



Alleviation of Poverty through the Provision of Local Energy Services

APPLES

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**Establishing Energy-Related Priorities
in Rural Areas**

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Abstract

The report on Establishing energy-related priorities in rural areas is deliverable no. 9A of the COOPENER project 'Alleviation of Poverty through the Provision of local Energy Services(APPLES)'. The APPLES project commenced on 1 June 2005 and runs from June 2005 to August 2008.

The project is implemented by ECN, The Netherlands, University of Oxford, UK, Risoe National Laboratory, Denmark, Parallax South Africa and the Energy Research Centre of the University of Cape Town.

The main objectives of APPLES are to understand the energy needs and energy priorities within the target communities, to determine and demonstrate the best practices for energy service provision to meet the needs of these communities, and to strengthen the embryonic networks of existing energy centres in South Africa.

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Establishing Energy-Related Priorities in Rural Areas

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APPLES: Establishing Energy-Related Priorities in Rural Areas

1. Introduction

This report covers the two rural localities that have been selected for the APPLES project as part of Work Package 3. The work package also covers an urban locality and a peri-urban locality. Close consultation with the South African Government was an important part of the process to determine which locations should be targeted by APPLES. For the rural areas, co-ordination with the national programme of Integrated Energy Centres (IeCs), managed by the Department of Minerals and Energy, was a particular priority. The communities at Highflats and Lucingweni were selected with full support from the DME, which will help to integrate the APPLES activities into the IeC programme as appropriate.

Following the agreement of target locations, the main purpose of Work Package 3 was to establish energy-related priorities for the poor people in these areas. Links to Government priorities and consideration of related service delivery options were important factors to ensure an approach that will add value to the national IeC programme. Careful co-ordination of efforts was required, particularly in Lucingweni, where DME was conducting separate activities at the time of the first APPLES site visit for this needs assessment.

The principal outcomes anticipated from this work package in rural areas were:

- 1) **agreed locations:** the identification of appropriate locations for the implementation of APPLES activities in rural areas
- 2) **stakeholder links:** to facilitate this process, working partnerships with relevant local organisations and actors were required in each area
- 3) **needs assessment:** local energy-related needs identified, reported, and prioritised through participative processes
- 4) **energy understanding:** local capacity and awareness around energy issues increased through participative processes
- 5) **priorities established:** prioritised energy problems selected for the newly established energy centre to address

This report represents part of the main deliverable from this work package, its aim being to present details of the process and results from the energy needs assessment in each of the two selected rural localities. A separate report has been prepared to address the other two locations. This report builds upon the work already undertaken to 1) agree relevant locations and 2) establish links with relevant stakeholders at all levels. The field work undertaken was intended to achieve the remaining outcomes 3 – 5 listed above.

Both rural locations were visited during the same week, with detailed preparations made in advance. Highflats and Lucingweni were selected partly because of the past experience of project partners in these areas. However, past activities (of the project partners and others) in Highflats are very different from those in Lucingweni.

The Switch On project managed by Parallax in the Highflats area included a useful survey of household energy needs, established good relations with the local and traditional authorities,

and built useful local capacity. However, Switch On covered only a small community in the municipality, leaving other areas with a very low awareness of alternative energy options.

In Lucingweni, ERC has recently completed the GRACE project (Gender Research in Africa into ICTs for Empowerment), which has provided a very useful foundation for APPLES. This has explored the energy needs of the communities and built good links with local leaders. APPLES can be seen by the local people as a useful follow-up to GRACE. Unfortunately, the installation of a hybrid (wind-solar) mini-grid into the area (by Shell Solar, financed through the National Electricity Regulator, NER¹) has resulted in some negative impressions of any alternatives to grid electricity. The impact of the mini-grid, and the ongoing uncertainty surrounding its future, must be carefully managed if the APPLES project is to be accepted by the local community.

This phase of the APPLES project is intended to determine the energy priorities of the communities in and around Highflats and of the communities around Lucingweni. The processes sought to establish:

- **What energy-related requirements of the community can be provided by the Energy Centres?** – what are the energy sources of greatest demand, what are the current problems of accessing these energy sources and what demand for such energy supplies is likely from the local community.
- **What activities should the Energy Centres be conducting to help address the needs of the local community?** Should this include e.g. communal TV & radio provision, access to computer facilities, telephone services, sales of energy supplies, sales of energy-related products, customer account management, maintenance and service of energy systems, etc.
- **What services should the local energy businesses offer, to be associated with (and perhaps accommodated by) the Energy Centre?** These could include e.g. hairdressing, office facilities, communication services, film projection, food drying, etc.
- **What are the highest priority energy capacity development needs of the community?** What areas of energy use require greater awareness and understanding, what should community leaders and municipal representatives (and other leaders?) do, what do local entrepreneurs need to know in order to offer an energy-related service?

