

PGWC Sustainable Energy Strategy Jan2008

MOVING TO IMPLEMENTATION

Methodology

- 3 essentially different TOR's
 - Lead to important conclusions about PGWC
- NEEP arrives
 - Changes strategic context
- In parallel do assignment leading a team that reviews Eskom DSM capability and plans

details...

Terms of Reference 7 Jan

“Provide two resources namely a +/- 20pp report and about 10 (very well developed) slides that show links between key objectives stated on the one hand in the iKapa Elihlumayo Growth and Development Strategy (GDS) document and on the other hand in the Sustainable Energy Strategy and Programme of Action for the Western Cape (SES) document.

Terms of Reference 18 Jan

- Done on basis of 7 Jan brief
 - SES assessed
 - Close agreement with SEA on objectives
 - Some additional indication of emphasis
 - convey how SES will contribute to GDS achievement of “Economic Sustainability” and “Energy Security”
 - On the whole, SES is best promoted at political level via renewable energy supply side orientation ... although (new) strong interest in EE ‘cos of supply crisis cont...

Items of emphasis cont..

- The issue around electricity market reform needs further debate/investigation (SES based on electricity sector re-structuring)
- Most interviews to involve PGWC senior managers and politicians
- Mention of possible Adviser Post
- Client is PGWC
 - Slides to be developed in “collaboration” with PGWC

Objectives

- Analyse the content of the SES and GDS to
 - A. Spell out exactly what various SES initiatives mean, what their benefits are and what they will involve in terms accessible to politicians – MEC level
 - B. Spell out exactly what various initiatives mean, what their benefits are and what they will involve in terms accessible to top level provincial management

The analysis will emphasize how SES will contribute to GDS achievement of “Economic Sustainability” and (the new??) “Energy Security”

PROVIDE A RESOURCE (document/slides/presentations/posters) that shows...

LINKS between:

Key objectives of the iKapa Elihlumayo Growth and Development Strategy

TO the

Sustainable Energy Strategy and Programme of Action for the Western Cape

To achieve the above...

- Couch each SES initiative in terms of the GDS
- Show how the SES can make an important contribution to the GDS
- Explain the SES in terms that are accessible and meaningful to non-energy sector politicians and PGWC senior managers.

New TOR 19 Feb

Because

- Client would not allow access to PGWC
- HLT sceptical about PGWC legal mandate as a result of access to legal assess (JG here today...)
- National Electricity Emergency Programme (NEEP)
 - Subsumes SES
 - Strategic context fundamentally changed

cont...

New TOR 19 Feb

- Output now to be a report
 - Purpose: “Interpret the SES i.t.o. the NEEP”
- Client ONE senior PGWC manager plus ONE politician although the politician passive in work plan

(14 days of 17 allocated used already...)

New TOR 25 March

Because

- Agreement could not be reached with client on prev TOR
SO...

- New Client = SEA

“an assessment of the draft Sustainable Energy Strategy (SES) of the Provincial Government of the Western Cape (PGWC), especially in terms of recent developments in the South African electricity sector and the policy and legislative context.

- TOR is Appendix B

Conclusions during TOR development period

- ESSENTIALLY problematic to develop a strategy without participation of organisation that will implement it
- South Africa has comprehensive set of policies, legislation, regulations and institutions to implement SES nationally
 - These are in early stage of development
 - There are serious issues around capacity to implement and the complexity of the institutional roles and relationships in the SA context

The final output

- Serious time constraint – but no excuse, the process to date had yielded valuable insights
 - Decided to present these no matter how unpopular they might be
- Main points... as we go through the final output...

Final output main points

- Mainly deals with EE because:
 - EE is solution for current supply crisis and will require most resources in next 5 years
 - REN being implemented by Eskom anyway at scale > hoped for in SES

Final output main points

- Based on conclusion that:
 - The Western Cape's best chance of achieving and exceeding the targets in its Sustainable Energy Strategy, and of securing the maximum practical energy security in a challenging national energy supply crisis, is to latch on to and provide active support to the Eskom New 3 Year DSM Plan and to cooperate in implementing this plan which subsumes the Western Cape Sustainable Energy Strategy goals

Final output main points

- The issue of independent regulation has shown itself to be vexed: the most important improvement would be to develop and approve the Implementation Plan mentioned in the Regulatory Policy on Energy Efficiency and Demand Side Management for South African Electricity Industry

Final output main points

- Global energy context fundamentally different
 - > US\$ 100 oil
 - Impact on all energy prices
 - GHG mitigation programme ramps up
- Domestic energy context fundamentally different
 - Supply crises (in all sectors)
 - Impact of global points above
- Western Cape will experience effects of all of the above

Final output main points - an aside

Energy policy by politicians

120	million tonnes coal input to power stations annually
20	% is "New small coal suppliers"
24	million tonnes
365	days a year
65,753	tonnes per day
6,575	10-tonne truck loads per day

Final output main points

- Despite HUGE potential for some EE measures AND their almost cost-free nature AND their prominence and priority** in South African policy very little by government so far

***“The White Paper on Energy Policy (1998) recognized that standards and appliance labeling should be the first measures to put in place in implementing energy efficiency.”*

