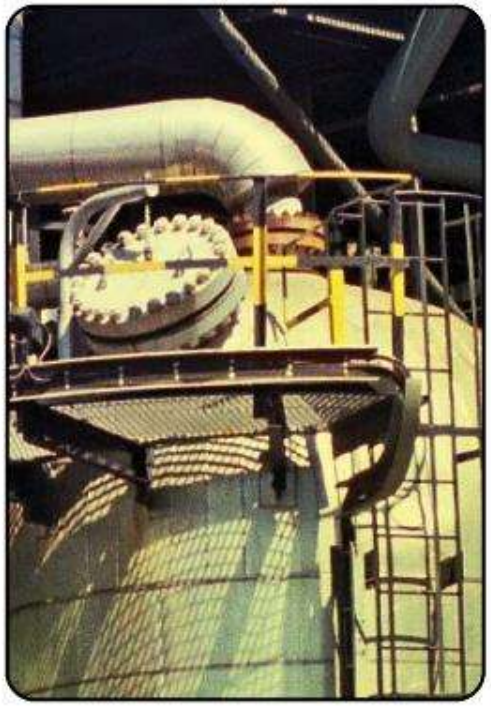
NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

REGULATORY REFLECTIONS



Presentation by Ronald Chauke – HOD: Regulatory Reform

05 August 2015

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CONTENT

- Legislative Landscape
- Mandate
- Industry Structure
- Embedded Generators - Regulatory Reflections
- Challenges
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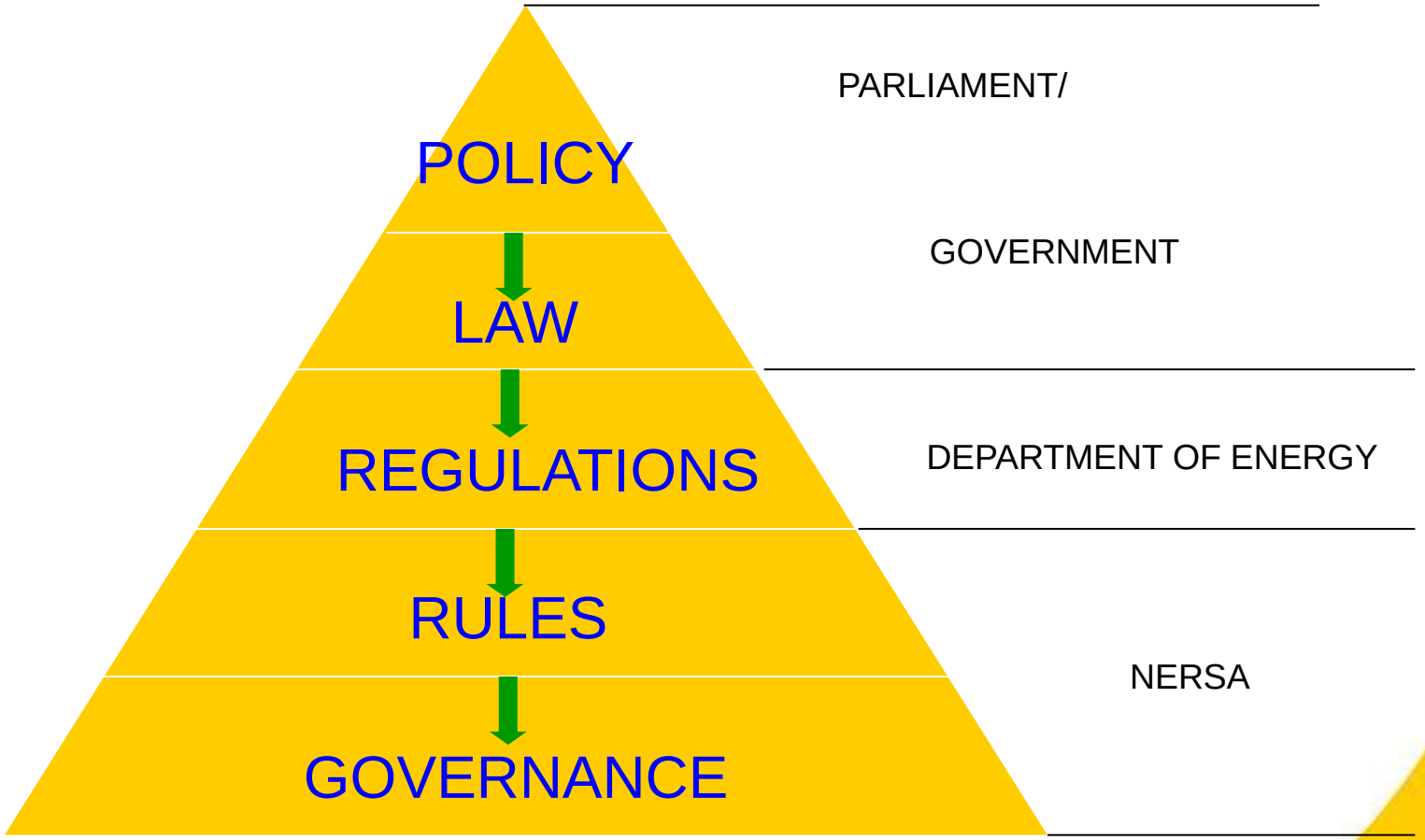
Legislative Landscape