2. Related Project Activity

One of the key reasons for selecting the two rural locations for the APPLES project was the foundations laid by previous activities, and the benefits of linking with ongoing initiatives, that are related to APPLES objectives in these areas. In Highflats, the community business “Switch On Energy Services”, established as part of a recent project managed by Parallax, offers a useful platform for APPLES. The local authority’s plan to introduce a Multi Purpose Community Centre (MPCC) to Highflats also offers a basis for a new energy centre model.

In Lucingweni, the proximity of a hybrid solar/wind mini-grid has had a great influence on the local communities. Unfortunately, though this has increased awareness of alternative energy sources, and developed relationships with some of the high-profile stakeholders, the

¹ Now officially known as the “National Energy Regulator of South Africa” (NERSA)

impact of the mini-grid has not been favourable. This has left a barrier to future interventions which APPLES will seek to overcome by avoiding any links to the past mini-grid efforts. More positively, the GRACE project managed by ERC has provided an ideal foundation for the APPLES intervention with very useful local contacts established and local capacity increased.

2.1 Highflats

2.1.1 Switch On

This project commenced in April 2002 with the aim to demonstrate how non-grid energy sources can be used sustainably in rural communities, thereby offering a significant contribution to climate change mitigation. It involved establishing a rural business in order to make an energy package available to residents of the Umkomas valley near Highflats in KwaZulu Natal. Four members of the targeted local community were carefully selected and trained to provide the skills necessary to operate a rural energy business. This business was given the brand "Switch On" and is now registered as a Section 21 company. The project finished at the end of February 2004, but the Switch On business continues to service local community members with ongoing support from Parallax

Useful connections to a wide range of important contacts in and around Highflats have been maintained as part of this project, which will now be very useful for APPLES. The local uBuhlebezwe Municipality has been particularly supportive of the Switch On intervention and have shown great interest in the energy centre concept. The community initially targeted by Switch On will be a useful starting point for APPLES, though other communities in the Highflats area will also be addressed during the project. Further expansion is likely if the project can demonstrate successful results.

2.1.2 MPCCs

In South Africa, Multi-Purpose Community Centres (MPCCs) have been identified as the primary approach for the implementation of development communication and information to the public to ensure that they become active participants in changing their lives for the better². An MPCC is a one-stop, integrated community development centre, where there is community participation and people's needs are addressed by providing relevant services. An MPCC aims to empower the poor and disadvantaged by means of access to information, services and resources from both governmental and non-governmental sources, which can be used for their own development.

The main goal of an MPCC is to provide every SA citizen with access to information and services in their local municipality by 2014. Each MPCC is expected to offer a unique institutional arrangement for partnerships between government, civil society and business. It is a vehicle for integrated service delivery. The MPCC will be a place where people have access to information and services from various service-providers. This may include government (Labour, Home Affairs, Social Development, Education, Agriculture, Communications, Minerals & Energy) parastatals (Eskom, Telkom, DBSA, Sentech, NGOs, CBOs) as well as business and private sector organisations.

² Cabinet Memorandum 15 of 1999, dated 18 November 1999

The MPCC at Highflats is intended to be a one-stop, integrated community development centre, where there is community participation and people's needs are addressed by the provision of relevant services. The MPCC aims to empower communities, especially the poorest and most disadvantaged, with access to government information, services and resources for their own development.

Direct contact has been made by APPLES with the district council official that is responsible for the development of the Highflats MPCC. Space for an energy centre has been allocated in principle. The MPCC design, development and construction is expected to be completed by mid 2008, which should be in time for the APPLES project. Close links with the district council must be maintained to ensure that this option for APPLES is delivered.

2.2 Lucingweni

2.2.1 Mini-Grids

Currently, there are two pilot hybrid systems in the Eastern Cape at the Hluleka Nature Reserve on the Wild Coast and at the neighbouring Lucingweni community.

