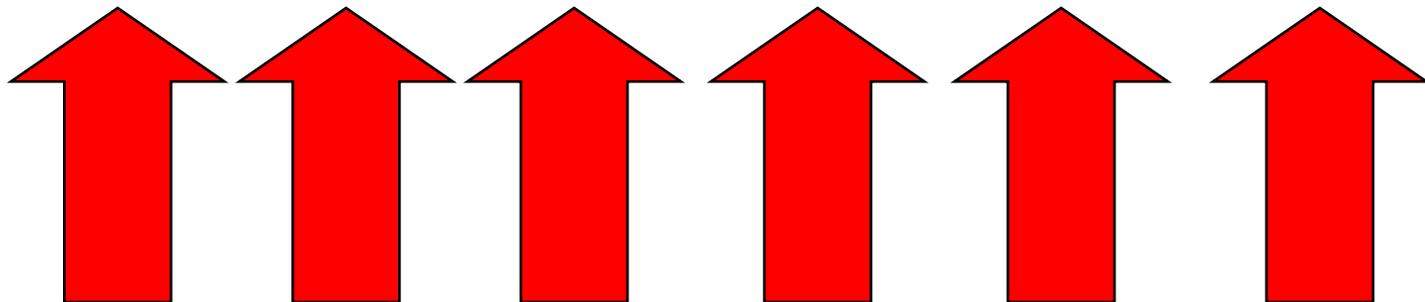
# ELECTRICITY PRICES

Press statement released at the time states:

- “The principle of smoothing prices is supported as part of the Multi Year Price Determination. **If the current economic climate continues to prevail** and Eskom’s capital expenditure programme remains as currently stated, then **tariff increases of between 20% – 25% per annum** are projected over the next three years.”
- Deterioration in the international economic climate
- Downgrading of Eskom’s credit rating by some agencies
- Turmoil in international financial market affecting availability of international capital.