Legislative Context

- **National Energy Regulator Act, Act No 40 of 2004**;
  - Independent Regulator: 4 full time and 5 part time members
  - Responsible for the regulation of three energy industries: electricity; piped gas; petroleum pipelines
  - Decisions based on reasons, facts and evidence
  - Public meetings/hearings

- Industry legislation

  - **Electricity Regulation Act, 2006 (Act No. 4 of 2006)** as amended in 2007
  - **Gas Act, 2001 (Act No. 48 of 2001)**;
  - **Petroleum Pipelines Act, 2003 (Act No. 60 of 2003)**;

- Electricity Regulations
  - **Electricity Regulations on New Generation Capacity I & II**

National Energy Regulator of South Africa

Mandate

NERSA is an independent statutory body established in terms of section 3 of the National Energy Regulator Act, Act No. 40 of 2004.

One of its mandate is to regulate electricity in terms of Electricity Regulation Act, 2006;

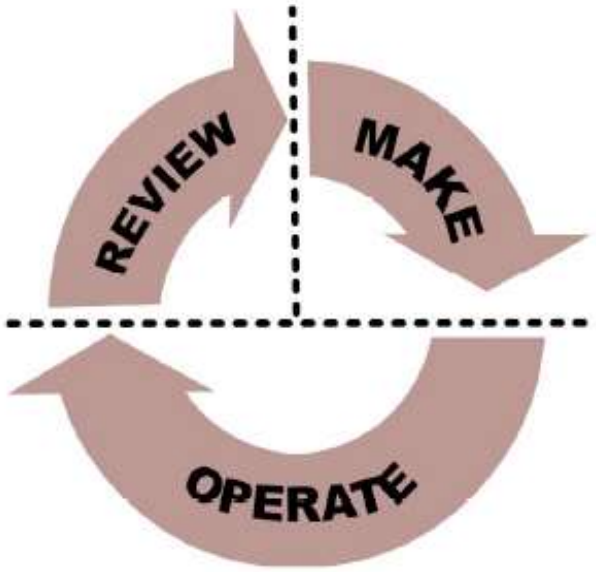
Specifically NERSA is mandated to;

1. **"**License electricity Generation, Transmission, Distribution and Trading"
2. **"**Develop rules to implement government policy and energy laws"
3. **"**Regulate electricity prices and tariffs"
4. **"**Undertake compliance monitoring and enforcement"