The **Hluleka hybrid mini-grid system** was installed by Shell Solar and has been in operation since June 2002. The Hluleka reserve was originally supplied with power from two 75 kW diesel generators. The high operating cost of the generators, the unreliable maintenance, and the pollution it generates made it unacceptable. To solve this, the reserve was converted to minimize its energy consumption and to generate this energy from environmental friendly solar and wind power. This conversion included:

- 1) The electric stoves were replaced with modern gas stoves
- 2) The electric hot water geysers were replaced with solar water heaters that is assisted by intelligent gas geysers that boost the water temperature only when necessary
- 3) All the lights were replaced with energy saving bulbs
- 4) An array of solar modules was erected as well as two wind chargers

This Shell Solar PV module array, fitted with 56 100W panels, is wired in series to provide a total capacity of 10.6kW. The array generates 600V DC, which is converted by three inverters to 230V 50Hz. The solar modules are located in close proximity to the two 2.5kW wind generators. In sunny and/or windy conditions, a special inverter/charger feeds 230 volts AC into the electric cables that feed into the camp – this is the basis for the Hluleka mini-grid. The same device guarantees the same voltage output for consumption in the camp. Batteries provide 5 days reserve electricity in the case of no wind and little sun. The batteries and the inverters are housed in the control cabin near the solar panels. The final back up is a diesel generator that will be started up when necessary.

Batteries, wind chargers, solar panels and power consumption are monitored by control equipment. These data are transmitted via a radio-based telephone and the Telkom network to a central computer where the data is then available on an Internet site. This allows Shell Solar to monitor the site 24 hours a day.

During 2004, the Lucingweni hybrid system was commissioned as a rural electrification pilot project by the National Energy Regulator and installed by Shell Solar. The village of Lucingweni consists of 220 homes and is located about 4 km inland from the Hluleka nature reserve. Not unlike a number of the villages in the Eastern Cape in the old Transkei region, this village was developed along more modern lines with each home on a designated plot of land. The land was structured so that each household's piece of land abutted the next. Thus forming orderly rows along which you can string overhead conductors to each house. In a large number of the other villages the houses tend to be scattered and far apart from each other making it unfeasible to interconnect them onto an electrical grid.

Lucingweni was identified by the government to be an ideal location to test the concept of mini-grids, especially because of its close proximity to Hluleka, where Shell Solar Southern Africa had already installed a much smaller mini-grid. Lucingweni forms part of the government rural upliftment programme. The mini-grid was also expected to add to the tourist potential of the area.

Shell Solar installed the generating equipment on the top of the north-facing hill above the village. The equipment consists of a 50 kW array of Shell Solar 100W PV modules and 36kW wind generators serving 220 dwellings (four lights per dwelling, radio, television, cell phone charger, street lighting, telecommunications and water pumping). In the longer term it was hoped that a number of mini-grids would be installed in the area and be interconnected to form a "macro" grid. Eventually, as the national grid comes to the area, this was expected to connect into the multiple mini-grids. The existing generating equipment would then feed into the national grid as well.

Each home is serviced by means of a "ready board" which has been extensively used in the South African electrification programme. The ready board is equipped with circuit breakers, earth leakage protection, plug points plus a control device that can be programmed to limit the maximum daily energy consumption and maximum current the customer can draw. The system was designed to provide a maximum of 1 amp with a daily limit of 1kW hour per 24-hour period. This allows each home to have access to satellite TV, lighting and radio. There is also a supply of 230V to two shops and a unit that was intended to be a community centre.

One of the initial intentions for this pilot project in Lucingweni was for the government to establish an energy information centre as part of Shell Solar's control centre. This was to have been used to educate and inform the local rural population as to the use of various forms of energy as well as the sale of suitable appliances. The "community centre" was intended to have enough space to establish some commercial activities, like a sewing centre. This is a key aspect of the Lucingweni project that must be co-ordinated with the APPLES project.

The mini-grid was also intended to power two existing boreholes, pumping water up the hill to an existing disused reservoir and then distributed to taps located throughout the village. This was part of the government's commitment to bring water to the rural areas, such that there will be a tap within 200m from any dwelling. On the basis of the promised water supply, a local NGO was intending to offer a programme to teach the locals to plant herbs, making use of drip irrigation. The herbs were to be dried on site and sold into the local South African market. Reviving this interest may be another opportunity for APPLES to engage local entrepreneurs (to first provide water and then to consider agricultural applications).

