



# Department of Energy

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# DEPARTMENT MANDATE & MISSION

## MANDATE

- Ensure secure and sustainable provision of energy for socio-economic development

## MISSION

- To regulate and transform the sector for the provision of secure, sustainable and affordable energy



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# VISION

## VISION 2010

- A transformed and sustainable energy sector with universal access to modern energy carriers for all by 2010

## VISION 2025

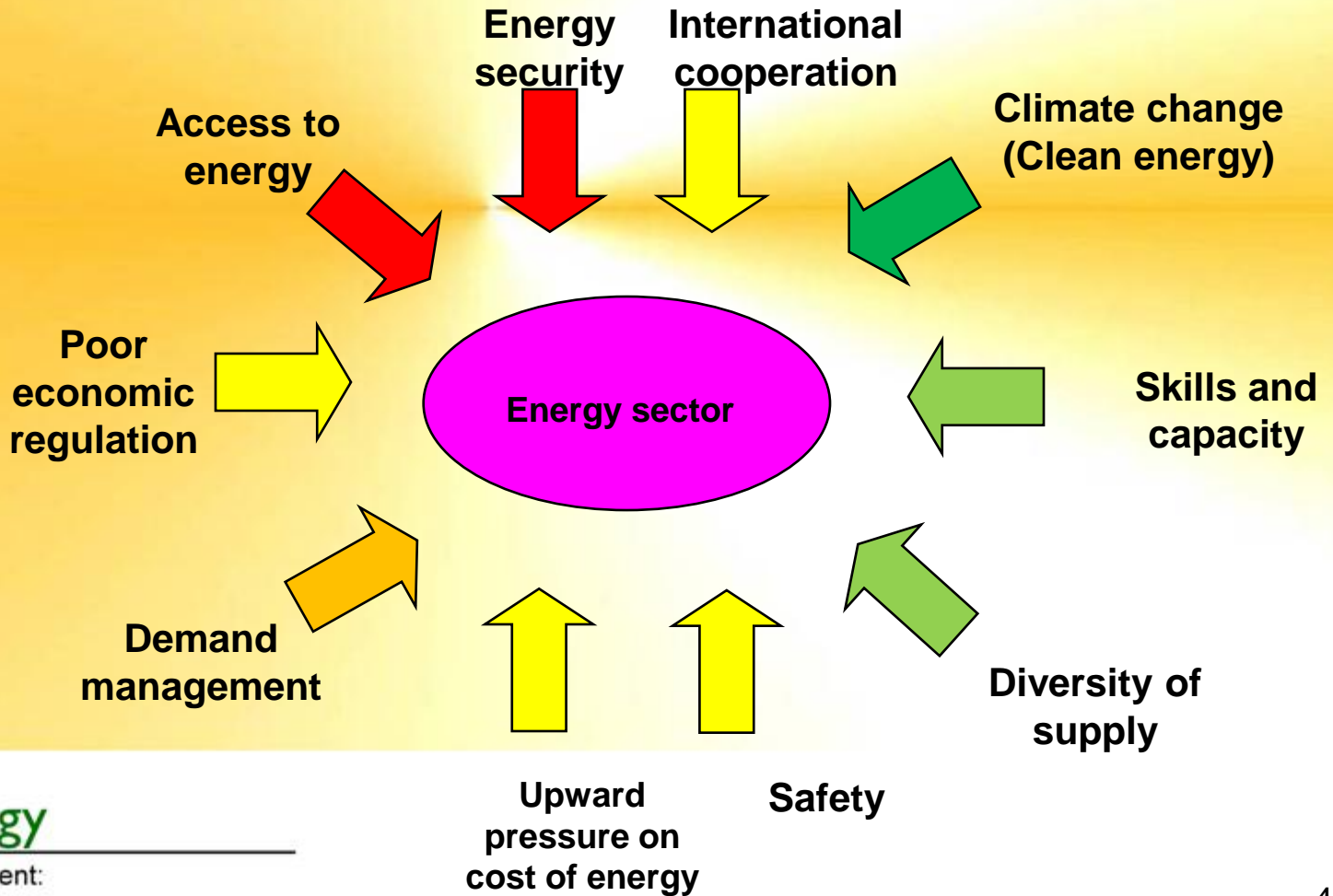
- Improving our energy mix by having 30% of clean energy by 2025



