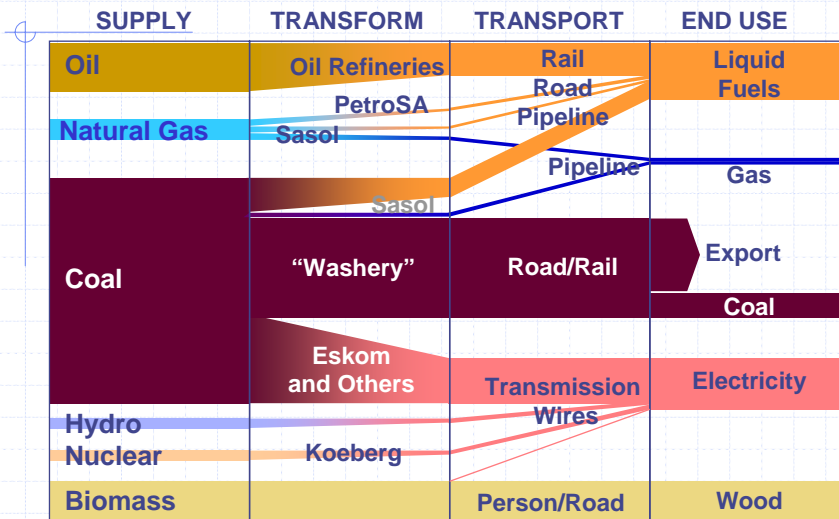


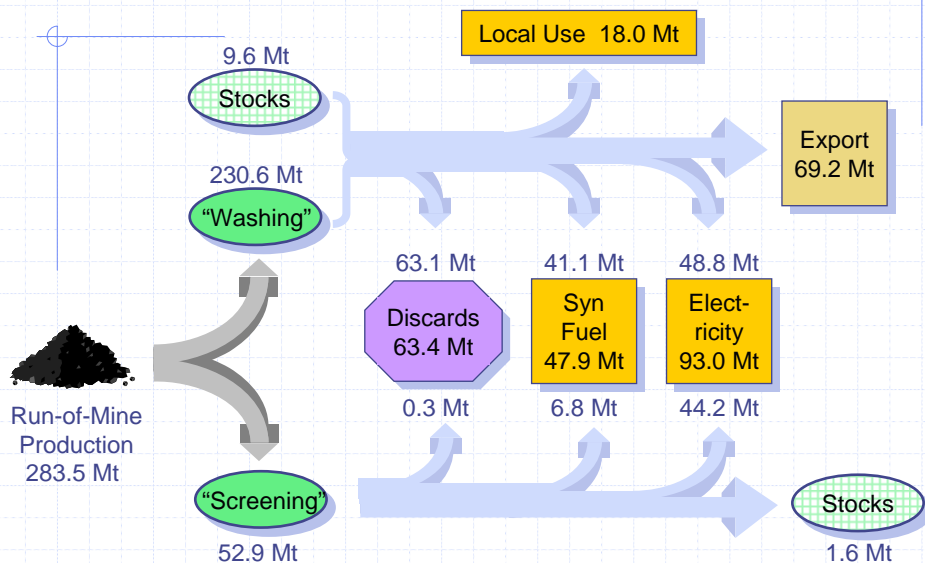
Contents

- ◆ Energy Use In South Africa
- ◆ “Basa Njengo Magogo”
- ◆ Energy Efficiency
- ◆ Renewable Energy
- ◆ Energy Bill
- ◆ National Energy Research Institute