Since the launch of the Lucingweni mini-grid in 2004, there have been ongoing problems around ownership of the system, unreliability of supply, corruption and, most recently (in February 2007), extensive vandalism of the solar array. This has raised questions over

whether the system can ever be operational under local conditions. It now seems clear that the whole mini-grid experience in Lucingweni, although launched with great expectations by then Minister for Minerals and Energy, Phumzile Mlambo-Ncuka, has had a very negative impact on the local community. In some cases, residents are now resistant to talk of renewable energy, and perceive that the mini-grid pilot has delayed their access to grid electricity.

Although the mini-grid system in Lucingweni has had a difficult history and no longer operates, the reasons for this situation should be considered carefully. In general, it seems that the problems are not caused by the technology failing but rather the lack of forward planning for the project such that at no time did the so-called owners of the system ever accept responsibility for it, or maintain it. Once again a white elephant was born and it will be important that APPLES does not contribute further to the long list of such donor projects.

Fortunately this negative reaction to the mini-grid is not the only perception, and views seem to have changed over time. Current feedback suggests that people want to see the problems resolved rather than the system removed. It has also been made very clear to community members on numerous occasions since the installation of the mini-grid that this will not delay access to grid electricity (including a similar message to stakeholders during this APPLES visit). However, this community apprehension remains a serious concern for APPLES, which must take care over any association with the past mini-grid experience.

Data and information on the two pilot hybrid systems at Hluleka and Lucingweni is currently being gathered and analysed by DME to assess their viability and to decide whether there is any basis for future modification and replication. APPLES will need to maintain close association with this government process and ensure co-ordination of efforts.

2.2.2 GRACE

Starting in 2005, the Energy Research Centre (ERC) was part of an initiative that brought together African researchers to study the link between energy access, information and communication technologies (ICTs), and women's empowerment in Africa. The project was called the Gender Research in Africa into ICTs for Empowerment (GRACE). GRACE was a 2-year project funded by the International Development Research Centre (IDRC). The intention for GRACE in South Africa was to explore what women think are the limitations and potential benefits that may be realised with the provision of basic energy services in relation to their access to and use of certain information and communication technologies like cell phones, radios and TVs.

Led by a multi-dimensional approach to development, ERC developed a research framework that draws energy into the ICTs and gender equation. ICTs in combination with appropriate levels of energy provision have the potential to facilitate access to a wide range of activities:

- Long distance education opportunities
- Basic adult numeric and literacy training
- Telehealth / telemedicine opportunities
- Networking amongst women
- Government services
- IT training and coursework

- Public telephone, computer and internet use
- Career development and job preparation facilities
- Entrepreneurial support
- Digitisation of indigenous knowledge and resources
- Access to external markets

However, in rural South Africa the varying levels of energy services may undermine the extent to which ICTs may be accessed and used. Unequal access to either energy or ICTs, is further compounded by the gender disparities that exist in society. Stated differently, the quantity and quality of varying energy services have an impact on women's access to and use of ICTs. In spite of these difficulties, women do use ICTs like cell phones to their benefit. But to what extent varying levels of electricity has promoted the uptake of ICTs requires investigation. If the triangular relationship between gender, energy and information and communication technologies in rural areas could be clarified and issues regarding their unequal access and use are addressed, combined they have the potential to contribute towards sustainable development objectives through empowering women. This is the main focus of the ERC study.

In line with the GRACE empowerment objectives, the research project adopted a people-centred development approach that centred on the integration of energy, ICT and gender concepts. The approach acknowledges that whilst rural people, particularly women, may be poor, they have a wealth of indigenous knowledge, resources and adaptive skills that need to be combined to allow rural communities to escape the poverty trap.

During the GRACE activities, the women selected for participation in Lucingweni were able to share their experiences about how they have used the energy sources available to them to access and use ICTs like radio, TV and cell phones. By telling their life stories and reflecting on their own activities, they expressed their perception of the effect that energy and certain ICTs have had on their lives. The primary objective of the study was for the women living in Lucingweni to communicate the ways that they visualize energy and ICTs contributing towards an improvement in their livelihoods. This GRACE work has laid an ideal foundation in Lucingweni for follow-up focussed on practical implementation through the APPLES project.

3. Visit Preparations

Prior to the main site visit for the needs assessments in both locations, significant preparation was required to bring together all the relevant stakeholders and determine how best to bring out their real feelings about energy requirements. Past experience of the partners has shown that interaction between "outsiders" and local people can produce very biased results. Locals are often known to tailor their responses to what they perceive will be the most advantageous outcome. Embarrassment over current practice is another barrier to understanding the actual situation in such communities. The partners therefore recognised that a carefully thought out approach was required.