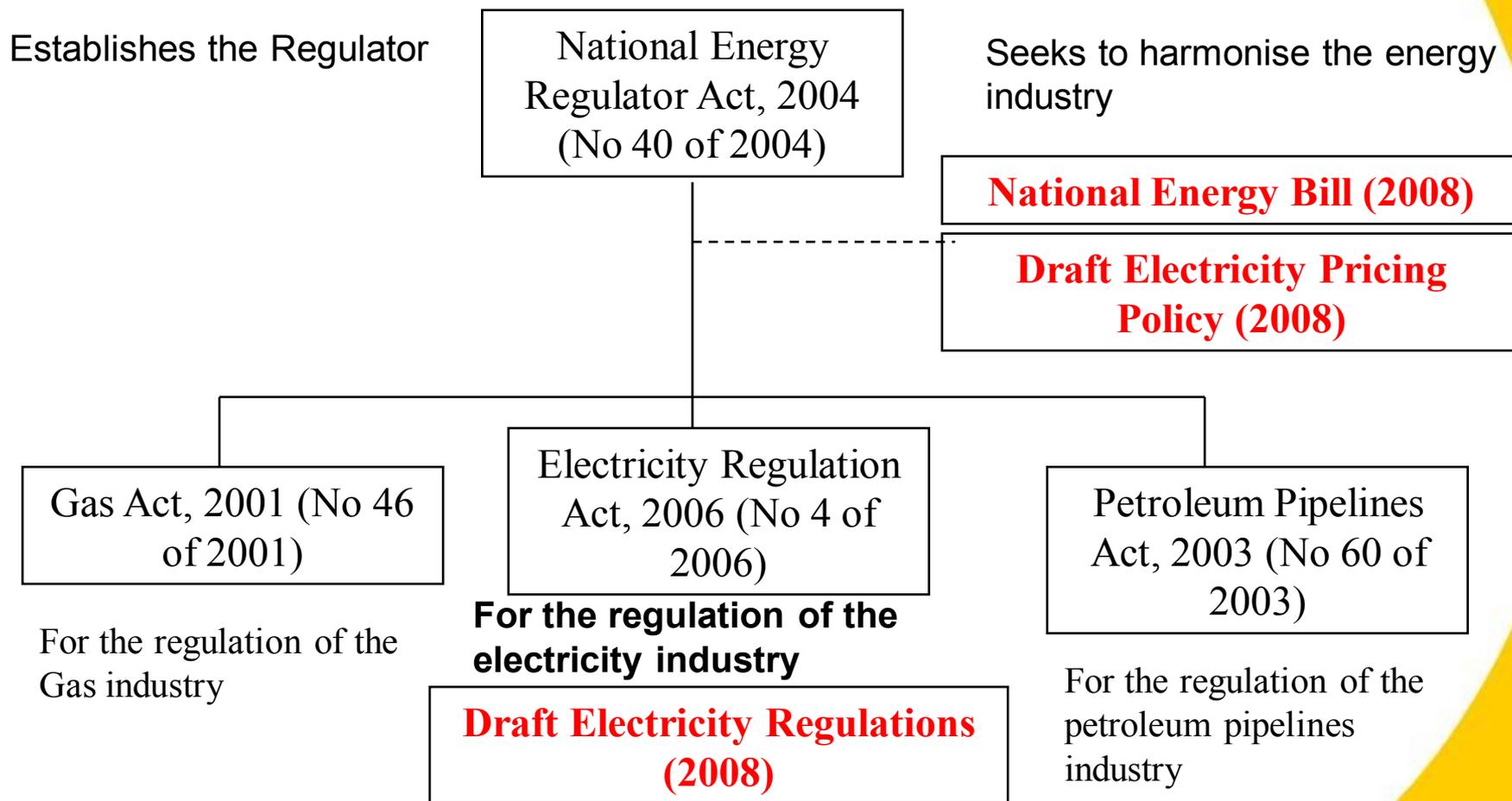
# ELECTRICITY PRICES

- Can only have a negative impact on Eskom's ability to acquire much needed funds from the international market and ultimately negatively impact the price of electricity for the next three year period.
- Eskom has not yet submitted an application to the Energy Regulator for the 2009/10 financial year, year and thus the quantum of the increase is yet not known.



# LEGISLATION

# LEGISLATIVE DEVELOPMENTS



# **DATA NEEDS**

# **REGULATORY REPORTING**

# **MANUALS**

# REGULATORY REPORTING MANUALS

- Load shedding inquiry – highlighted difficulty in accessing adequate information essential to making informed decisions.
- Energy Regulator approved the Regulatory Reporting Manuals (RRMs) for the regulated electricity, piped-gas and petroleum pipeline industries in July 2008.
- Gazetted manuals are effective from 1st September 2008.
- Implementation on a staggered basis (6 Metros and Eskom)

# REGULATORY REPORTING MANUALS

- **Volume 1: General Regulatory Reporting Procedures and Administrative Matters** and **Volume 2: Electricity** will be most applicable to the AMEU members.
- The purpose is *“to prescribe and provide guidance to the regulated entities in the Electricity Industry on the format, content, preparation and submission to the Energy Regulator of required information to perform its functions”*.
- Does NOT replace existing Distribution Forms (D-Forms)

# **SINGLE BUYER AND IPPs**

# SINGLE BUYER OF IPPs

Cabinet – Eskom as single buyer

NERSA responsibility, in addition to its standard regulatory functions (such as licensing of power plant) to facilitate includes:

- Issuing guidelines, rules and procedures for power procurement
- Issuing guidelines and rules for the economic dispatch of IPP plant and Eskom's own generation
- Approval of standard commercial agreements between the single buyer and the IPP including power purchase agreements, fuel supply agreement, transmission connection agreement, implementation agreement, transmission use of system agreement and standard tender/bid documents
- Approval of new commercial agreements with IPPs, subject to compliance with procurement guidelines and rules
- Conducting periodic audits of the single buyer procurement processes and Eskom's system operation dispatch function..

# CONCLUSION

Many factors have come together over the past 12 months which have substantially changed the industry we operate in.

Some facts cannot be avoided, including that:

- South Africa has a serious shortage of electricity supply which will impact the industry for at least the next 10 years.
- Customers will no longer be able to rely on unlimited capacity.
- The price of electricity will rise substantially over the next few years.
- The nature of the generation market will change substantially, to include alternate energy sources, co-generation and independent power producers.

# CONCLUSION

- Changes in consumption will have to be effected as a matter of urgency.
- Regulation of the industry will become even more complex.
- The implementation of the PCP will have a substantial effect on all customers.
- The Energy Regulator is aware of the serious challenges faced in the coming years, but is determined to rise to the challenge and ensure that everything possible is done to address these challenges in the very best way possible, to the ultimate benefit of customers, the electricity industry and the economy. .

**We're all in this together - let's work together!**

**THANK YOU**

**Questions ?**

**WEBSITE: [www.nersa.org.za](http://www.nersa.org.za)**