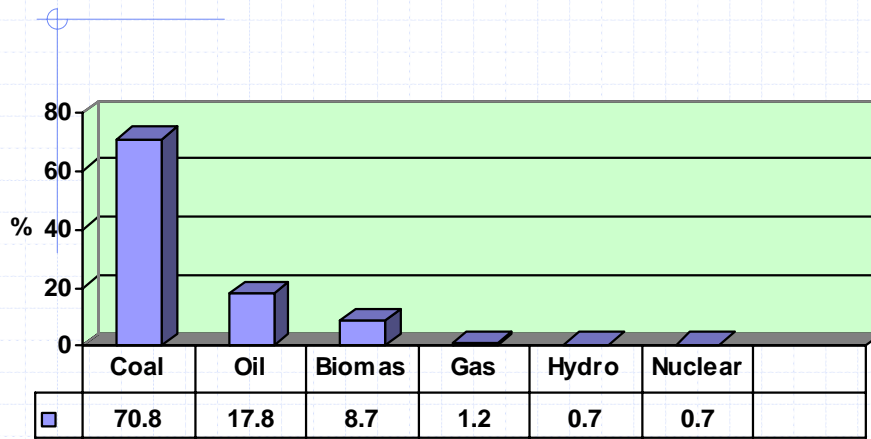
Energy Overview: Energy Flows



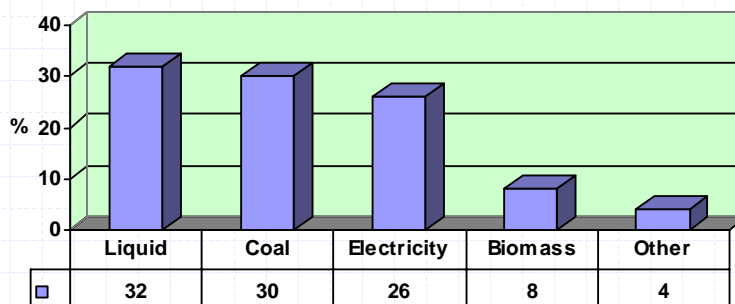
South Africa Coal Chain - 2002



Energy Overview: Supply



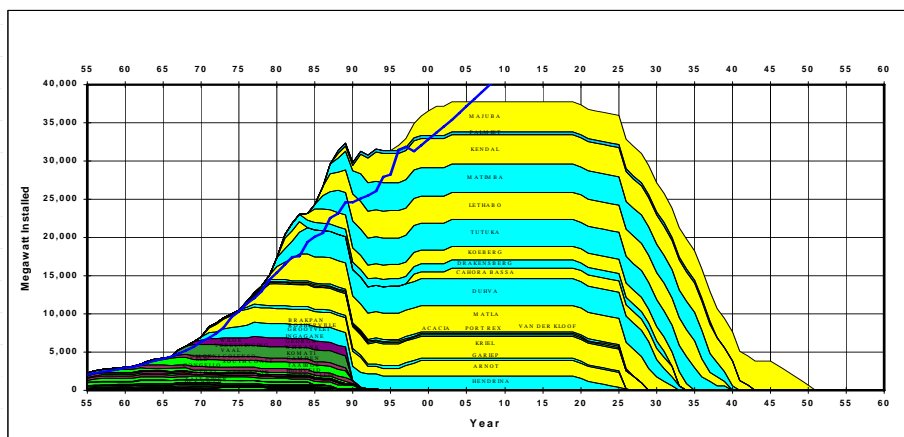
Energy Sector: Demand



Electricity: Generation Capacity

Energy Source	Capacity / MWe
Coal	32,202
Nuclear	1,840
Pumped Storage	1,580
Hydro	667
Gas Turbine	662
Bagasse	105
TOTAL	37,056

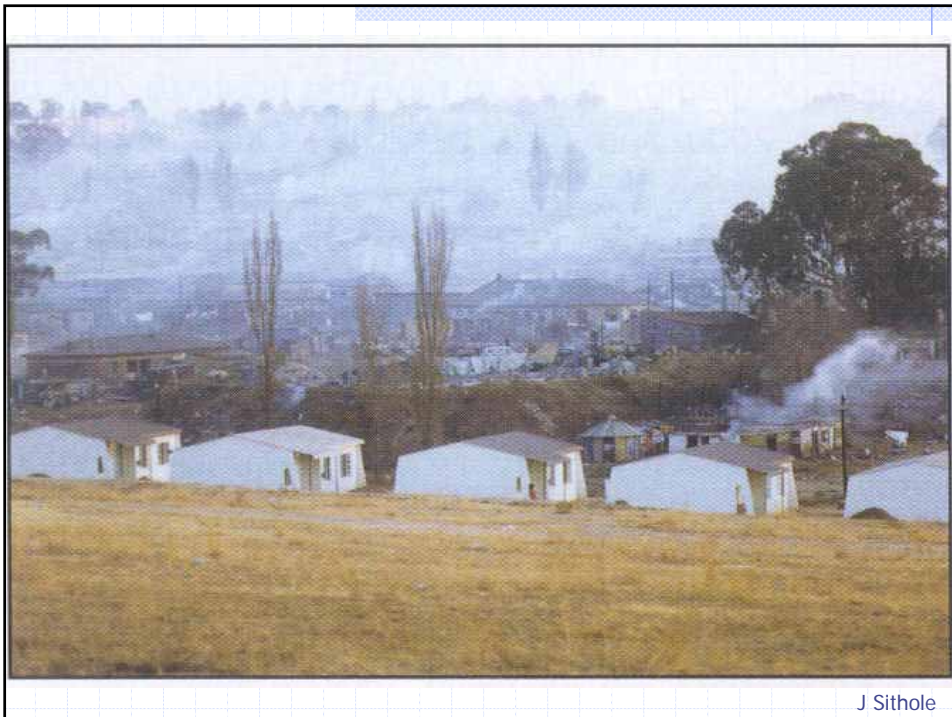
Electricity: Generation Capacity



Oil Refinery: Capacity

Facility	Barrels/day (Crude or equivalent)
Calref (Capetown: Caltex)	100 000
Sapref (Durban: BP/Shell)	180 000
Genref (Durban: Engen)	105 000
Natref (Sasolburg: Sasol/Total)	86 000
Sasol (Coal to Liquid)	150 000
PetroSA (Gas to Liquid)	45 000
TOTAL	666 000