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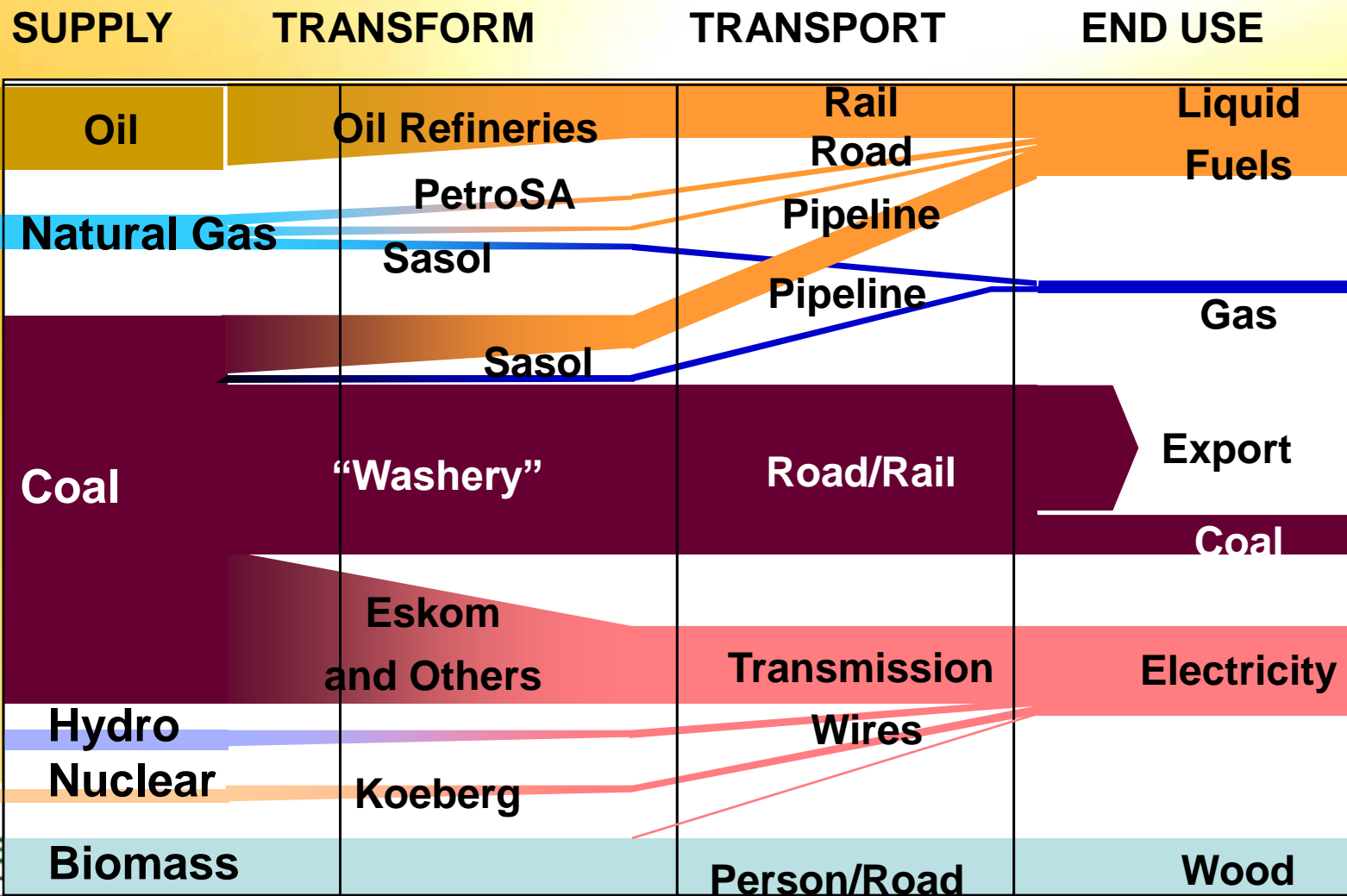
# FACTORS THAT GUIDES AND DRIVE THE ENERGY SECTOR IN SOUTH AFRICA.



