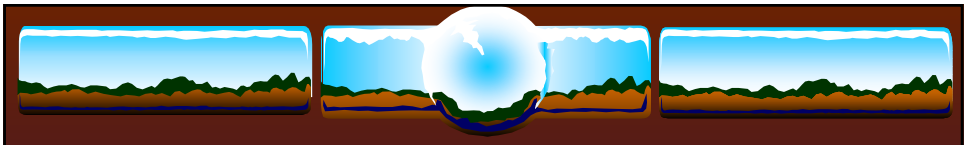

Assistance to rural communities for improved energy services

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RAPS Consulting (Pty) Ltd

Joint EC networks workshop, 20 August 2002

Outline

- Introduction
  - Energy services (ES) definition and significance
- Rural energy services situation - a case of South Africa
- Current approaches to improving ES in SA
- Financial mechanisms to back up ES delivery
- Conclusion

Introduction

- General consensus that no-one wants energy for itself but what it can do. Typically households require energy for
  - Lighting
  - Information services/entertainment (TV, radio)
  - Refrigeration and space cooling
  - Thermal energy needs – cooking, space heating, water heating, ironing
  - Income generation/small scale enterprises (mostly neglected in household energy policy&planning)
- Energy + conversion appliances = energy service

Rural energy service situation – a case of South Africa

- Main fuels available and end uses
  - Lighting – candles, paraffin lamps, car batteries, diesel/petrol powered generators, solar home systems (SHS), grid electricity
  - Information/entertainment – car batteries, diesel/petrol powered generators, SHS, grid electricity
  - Refrigeration/Space cooling- electricity
  - Cooking, space heating, water heating, ironing & small scale enterprises – grid electricity, LPG, coal, wood fuel, paraffin other biomass fuels

Rural energy service situation – a case of South Africa

- Generally low income households use multiple fuels to meet their needs
- Women & children are the main fuel users within households & often bear responsibility for fuel wood collection
- Inadequate access to fuels affects household managers who are women
- Availability and affordability equally important issues for household health, safety, nutrition & livelihoods

Current approaches to improving ES in South Africa

- Low cost electrification
- Off grid concessionaires
- Integrated Energy Centres

Low cost electrification

- Mainly the responsibility of Eskom in rural areas
- Various supply options explored
- Grid access in rural areas is more than 50% at present

Off grid concessions - the beginning

- Call for proposals from industry, NGO's, utilities (early 1999) for non-grid electrification
  - main focus Solar Home Systems – enough for lighting and entertainment
  - emphasis on complementary thermal energy services
  - Access to National subsidy
  - Assumed growth to about 50 000 households per concession
  - DME requested 'complete' solution (finance, management, revenue, maintenance, energy services…)
  - Significant international and local interest

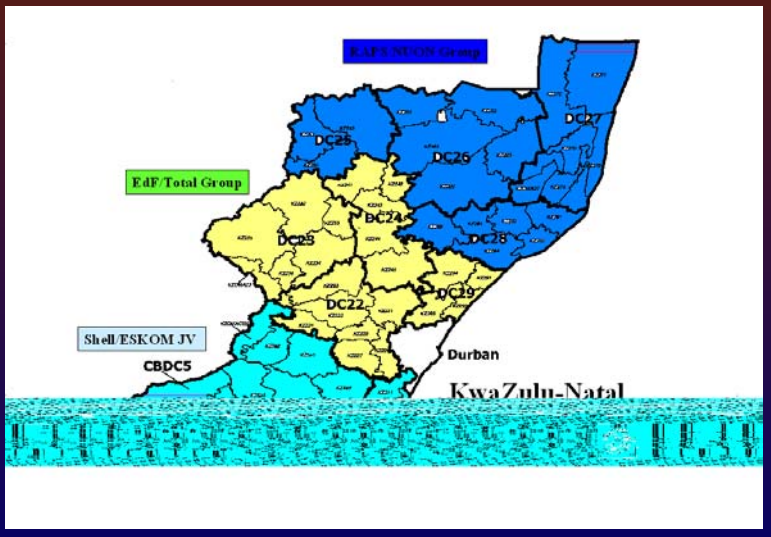
Off grid concessions-current status

- Initially Seven consortia selected – May 1999
- Currently only 5 consortia namely Solar Vision, Nuon RAPS utility, Eskom Shell Joint Venture, Renewable Energy Africa, EDF/Total
- Late 2001 decision taken to sign interim agreement pending restructuring of EDI signing Feb-Jul 2002
- Parties to agreement – Eskom primarily for area identification, National Electricity Regulator for auditing, funding and concessionaires – everything else
- Longer term contract possibly in 18 months
- Mid 2000: KfW announced interest in non-grid investment – 31 M DM (about R 100 M)
  - KfW implementer still to be selected through new tender process