To develop such a framework for community interaction, it was first necessary for the partners to agree a common understanding of the energy centre concept that will form the basis for the APPLES activity. Each centre will be based on the aim to provide affordable and accessible energy services to local people, but the format of the centres should be driven

by local preferences. However, it is very difficult for a needs assessment to determine the priorities of the target community if there is simply no awareness of the options. Some basic principles for the centres were therefore required in advance of the visit.

3.1 Energy Centre Concept

The concept of an energy centre is not new in South Africa. For examples, in the late 1950's, Johannesburg Municipality ran an energy centre in one of the suburbs, which provided advice on electrical and town gas appliances and the sale of such appliances. More recently, Government, via the DME and some petrol companies, has established a number of centres based around the sale of petrol, diesel and paraffin. Some of these have been successful while, others have faced insurmountable problems and have been shut down.

The APPLES project seeks to establish energy centres without the petrol company as the anchor. This introduces a new challenge as one can not rely on the income from sales to motorists, to assist in making the centre profitable. The intent is therefore to establish a centre that is self sustaining based on activities that exclude the sale of vehicle fuels.

3.1.1 Issues to Consider

The income stream for the centre should therefore be by means of activities carried out at the centre and its possible energy satellites (outlets in remote communities). In addition there could be some form of support from the DME, local government and possibly private enterprise, the latter possibly via some form of cost subsidy on the goods supplied. A private donation from the social responsibility funds of large corporations may also be a target to support the initial establishment of energy centre operations.

In the first instance the physical structure could be supplied by the local authority, on the basis that the various tenants will pay some form of rental fee for the use of the area they occupy. This cost could be subsidized by the LA or an associated body relating to the activity performed in that area. This energy centre design has particular application in Highflats. The more remote location of Lucingweni has fewer government premises and so a different approach may be required.

It is envisaged that the centre aims to become a focal point for the community and it should therefore be located close to a current commercial centre, or alternatively in itself become a commercial centre. Another option, particularly to address the lack of business activity in Lucingweni, may be to convert an existing business into the energy centre (or include energy centre provision as part of the business activities). Using the energy centre as a base for local or traditional authority interaction with the local community would be a very useful way of gaining local acceptance. APPLES project links with these authorities should therefore be used to explore this option. The location of the centres will determine which LAs would be represented. In addition, it would be ideal if the centre could also become a community meeting point.

The centre will be supplied with energy, probably in the form of a grid connection (in Highflats) or solar power. Alternative options for powering the centre will be explored in Lucingweni – a hybrid system could provide a demonstration of possible renewable energy systems. Energy provision for the centres is essential to enable their extended use and at the same time to power appliances and possibly machinery used at the centre. In addition there

should be a water supply to the centre and a solar water heating system. These two services will at the same time be used to demonstrate solar power and solar water heating.

3.1.2 Facilities

From the outset of their operation, the centres should maintain close links with the provincial DME representatives. The centres must be staffed by representatives who will be on hand to give advice on energy matters. This could involve an official from the relevant local authority or a local community member(s) that have received adequate training through the capacity building provision of APPLES (work package 6). Supplies of pamphlets, preferably translated to the local language, will be made available to educate potential end users of the energy sources. Other information media (such as videos and computer software at the centres or radio coverage) will be investigated to decide whether these will be effective to raise awareness. The centre could also become the information point for Eskom so it can provide advice and receive payments from its grid connected clients. The same could apply to the LA who could also provide information and receive payments at the centre. (These facilities could go a long way in assisting in the funding of the centre.)

The following is a list of some of the activities that could be provided at the centre:

1. The supply of paraffin packaged in safety bottles, the packaging could be done on the site. A useful partner in this regard will be the Paraffin Safety Association of South Africa (PASASA), who may also be able to offer some funding support for the centres.
2. The supply of component parts to make fuel efficient biofuel stoves, plus an education programme on how to make the stove.
3. The sale and installation of solar water heating systems. (this is problematic and would depend on reticulated water to homes in the area.)
4. Assembly facility. The intent is to sub contract to manufactures who want equipment assembled, e.g. printed circuit boards for the electronics sector. This would be a pure employment generator making use of the local energy supply and the facility (This may be more difficult to establish within the timeframe of the APPLES project, but will be a future opportunity for the Centre).
5. The sale of LPG gas and appliances, a customer advice programme would be attached to this. To allow such group advice/education/training sessions, an area will be set aside in the Energy Centre. The Centre will also have equipment to support this function (including e.g. photocopier, slide projector, video machine, etc).
6. The sale of gel fuel and appliances. Again a customer advice programme would be attached to this³.
7. Cell phone charging and airtime sales. Possibly also the sale of cell phones.
8. A child care and baby crèche, to look after children while parents are at the centre.