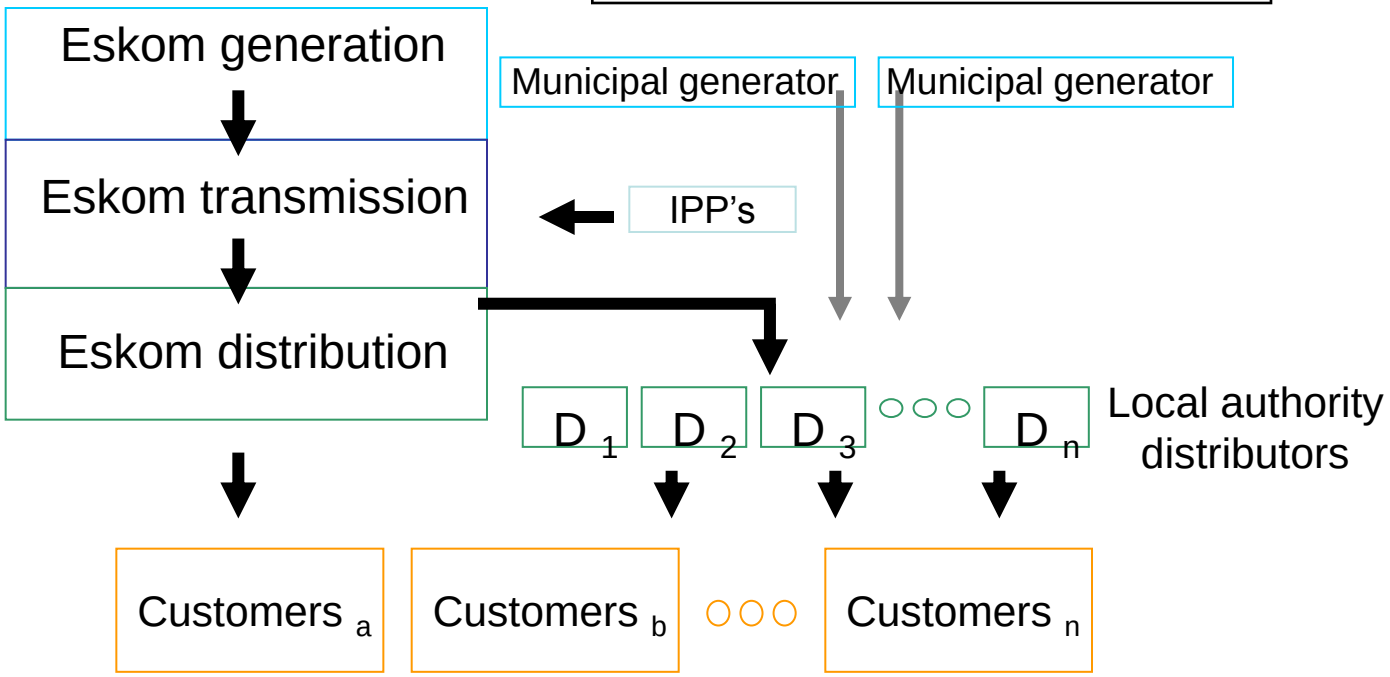
The Regulatory 'Cycle' in South Africa

Elemental parts:

- **Make** – In South Africa this is predominantly in the Sphere of National Government
- **Operate** – administering and enforcing regulation which is predominantly in the realm of the Energy Regulator (NERSA)
- **Review** – assessing regulation and making any adjustments required.



