Joint Organisations Data Initiative:

-Benefits of Energy Data Transparency for National Administration



energy

Department: Energy **REPUBLIC OF SOUTH AFRICA**

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Presentation Outline

- **1. National Energy Data Resource.**
- 2. South Africa's National Energy Planning.
- 3. Role of Data Transparency
- 4. Benefits of Quality Data
- 5. Areas of concern



1. National Energy Data Resource

Resource:

- Energy balances,
 - (production, import, and export of primary energy sources; transformation into fuels for final consumption; consumption by various high-level demand sectors, including the residential, commercial, industrial, agricultural and transport sectors)
- Energy efficiency data and indicators,
- Energy-related environmental emissions,
- Fuel prices and taxes.



1. National Energy Planning

South Africa's Energy Planning Context:

- White Paper on the Energy Policy of the Republic of South Africa of 1998.
- Further anchored in the National Energy Act, 2008 (Act No. 34 of 2008)
 - [Mandates Minister of Energy to develop and publish and review the Integrated Energy Plan].

In reality:

- Planning largely dependent on data that resides within energy industry and outside National Government.
- Question 1. How to gather quality data for planning and policy making purposes?
- Question 2. Does National Government need to legislate energy data provision?



1. National Energy Planning

Integrated Energy Plan

Global **Data** Parameters (e.g. GDP, Discount rate, Exchange Rate, Fuel Costs)

KEY DATA PARAMETERS

SCOPE

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epartm

Energy

- (Capital, O&M)Plant performance
- Plant operational life

Technology Costs

 Other technology parameters

IRP

- Electricity generation build plan
- Transmission build
 plan
- System Adequacy
- Electricity Price Path
 All primary energy
 carriers

- Technology Costs (Capital, O&M)
- Plant performance
- Plant operational life
- Production slates
- Other technology parameters

Liquid Fuels

- Liquid Fuel Supply Options
- Liquid fuel supply infrastructure
- Location and logistics

All primary energy carriers

- Infrastructure costs
- Legislative framework

Gas

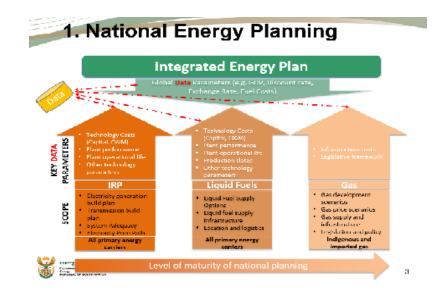
- Gas development scenarios
- Gas price scenarios
- Gas supply and infrastructure
- Legislation and policy
 Indigenous and imported gas



Level of maturity of national planning

2. Role of Data Transparency

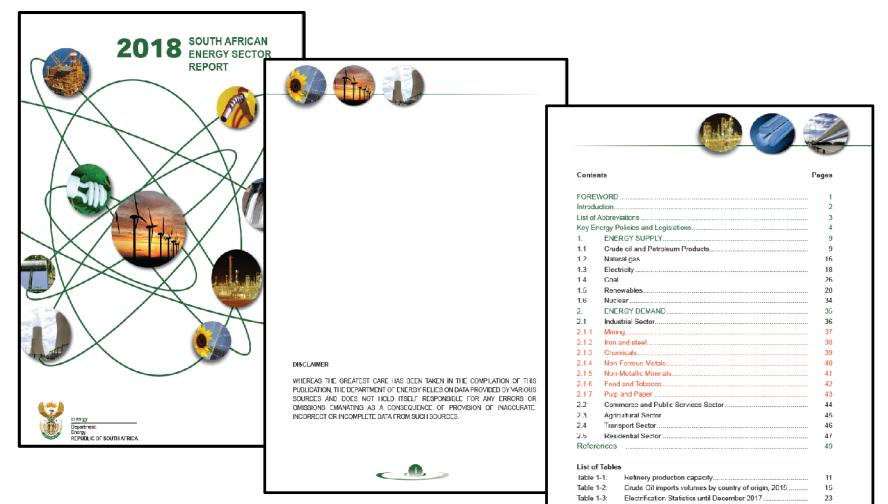
- National <u>Policy making that is based</u> on quality consumer/producer data, including;
 - Technology Cost
 - Consumption patterns
 - Commodity Price Volatility
 - Investor Confidence.
 - Targeted policy interventions based on data available.
 - Monitoring of policy impact on access
- 2. National <u>Planning</u> based on data collated
 - Universal Access targets.
 - Budget for targeted interventions.
 - Energy Transition needs a qualitative and quantitate understanding of current status qou.





1. Benefits of Energy Data

"South Africa Energy Balances Report, Nov 2018"



*Questionnaires completed by industry. Team currently looking at amendment of Regulations to improve data quality and include Energy Efficiency data.



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Benefits of Energy Data

"Analysis of Typical Household Energy Consumption"



Produced by BDO Consulting, South Africa www.elug.org.za



Benefits

- 1. Well considered energy plans
 - 1. electricity, [generation, energy efficiency]
 - 2. liquid fuels and
 - 3. gas plans.
- 2. Policy development geared towards improving economic outlook of South Africa.
- 3. Just Energy Transition based on high quality data.
- 4. Universal access targets continuously monitored.



5. Areas that requires improvements

- 1. Currently data provision is <u>voluntary</u>. Challenges when changes in data sets are made.
- 2. Need for <u>coordination at National Administration level</u> (i.e. Department of Energy, Department of Environmental Affairs).
- 3. Tools, Systems and data period need be standardized to improve data collection effectiveness.
- 4. Possible introduction of compulsory/ mandatory Regulations by amending current regulation;
 - 1. Create certainty to the public
 - 2. Ensure compliance

3ne Define who is expected to provide what data

Thank You