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# Energy Overview: Energy Flows



# STRATEGIC OBJECTIVES

- Vision 2025 is to improve the energy mix by having 30% of clean energy.
- This will be achieved through strategic intervention:
  - effective legislation, policies and guidelines, to encourage investment in the energy sector;
  - diversified energy mix, improved access and connectivity, provision of quality and affordable energy, promote safe use of energy and transform the energy sector;

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# STRATEGIC OBJECTIVES

- Rolling out of energy efficient technologies;
- promote clean energy alternatives, which focus on economic development, and promote job creation, etc.
- The Clean Energy sub-programme already facilitates the implementation of renewable energy and Energy Efficiency Technologies and also promotes and regulates the Clean Development Mechanism (CDM) activities.

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# REGULATORY FRAMEWORK

- **The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)**, as the supreme law in the land, requires government to establish a national energy policy to ensure that national energy resources are adequately tapped & delivered to cater for the needs of the nation.
- As enshrined in the Constitution, energy in SA is currently a national competency except in the case of electricity reticulation which is a function performed by local government. Local government does so by virtue of its regulation by national legislation whilst the provincial government has no formal mandate in this regard.

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# REGULATORY FRAMEWORK

- **White Paper on the Energy Policy of the Republic of South Africa of December 1998 – “EWP”**
  - *ensuring that economically feasible technologies and applications are implemented;*
  - *ensuring that an equitable level of national resources is invested in renewable technologies, given their potential and compared to investments in other energy supply options; and*
  - *addressing constraints on the development of the renewable industry.*
- **White Paper on Renewable Energy Policy of the Republic of South Africa of November 2003 – “REWP”**
  - *In this policy, government’s goal is to achieve a target of 10,000 GWh renewable energy contribution to final energy consumption by 2013, to be produced mainly from biomass, wind, solar and small-scale hydro.*
  - *This policy document is being reviewed to assess progress after the first 5yrs of policy implementation and also propose medium to long terms RE targets.*

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# REGULATORY FRAMEWORK CONT'

- **Energy Act of 2008:**

- *This is the primary legislative instrument that governs the evolution and transformation of the South African energy economy. It seeks to ensure that diverse energy resources are available in sustainable quantities and at affordable prices to the South African economy in support of economic growth and poverty alleviation.*

- **Electricity Regulation Act as Amended:**

- *One of the objectives of this Act is to “promote the use of diverse energy sources and energy efficiency”.*
- *The Act has a provision for new generation capacity. In this provision, “The Minister may, in consultation with the Regulator determine that new generation capacity is needed to ensure the continued uninterrupted supply of electricity and determine the types of energy sources from which electricity must be generated, and the percentages of electricity that must be generated from such sources.”*

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# REGULATORY FRAMEWORK

- **Renewable Energy Feed in Tariff:**

- *To contribute towards the attainment of the 2013 target, socio-economic and environmentally sustainable growth, stimulating the RE industry in SA, government saw a need to establish an appropriate market mechanism. Among the available financing mechanism, the Refit was preferred and a process of developing this mechanism was initiated.*

- *Approved tariffs for Refit I & II were subsequently published by the National Energy Regulator of South Africa (NERSA) in March 2009 and October 2009 respectively.*

- *The published Refits resulted in a great interest by Independent Power Producers (IPPs) to develop renewable energy projects in South Africa.*

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# REGULATORY FRAMEWORK CONT'