Current Structure



Generation oligopoly
Transmission monopoly
Distribution fragmentation

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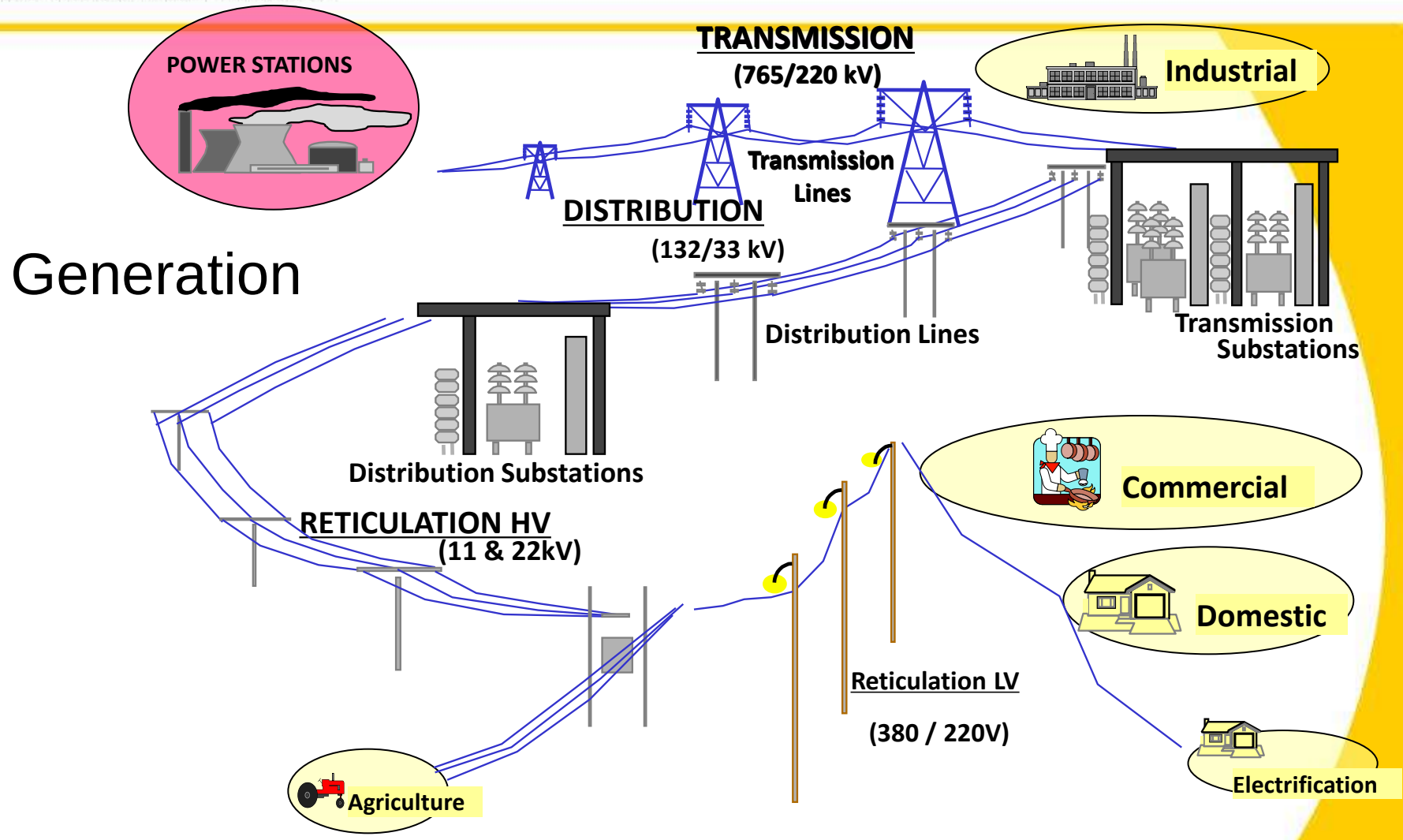
Industry Structure

- It is dominated by the vertically integrated incumbent – Eskom
- Eskom is responsible for the generation of 96% (~26 Power stations) of electricity in the RSA and 60% of Distribution
- There are 188 licensed distributors, including Eskom Distribution
- IPPs will sell to Eskom and not compete directly
- Total licensees = 188 including Eskom :
  - 174 Municipalities
  - 13 Private Distributor
  - 1 Eskom
- Eskom Dx - distributes 60% to end user customers
- Municipalities and some private distributors distribute 40% to end user customers

ESI –Value Chain



Regulatory frameworks

- Electricity Regulation Act 2006
  - ✓ 4(a)(iv) – The Regulator must "*Issue rules designed to implement the national government's electricity policy framework, the IRP and this Act*" .
  - ✓ New Gen Capacity Regulations I & II

Regulatory frameworks (cont…)

- Electricity Pricing Policy (Notice 1398 of 2008) -
  - ✓ NERSA may approve a framework to expedite the determination and approval of prices from supply options;
  - ✓ … “renewables could be introduced at a price premium relative to non-renewables, subject to approval by NERSA”.