³ APPLES will need to monitor the situation regarding the sale of gel stoves and fuels in the light of a recent study from the Energy Research Centre in South Africa that indicated a potential hazard from carbon monoxide emissions linked to gel combustion. (Further research is probably required to determine whether this is an acceptable risk when compared with risks from other fuel options such as paraffin).

9. An adult education facility especially related to energy, and energy related functions and literacy.
10. An internet office with suitably trained operators (possibly provided as a public service by the local authority) to provide guidance and training in the use of the internet.
11. Possible sale of coal, though this is doubtful and not to be encouraged unless efficient stoves are available.
12. In the fullness of time mini workshops could be established at the centre, but for now that would be premature.

The legal status, and hence the accountability, of the centre and its staff will be important issues to agree. The first option to be explored will be setting up at least one of the centres as a co-op with members either as entrepreneurs who have a stake in the operation or external community members who provide some form of expertise to the running of the centre.

The facilities listed above could be provided by the central energy centre and/or by satellite centres fed from the central location. This would be the case in Highflats where the centre is in a commercial hub that already sells goods, e.g. gas. The preference will be for the centres to avoid competition where possible since they are intended to provide an additional public service. In Highflats, getting energy to outlying areas is a key aim, rather than servicing passing trade – this should avoid competition with existing suppliers such as the Triangle store. Depending on the local circumstances, the centres must decide whether to compete with the local trade or not.

3.1.3 Entrepreneurial Opportunities

In addition to these centre facilities, opportunities will also be offered to local entrepreneurs, who will receive training through the APPLES project. Such opportunities will depend upon the local circumstances, but may include:

1. A battery charging station for lead acid batteries used by those who have no access to electrical power. This could be provided by a battery sales organization so that at the same time customers can be educated in the proper use of these batteries.
2. The sale and installation (maintenance) of solar PV systems and appliances. Again this could be a local branch of a PV supplier, though this could prevent price flexibility if only one supplier is represented, this would include advice.
3. Sewing machine centre. With clothing sales on site and possible piece work for clothing manufacturers
4. Possible vegetable garden making use of a solar water pumping system. Solar drying of herbs and vegetables.
5. The sale of wood from a community woodlot or the sale of scrap wood from the surrounding wood farms.

These are just a few examples of many entrepreneurial opportunities that can be considered at the centres, each creating work and serving the community. However, a key issue is to understand what is interesting for the local people. Presenting options to potential local

entrepreneurs will be useful, though this should not bias the outcome. The local reaction to any possibilities is the deciding factor to determine which prospects will really be demand-driven.

3.1.4 Satellite Centres

As the communities are very spread out and there are many that are distant from the central energy centre, it would be ideal to have satellite centre within the remote communities. These would be supplied by the central operation and would provide similar services. Some of the administrative function would not be repeated. The satellite would be more of a distribution point. It is feasible however that the satellite in fact supplies the central site with raw product. An example could be the supply of fire wood. Clearly, the details of this need to be developed, giving particular attention to the local cost/benefit - the distribution/supply channels will be key to the success of these satellite centres.

3.2 Method of community interaction

Two levels of intervention with the community were planned in advance: community meetings to present the APPLES project and the APPLES team, and workshops with community representatives and other stakeholders, including local government, to determine the needs and priorities. These workshops will provide the platform for future APPLES activities and therefore participants needed to be encouraged to provide feedback that accurately described the local conditions. A framework for a participatory needs assessment process was therefore agreed in advance.

3.2.1 Purpose of a Participatory Approach:

The objectives of the participatory approach to workshops planned for Highflats and Lucingweni were:

- To provide the APPLES team with strategic advice for the project
- To initiate a framework for participation with the community that enables “the voice of the people” to inform the project decision making process
- To establish a people-centred approach to understanding the views of community from the different research sites
- To develop a strategy for sustaining the work for the life of the project

The participatory needs assessment was about asking people within the community what they want in terms of energy services. The APPLES team planned to start the workshops by asking people to describe their past development project experiences, *what* they would most like to change, *how* they will contribute to make this change come about and *why* they would like these developmental changes. Above all the APPLES team wanted to ascertain to which extent energy can contribute towards these positive changes.