- The table below depicts qualifying technologies under Refit as well as the approved tariffs:

Technology	Unit	Refit
Landfill gas	R/kWh	0.90
Small Hydro	R/kWh	0.94
Wind	R/kWh	1.25
Concentrated solar	R/kWh	2.10
Biogas	R/kWh	0.96
Biomass solid	R/kWh	1.18
CSP Tower with storage of 6hrs/day	R/kWh	2.31
CSP Trough without storage	R/kWh	3.14
Large-scale grid connected PV systems (≥1MW)	R/kWh	3.94

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# REGULATORY FRAMEWORK

- Deployment of all Clean Energy Technologies in the field of wind energy, hydro, biogas, landfill gas, Solar, biomass, requires the following authorisations, etc.
  - Environmental authorisation requirements (Record of Decision) – Department of Environmental Affairs – <http://www.environment.gov.za>
  - Water Licensing authorisation (Permits) for hydropower project and other RE technologies that require water such as biofuels and CSP, etc – Department of Water Affairs – <http://www.dwa.gov.za>
  - Generation License – Energy Regulation of South Africa (NERSA) - [http://www.nersa.org.za/electricity\\_licences.htm](http://www.nersa.org.za/electricity_licences.htm)
  - Securing land of area for Renewable Energy Power Plant – Department of Rural Development and Land Reform
  - Power Purchase Agreement – Municipalities, Eskom or an buyer as a big industry consumer such as Industry

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# PRIORITY AREAS

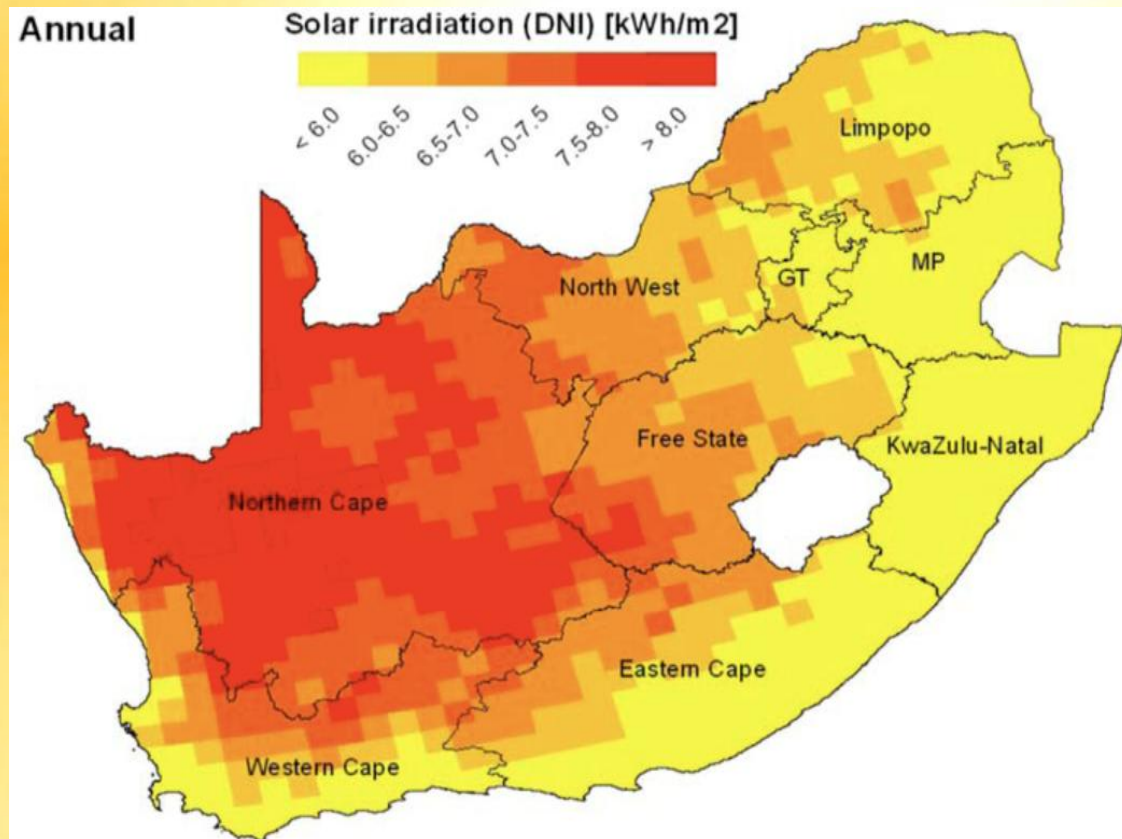
- Deployment of Clean Energy Technologies in the field of wind energy, hydro, biogas, landfill gas, Solar, biomass, etc.
- Establishment of Solar Parks across the country with the first initiative in Upington, Northern Cape.
- Cabinet approved the Pre-feasibility study in September 2010 and endorsed that a Solar Investors conference be held in October respectively.
- It should be noted that so far government is technology neutral in the deployment of these technologies.