Regulatory Frameworks (Cont…)

- **Regulatory Rules on Network Charges for Third-Party Transportation of Energy (2012)**
  - Under Review
  - Work Groups established

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Grid Code Provisions

Clause 4 sub clause 5 of the Distribution Code System Operation Code's Operational Responsibilities of Embedded Generators and Other Customers says:

"Customers shall at all times operate their equipment/ facilities in such a manner to ensure that they comply with the conditions specified in their supply agreement"

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Regulatory Rules for Embedded Generators - Facilitation of Network Access & Grid Connection Conditions

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Embedded Generators: Initial Steps for before Licence is issued – Distribution Code Requirements for connection

- *Embedded Generators* shall apply for connection to the *Dx System* to the network owner (i.e. *Distributor).*
- A sample application form can be found in Appendix B of the South African Dx Code.
- Each *Distributor* shall develop and publish its own application form for connecting *Embedded Generators.*

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Responsibilities of *Embedded Generators* to *Distributors*

- The *Embedded Generator* shall enter into a connection agreement with the *Distributor* before being licensed by NERSA and connecting to the *Dx System.*
- Ensure that the reliability and *quality of supply* complies with the terms of the connection agreement.
- Ensure compliance with the *Distributor's* protection requirement guide as detailed in the Distribution Grid Code as well as protection of own plant against abnormalities, which could arise on the *Dx System*.

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Responsibilities of *Embedded Generators* to *Distributors (*Cont…)

- The *Embedded Generator is liable* for any dedicated connection costs incurred as a result of connection of its facility to the Tx or Dx System in accordance to the provisions of the Tariff Code.
- The *Embedded Generator is* responsible for synchronizing its generating facility to the Dx System within pre-agreed settings.

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Responsibilities of *Distributors* to *Embedded Generators (Cont…)*

- If requested, the *Distributor* shall provide information relating to the capacity of the Dx System to enable the *Embedded Generator* to identify and evaluate available connection opportunities.
- The *Distributor* shall treat all applications for connection to the *Dx System* by potential *Embedded Generators* in an open and transparent manner by ensuring equitable treatment of all participants.

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Connection Point - Technical Requirements

- The *Embedded Generator is* responsible for the design, construction, maintenance and operation of the equipment on the generation side of the *connection point*.
- The *Embedded Generator i*s responsible for the provision of the site required for the installation of the *Distributor* equipment required for connecting the generating facility.
- The Embedded Generator shall pay for any expenses incurred by the Distributor on behalf of the Embedded Generator in line with the Tariff Code.

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Other Technical Requirements

- Specific Protection Requirements
  - Phase and earthfault protection
  - Over Voltage and Over Frequency Protection
  - Faults on Dx System
  - Islanding
- Quality of Supply
  - Frequency Variations
  - Power Factor
  - Fault Levels etc
- Telemetry Requirements

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ERA 2006 Exemptions Schedule 2

- Any generation plant constructed and operated for demonstration purposes
- only and not connected to an inter-connected power system
- Any generation plant constructed and operated for own use
- Non-grid connected supply of electricity except for commercial use

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CHALLENGES

- Legislative
  - Shortcomings of existing legislation
- ESI Reform
  - ISMO
  - Ring-fencing of electricity business @ munics
  - Harmonisation of tariffs
- Institutional Arrangements
  - Jurisdictional overlaps
- Eskom Funding Model
- Municipal fiscal Framework
- Capacity building - Skills
- Multi-year price determination – assumptions
- Net metering.

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CONCLUSION

- Eskom application for the MYPD3 Re-Opener.
- Public Hearing on Cost of Supply Studies' Framework for municipalities – 06 August 2015.
- Regulatory Rules on Small Scale Embedded Generation – Board Decision on 20 August 2015.
- Guidelines on Electricity Reseller Tariff – Phase II Board Decision expected not later than 30 September 2015.
  - Phase III of the project expected to get underway – beginning of 2016/17FY
- Tariff Rationalisation project – on hold – subject to finalisation of the Cost of Supply Framework.
- Eskom busy preparing new revenue requirement application.

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THANK YOU FOR YOUR ATTENTION!!!

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