The concept of the participatory needs assessment consists of two main elements.

- A people-centred development approach
- An appreciative inquiry approach

A combination of these elements was prepared for the anticipated interaction with local community stakeholders likely to be associated with the APPLES project. The main purpose of using this approach was to encourage real buy-in to the design and development of any APPLES intervention, and hence aim to achieve local ownership of project results, which will provide a basis for longer-term sustainability.

3.2.2 People-Centred Development (PCD)

This participatory needs-based approach is informed by the view that development is not simply about “products” but that people are essential to the development process. It acknowledges that development interventions need to be driven by the needs of the people that the project intends to serve.

A PCD approach is based on many principles and may be applied in various ways but a fundamental element relevant to the APPLES needs assessment is that of interactive participation. Effective interactive participation means that women and men are involved in the decisions that affect their livelihoods. People are disempowered and projects are undermined when they cannot participate in decision-making that affect them. APPLES will therefore, through the participatory needs assessment strengthen the local women’s and men’s capacity to participate actively and see this as a right and not as a means to achieve the project’s goals.

The PCD approach also recognises that communities have their own knowledge systems and resources that are used to sustain and develop their livelihoods in their own way. The needs assessment was to be conducted interactively with a “facilitator” that attempts to provide “spaces” for people to talk and also “discover” for themselves what these needs are - essentially, to build and strengthen their existing capacities in a facilitatory manner.

3.2.3 Appreciative Inquiry (AI)

One of the main methods used in this APPLES participatory needs assessment was Appreciative Inquiry. It is an interviewing technique that has been used effectively to consult with communities and learn from their experiences, to involve them in change and development interventions and to build a shared vision for the future that everyone helps put into practice.

AI is coherent with the principles of the people-centred development approach because it encourages the involvement and active engagement of the people involved. In this way it empowers people by demonstrating respect for their views and their existing capacities.

AI involves two underlying principles of Appreciation and Inquiry:

Appreciation:

1. **You discover** and value those factors that give life to the community; for example, what do you value most about yourself, your neighbours, the community organisations of which you are a part? What in your view is making a positive difference to the quality of life in your community? What contribution are you making that you are especially proud of?

2. **You envision what might be.** When the best of what is has been identified and is valued, the mind begins to search beyond, to imagine new possibilities. Imagining involves "passionate thinking", allowing yourself to be inspired by what you see. It means creating a positive image of a desired future. e.g. what small outreach project would make a big difference on your block?

3. **You engage in dialogue**, discussing and sharing discoveries and possibilities. Through dialogue, individual vision becomes shared vision.

4. **You create the future through innovation and action.** Because ideals are grounded in realities, there is confidence to make things happen.

Inquiry:

1. **Inquiry into what is possible should begin with appreciation.** The primary task is to describe and explain those exceptional moments which give energy to the community and activate members' competencies and energies.

2. **Inquiry into what's possible should be applicable.** Study should lead to the creation of knowledge that can be used, applied, and validated in action.

3. **Inquiry into what is possible should be provocative.** A community is capable of becoming more than it is at any given moment, and learning how to determine its own future.

4. **Inquiry into the human potential in the community should be collaborative.** This assumes an inseparable relationship between the process of inquiry and its content.

3.2.4 Needs Assessment Techniques

Some in-depth interviews with key stakeholders were planned as part of the needs assessment, and these were complemented by focussed workshops with community representatives and related stakeholders. The approach taken for these workshops was framed by the "Transformational Attitude Interview" (TAI) concept, which is based upon the three areas of discovery, discrepancy and destiny. This investigated the workshop participants' current experience and ideal situation with regard to energy-related activity, the difference between these extremes, and how this gap could be addressed.

The questions used during the workshops were based upon those included in the facilitators guide (Annex 11). In general terms, these covered issues relating to energy and development categories, including many of the following:

Energy questions:

- Can you think of the different ways that you use energy in your family?
- What are the different types of energy used in your household, how has this changed over the years?
- Where does the energy that you use in your household come from?
- What are the kinds of energy sources that you would like to use?
- Do you have any special stories about energy in your family?
- What do you know about energy use in your community?
- How has the type of energy used by people in your community changed over the years?
- How did these changes come about?
- What productive activities do people use energy for?
- What places in your village related to energy stand out and why?
- What are the things that your community could do to improve energy access in the community?
- Are there plans that you know of to improve access of energy to the people living in the village?
- If you were able to receive the energy services you wish for, what would you choose to use it for so that it benefits everyone in the village?

