

The case for renewable energy to be linked to productive economic activities

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Electrification programme

- ◆ Target to electrify 2.5 million households by 2000
- ◆ Reduce to 30% households lacking grid electricity
- ◆ Mainly through grid electrification in urban areas
- ◆ Approx 2.1 million households, mainly in rural areas, yet to have access to electricity

Rural energisation

- ◆ **A, simplified, criteria for grid extension: ability for household to pay for service**
- ◆ **Rural households that are unable to pay for service are unlikely to be connected to the grid**
- ◆ **Reason: very little, if any, employment opportunities**

Renewable energy for rural electrification in Eastern Cape

- ◆ **Primary objective:**
 - Identify rural electrification opportunities using renewable energy linked to existing and new economic activities
- ◆ **Geographic Information Systems (GIS) to present and interpret results**

Project parameters

- **DG XVII “Thermie B” project 1997 - 1999**
- **Initiated and conceptualised by CSIR**
- **Wind, hydro, biomass remote area power systems**
- **Rural electrification through RAPS**
 - **93% of rural population without electricity**
 - **10 kW to 10 MW capacity**
 - **focus on former Transkei**

Project team

➤ **Co-ordinator:**

- **Garrad Hassan (UK)**

➤ **Partners:**

- **CSIR (South Africa)**
- **ECN (Netherlands)**

➤ **Principal sub-contractors:**

- **Border Biofuels / FCA (UK)**
- **Stephenson & Associates (South Africa)**
- **University of Natal (South Africa)**
- **P E Technikon (South Africa)**

Demand indexed to Gross Regional Product (GRP)

- **Data for each Magisterial District**
- **Forecasts for years 2000, 2005, 2010, 2015, 2020**
- **Demand forecasts by sector:**
 - **domestic (95% of total in 2010)**
 - **agriculture (2% of total in 2010)**
 - **manufacturing (<3% of total in 2010)**
 - **commercial (<<1% of total in 2010)**

A, hopefully, unlikely scenario

- ◆ Hence, assuming no intervention measures:
 - *For Transkei, in 2010 only 5% energy demand will be for productive economic activities*
- ◆ Likely that there are also low figures for rest of rural SA
- ◆ This does not bode well for job creation !!!!!

Demand from new economic activities (NEA)

- **Agriculture**
 - irrigation
- **Forestry processing**
 - sawmills
 - pulp
- **Tourism**
 - Wild Coast

Stimulating rural job creation

- ◆ The correct and appropriate questions would have to asked and answered
- ◆ *“What intervention measures, what policies, what strategies would need to be put in place to increase the demand for electricity for productive economic activities from, say, 5% to 10% in 2010 in Transkei”*
- ◆ This Synergy project is hoping to provide some input into this issue

Important considerations

- ◆ **Energy & economic development are linked and hence the application of RE in rural areas should be integrated into local economic planning activities**
- ◆ **To create awareness that RE is not inferior the implementation of large grid connected RE systems must be done**