Diesel/Petrol Mismatch
Addressed through Diesel Export

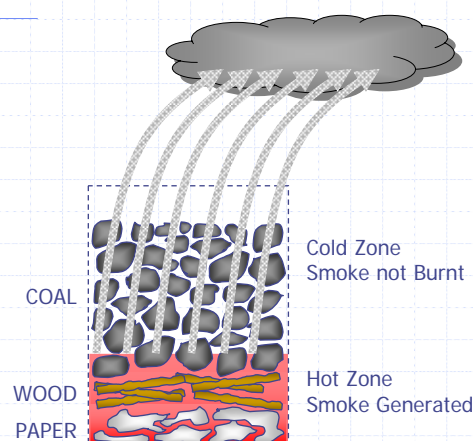


J Sithole

ENVIRONMENT/HEALTH

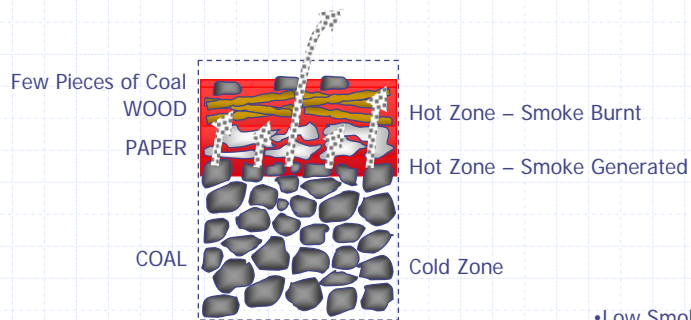
- ◆ Coal burned for cooking & space heating
 - ~1% coal use => ~30% national emissions
 - Respiratory diseases
 - Poor visibility
 - Aesthetics
- ◆ Cross-sectional study on children
 - Lower Respiratory Illnesses risk 20% higher
 - Upper Respiratory Illnesses risk 80% higher
- ◆ Estimates health cost R1.2 billion/y

Classical Fire-lighting Methodology



- Very Smoky
- Wasted energy in smoke
- Long time to get ready

Basa Njengo Magogo Methodology



- Low Smoke Emissions
- Efficient – Burn Smoke
- Longer Lasting
- Quicker Heat

Lower Smoke Emissions of Basa Njengo Magogo - Again



Promotional Banner for the Marketing of BNM in the Orange Farm Pilot Project



Demonstration: Orange Farm Pilot Project



Energy Efficiency Renewable Energy

◆ Energy Efficiency

- Sets a national target for energy efficiency improvement of 12% of final energy demand by 2014

◆ Renewable Energy

- 10 000 GWh (0.8 Mtoe) renewable energy contribution to final energy consumption by 2013, to be produced mainly from biomass, wind, solar & small-scale hydro.
- Renewable Energy Subsidy Office - R14.2 million has been made available by Government for 3 years after which government contribution will be evaluated (key indicators: job creation, empowerment and achieving target)

National Energy Research Institute

◆ Approach:

- Aligned with government development policy
- Utilisation of available resources
- Capacity development
- Speak to Integrated Energy Plan

Energy Bill

- National Energy Advisory Committee
- National Energy Database and Information System
- Integrated Energy Planning
- Renewable Energy` (targets, minimum contribution and nature of RE sources, promotion of RE, standards)
- Energy Efficiency (targets, minimum levels, manner to comply, standards, labelling etc)
- Energy Research
- International Obligations
- Health, safety and environmental matters

National Energy Research Institute

- ◆ Research Areas:
 - Renewable Energy
 - Energy Efficiency
 - Clean Coal
 - New/Alternative Energy
 - Distributed Energy Supply
 - Energy & Environment
 - Electricity
 - Governance

National Energy Research Institute

◆ Criteria:

- Knowledge advancement
- Social development / poverty alleviation
- Economic development
 - ◆ Job creation
 - ◆ Beneficiation
 - ◆ GDP growth
 - ◆ SMME development
- Governance
- Global competitiveness
- Environment

END