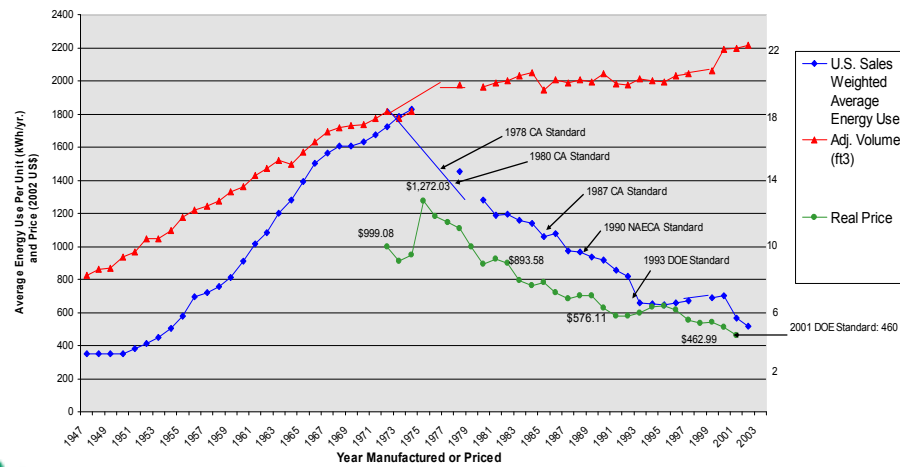
Final output main points

- *“...refrigerators were the largest residential user of electricity in 1972 in the United States, ... their energy consumption declined fourfold over the next 30 years as a result of policy at the same time that the size and features were increasing and the price to the consumer decreasing in real dollars*

Final output main points

Success of the Refrigerator

U.S. Refrigerator Energy Use v. Time with Real Price



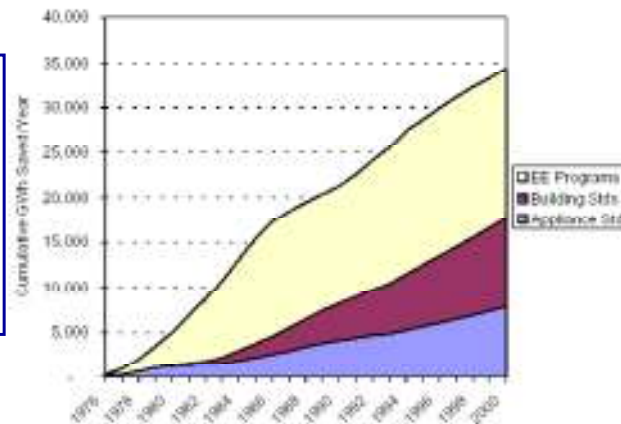
Sources: Lawrence Berkeley National Laboratory and Association of Home Appliance Manufacturers

Final output main points

The Power of Multiple Approaches

Cumulative Savings Achieved in California

By 2000, nearly 35,000 GWh saved per year through energy efficiency programs and codes and standards.



Source: Xenergy

Final output main points

- *“Eskom DSM was deployed as an essential solution in the Western Cape during the energy shortages in 2006 and exceeded its target of a 400 MW saving PER DAY. The results achieved were phenomenal, with an average saving of 500 MW for weekdays in June, more than two-and-a-half times that of the annual national DSM target”*

Final output main points

- *Local authorities*

The Regulatory Policy on Energy Efficiency and Demand Side Management for South African Electricity Industry makes provision for major distributors to access EEDSM funds. Eskom has already accessed and fed R100s of millions through to energy efficiency projects. The Provincial Government of the Western Cape could assist local authority electricity distributors to access the funds.

Final output main points

- *4.9.7 Revenue Loss due to EEDSM*
- *Mechanisms to compensate the REDs for net revenue loss due to EEDSM will be investigated and adopted by the NER in line with the regulatory regime (ROR. IBR).”*

(NER 2004:1)

Final output main points

- *4.5 Incentives for Electricity Suppliers to implement EEDSM*
- *When an electricity supplier implements EEDSM, it faces both a) Direct EEDSM Costs and b) Net Revenue Loss due to reduced energy sales. Within the Rate of Return (ROR) regulatory regime, (currently in SA). Eskom is allowed to recover the Direct EEDSM Costs through the tariffs as in line with the current mechanism in place. In a Performance Based Regulation regime (Price Cap/Revenue Cap), recovery of the direct EEDSM costs would have to be considered outside the Price Cap/Revenue Cap formula. With the establishment of a public benefits fund, the electricity supplier recovers direct EEDSM costs through a tender process.*
- *The following incentive mechanisms may be put in place to recover the Net Revenue Lost:*
- *Shared Savings: The energy supplier receives a fraction of the net benefits due to the EEDSM programme: which is recovered through the tariffs. Net benefits = Avoided Supply Costs (Gx,Dx.Tx) - EEDSM Cost to (supplier and /or customer). Note this incentive is totally different from the manner in which Shared Savings is administered through Eskom.*
- *Rate Basing: EEDSM Investments are allowed to receive a higher rate of return than supply side investments - applicable in ROR Methodology.*
- *Recovery of Net Revenue Lost Through Tariffs: The supplier is allowed to recover the net revenues missed due to EEDSM. A Net Lost Revenue Adjustment mechanism is put in place together with monitoring and verification to confirm the reduction in energy due to EEDSM.*

