FUTURE PROSPECTS OF BIO-ENERGY UTILISATION IN THE SOUTH AFRICAN SUGAR INDUSTRY

9th LAMNET PROJECT WORKSHOP
RI BEI RAO PRETO, SAO PAULO,
BRAZIL

DENIS TOMLINSON
ILLOVO SUGAR LTD
GOVERNMENT WHITE PAPER ON RENEWABLES

• White paper on renewables approved November 2003

• Target set at achieving 10,000Gwh contribution to final energy by 2013

• Government's long term plan to establish a renewable energy industry providing modern energy carriers as a complement to fossil fuels

• Vision: An energy economy in which modern renewable energy increases its share of energy consumed and provides affordable access to energy throughout South Africa, thus contributing to sustainable development and environmental conservation.

• 3 Pillars: SOCIAL, ECONOMIC, ENVIRONMENTAL
GOVERNMENT EMPHASIS AND TARGETS
RENEWABLE ENERGY

INITIAL PHASE 2004 - 2007

Least Cost Solution to 10,000Gwh

ELECTRICITY

Sugar Bagasse 59%
Solar Water Heating 23%
Small Hydro 10%
Landfill Gas 6%
Bio-mass Paper / Pulp 1%
Wind 1%

FUEL

Bio-diesel tax incentives in place.
Voluntary uptake (5%) of bio-ethanol in discussion.
Determination of financing arrangements for bio-ethanol.

SECOND PHASE 2007 +

Implementation of blending targets.
GOVERNMENT ACTION PLANS
RENEWABLE ENERGY

• DME Survey of potential for co-generation in the sugar and pulp / paper industry. - Finalise November 2004

• Restructuring of Electricity Industry - Ongoing

• Implementation of Regional Electricity Distributors
  - - commence 2005

• Wind Farm - Darling pilot project - complete 2004

• Solar Power - 5 Rural concessions awarded - complete 2004

• Paraffin Substitution - review sustainable options commence 2004
SOUTH AFRICA SUGAR INDUSTRY PLANS

• BUSINESS AS USUAL PLANS

- Utilise excess bagasse at “Raw Sugar Mills” to generate electricity to the Grid (Eskom or REDs)

- Develop, and be part of, the voluntary trade in renewable energy certificates (TRECs) in Southern Africa
SOUTH AFRICAN SUGAR INDUSTRY PLANS

• COMMERCIAL INVESTMENT OPPORTUNITIES

  - Increased generating capacity options. Investment and returns to be determined. DME / SMRI review. Complete November 2004

  - Investigate bio-ethanol opportunities for domestic cooking / heating market – Paraffin substitution.

  - Dialogue with Government as to bio-ethanol requirements stemming from renewable commitment, including volumes and pricing. Ongoing

  - Undertake Pelletisation trials with Bagasse for co-generation of electricity and chemical extraction properties subsequent to pelletisation complete 2004