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# South Africa's Solar Resource

- South Africa's solar resource is among the best in the world, making it an ideal location for solar power generation



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# PRIORITY AREAS CONT'

- The following are the prioritised interventions within the EEDSM side:
  - *Energy Efficiency and Demand Side Management which are cost-effective ways of meeting the demands of sustainable development.*
  - *RSA is committed to roll out of 1million Solar Water Heaters in the residential area, commercial sector, public building sector by 2014.*
  - *Phasing out of inefficient lighting currently over 40 million CFLS have been installed by Eskom in RSA. Discussion on regulatory framework are well underway on the phasing out programme.*



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## PRIORITY AREAS CONT'

• To encourage more players to enter the generation industry in order to develop a competitive power market through:

- **the Integrated Resource Plan (IRP 2010)-**

- *A determination regarding the Integrated Resource Plan (IRP) and New Generation Capacity (Gazette No.32898, 29 January 2010)” – IRP 1 was promulgated and provides for 1025 MW of renewables - based electricity generation by 2013 according to the following split:*

- *IRP 2010 with the time horizon of 20 years has been developed and public hearings were held across the country. It proposes that renewable energy should contribute 16% of the new generation capacity by 2030.*

- **Independent Systems Market Operator (ISMO) –**

- *The ISMO is intended to level the playing field between producers and consumers of electricity in a manner that protects the smaller players from potential market abuse by the bigger players.*

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# Opportunities

- Opportunities for solar, wind, hydro, biomass, biogas, landfill gas, wind energy, etc.
  - National Demonstration Plants
  - Partnership to establish Local Manufacturing centers for different parts in all the sector to support localisation as enshrined in the IPAP2
  - Opportunities as Independent Power Producers (IPPs) to invest within the existing frameworks.
  - Capacity Building and Skill Transfer in Renewable Energy sector for local maintenance and operations on all the technologies.
  - Auditing, Measuring and Verification of Energy Efficiency programmes.
  - Energy efficiency hardware /equipments

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# Incentives

- REFIT as outlined above. Standard Power Purchase Agreement being finalised.
- Energy Efficiency programmes/projects:
  - Tax Incentives through the South African Revenue Services (SARS) as Energy Efficient projects.
  - Energy Efficiency programme through the Department of Trade and Industry
  - National Energy Regulator South Africa – R5,4 billion
- Critical Infrastructure grant at the Department of Trade and Industry
- Renewable Energy Finance and Subsidy Office (grant)
- Renewable Energy Market Transformation (REMT)

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# CONCLUSION

- Policy is necessary to drive behavior and technological transformation, but not sufficient on its own.
- Strengthening collaboration on best practices with those already advanced in the energy sector like the Austrian sector will benefit both countries.
- Go South Africa is supported by the Department and business investment in South Africa in the renewable energy sector and is inline with the national strategic objectives of the country.



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# THANK YOU FOR YOUR ATTENTION

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