Final output main points

- *“Pending the approvals and licensing processes, a decision has been taken to build a 100MW wind facility in the near future” (Eskom 2008b). The General Manager of Eskom Resources and Strategy has noted (Engineering news 2007) that: “Eskom believed South Africa had a resource base of 1,000 MW for wind-power generation along the country’s coastal regions.”*

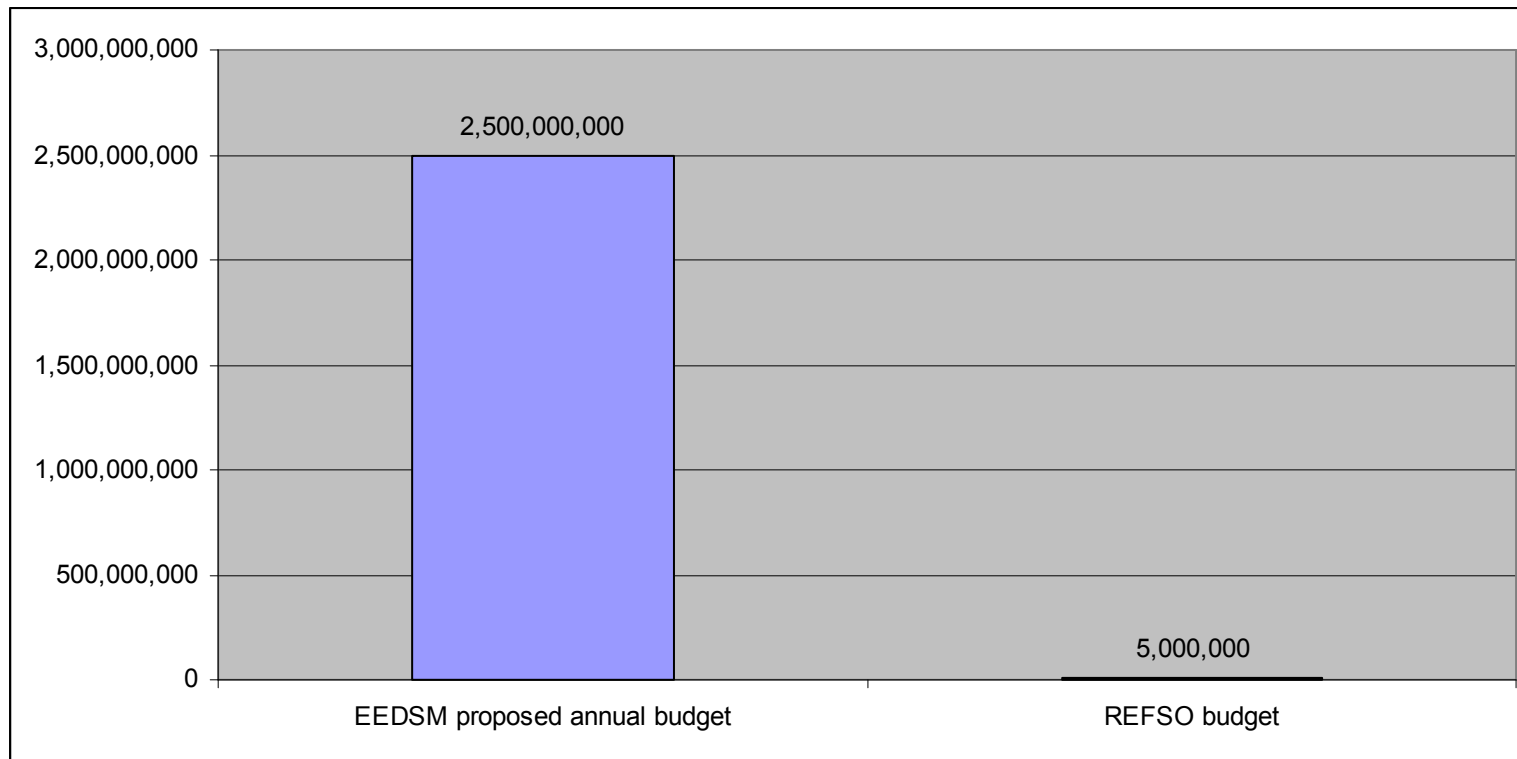
Final output main points

- ***South African national context – conclusions relevant to Moving to Implementation of the Western Cape Sustainable Energy Strategy***
- => go to text in report

Final output main points

- *“The overall responsibility for supply security in South Africa lies with the Department of*
- *Minerals and Energy (DME) but in the short-term (to 2008) Eskom has an obligation to meet the need for additional capacity. **However, there is no agreed basis or standard for the level of supply security to be provided. It is recommended that an unequivocal security standard should be established.***

Final output main points



Final output main points

- Based on above points a key issue to debate is:
 - Do we mobilise South African capacity to make existing institutions** work or do we create more institutions

** Institutions include laws