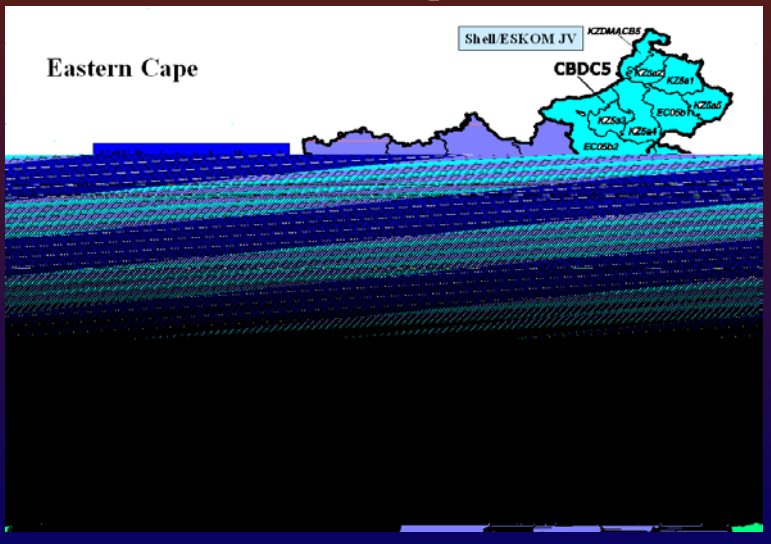
Consortia status: July 2002

Name	Notes	Total customers July 2002
Eskom Shell	Started 1998/98	4700
Solar Vision	Started Sept 2001	750
Nuon RAPS	Started December 2001	290
EDF/Total	Pilot starting now	2
R E A	Setting up – hope to start in October	-

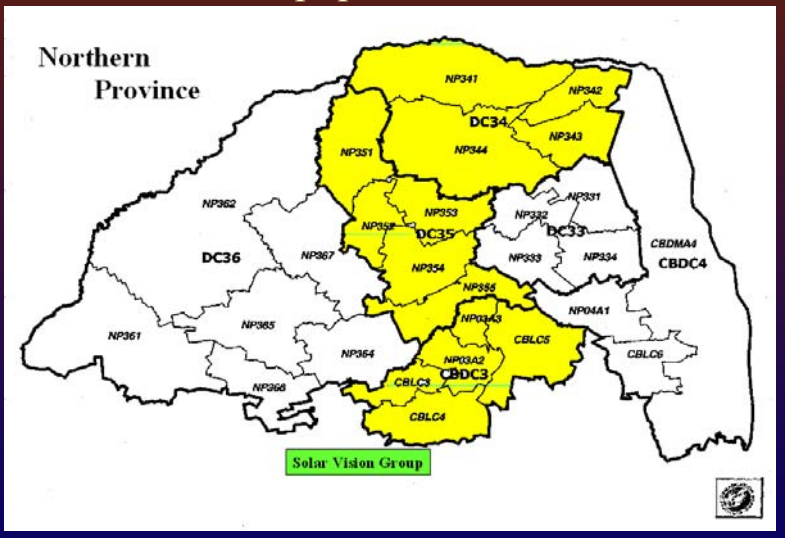
KZN areas of operation



Eastern Cape areas



Limpopo Province



An example of concessionaire contribution to delivery – Nuon-RAPS Utility

- Operates in northern KZN
- Is opening up energy stores – fuels, appliances, and energy awareness raising
- Local employment and empowerment – hope to run utility as a franchise operation
- Intends supplying a range of systems (including 220V AC output) and additional lighting as per customer requirements

Integrated Energy centres

- Government Initiative
- Decision on an Integrated Sustainable Rural Development Strategy (ISRDS) – targeted and co-ordinated approach to service delivery & in partnership with other stakeholders
- Aim to bring ES closer to communities while simultaneously addressing health, environment and other related needs primarily through information dissemination & ES delivery

Integrated Energy centres cont.

- Key features are – joint ownership by government and community
- Bulk distribution to reduce retail price

Financial mechanisms to back up delivery of ES

- Subsidies – capital and consumption
- Electrical Basic Support Services Tariff
- Zero Rating of Paraffin
- Other opportunities – local sources + international grants and donor funds

Nuon-RAPS Utility example

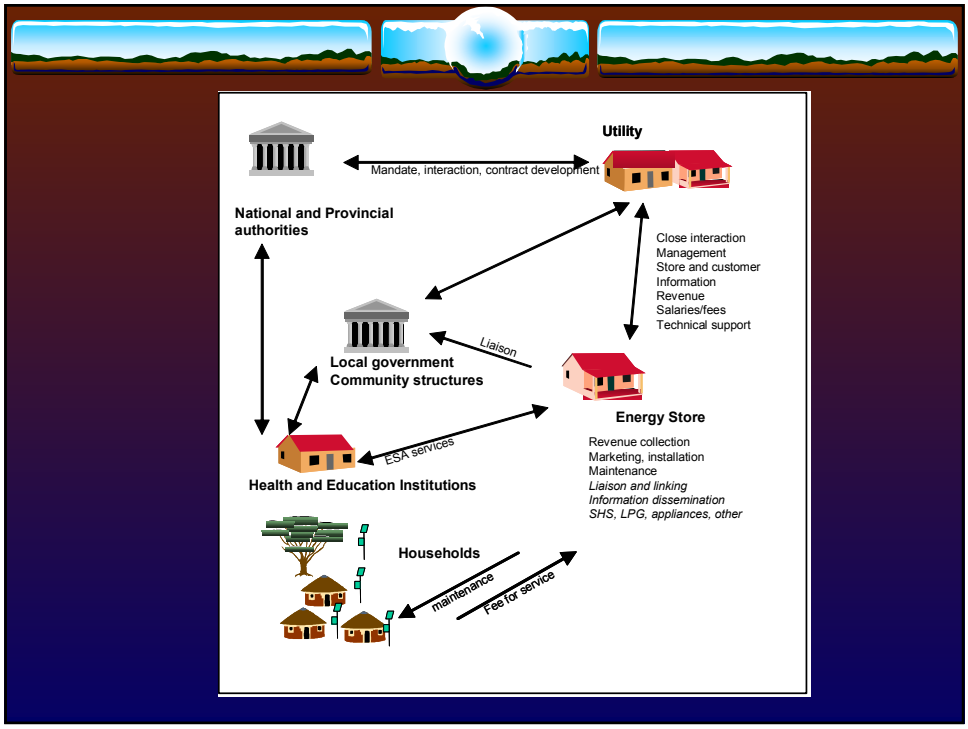
- Investment by Nuon and RAPS (time and funds)
- Support from Dutch Government (PSOM)
- Support from USAID (larger systems, LPG)
- Customer payments (as per NER approved tariff)
  - Connection fee: R100
  - Tariff (basic 4 light system) R58/month (incl VAT)
  - Above tariff excludes 'poverty tariff' (R40 has been proposed), this would result in effective tariff of R18
- Capital subsidy from NER (R3 500 per installed system)
  - Current Capex on SHS alone is between R3500 and R4500 (excluding utility infrastructure needed)

Conclusion

- Energy plays an important role in social and economic development as such improved ES are important to rural development and upliftment of the status of women
- Energy service delivery in rural areas lags behind that of their urban counterparts, but is currently receiving attention from government and private sector, and local communities are drawn in to participate in solving the problems
- Concessionaires are a promising vehicle for sustainable rural energy services delivery
- Energy stores/centres will finally bring about comprehensive solutions to the problem of rural energy

Conclusion cont.

- Bulk distribution is likely to reduce fuel prices thereby increase affordability
- Lessons learnt from utility operated energy stores & government-community owned & operated energy service centres will be very useful for the improvement of service delivery, therefore its important for these models not to be seen as competing
- In line with energy use patterns within households, rural energy service delivery currently promises to provide energy users an opportunity to choose which fuels to use for what end uses as determined by their household circumstances and preferences


Utility
Mandate, interaction, contract development
National and Provincial authorities
Close interaction
Management
Store and customer
Information
Revenue
Salaries/fees
Technical support
Liaison
Local government
Community structures
Energy Store
ESA services
Revenue collection
Marketing, installation
Maintenance
Liaison and linking
Information dissemination
SHS, LPG, appliances, other
Health and Education Institutions
Households
maintenance
Fee for service