Development questions:

- What do you enjoy about living in Highflats/Lucingweni?
- Could you share a story about a development project in your village that benefited you in any way?
- When people discuss development projects in your village, what is it that they talk about?
- What are the kinds of development projects that you envisage for your village?
- If you were to identify a development project that would be of immediate benefit to your community, what would it be?
- How do you think your community can contribute towards development projects?
- Is there any advice would you like to offer in order to improve development projects in your village?

Though the duration of the workshops did not allow all of these questions to be raised, they provided a useful menu for possible issues to be covered within the TAI framework. To ensure that the time for workshops was used as efficiently as possible, detailed planning of the interaction between moderator (local representative selected from the community, to allow interaction in the local language) and the participants was planned ahead of the site visits. Particularly important was the opening introduction of the facilitators, which set the tone for the session and hence the value of any output.

The interactive approach was an essential element of the needs assessment. However, it was important to take account of the limited resources available (time and budget), the context of this needs assessment (much information was already available about the selected locations) and the need for clear feedback that will provide a basis for the energy centre (some context was necessary but not divergence from this project focus). Despite the likely lack of exposure of participants to related development issues, it was essential that the workshops focused on energy needs. There simply was not the time or resources to address broader issues within the APPLES project, so it was important not to raise expectations. (However, a balance was required since, in some cases, broader issues are clearly essential to provide a framework for the energy questions. In summary, a participative approach provided the basis for the needs assessment, though careful attention was paid to the scope of the project.

3.2.5 Workshop Preparations

Taking into account the intended approach, relevant forms were prepared in advance of the workshops. These included:

- workshop report form (Annex 1)
- workshop participants list (Annex 2)
- information consent declaration (Annex 3)
- workshop programme (Annex 4)

Introductory notes for the key stakeholders, particularly the elected and traditional community leaders in the two locations, were also distributed to ensure that a partnership was developed with the local authorities, based upon their early consultation and buy-in to the process. These introductory notes are included at Annexes 5 & 6. A contact list (Annex 7) was also compiled to assist the logistics of the visit.

4. Stakeholder Engagement, Highflats

The visit to Highflats took place from 19-21 March. The first objective was to agree relevant target communities around Highflats that would be serviced by the intended energy centre. Interaction with these communities and their representatives would then be required to assess the needs in the communities and determine the priorities for any energy centre intervention and hence the future focus for the APPLES project.

The process of community interaction was divided into two sections, the first day being devoted to a community meeting at each relevant location where a description was given by the APPLES team of the energy centre's purpose and method of operation was described. This was followed the day after by a workshop of selected participants who would liaise with the communities they represent and provide input as to the communities needs and capabilities.

A wide range of stakeholders were consulted during this visit, with different platforms being provided for interaction with the APPLES project team. In principle, the team expected to conduct a community meeting in relevant locations around Highflats (upto three locations had been selected in advance). These meetings were then to be followed by a workshop for selected representatives of the targeted communities. In the event, two locations were

selected and alternative arrangements to replace one of the community meetings were required due to last-minute disruption of the intended schedule.

4.1 Community Meetings

In discussions with the deputy mayor and IDP manager of the uBuhlebezwe municipality it was decided that the most appropriate model for the energy centre would be to have a central location at Highflats, as part of the MPCC with three satellite energy centres in Jolivet (Ward 7&8), Mahehle, and at a partially completed community hall going into the Nkweletsheni valley (Ward 5, with 7,000 people).

It was subsequently decided not to proceed with Mahehle at this stage as it was on the other side of Ixopo and therefore far from Highflats. Community meetings were therefore arranged for the Jolivet area consisting of Wards 7&8 which were both partially electrified with Eskom power, and with Ward 5 which was unlikely to be electrified for some time if at all. This provided a reasonable potential mix of requirements.

Unfortunately the day before the community meeting in Ward 5, one of the leaders passed away and custom demanded that the community attend his funeral on the day that had been set for the community meeting. Since the local Parallax representative, Zimbili Kumalo, had already had a meeting with the Ndunas of Ward 5, together with councillor Mr. F. Ndlovu, it was felt that the community would be informed sufficiently about the project. In addition, the purpose of the APPLES project was described in detail during a meeting with Busisiwe Mhlongo, a Ward 5 committee member works closely with the local councillor in Nkweletsheni and is tasked with development in the area (there are 10 Ward committee members). A meeting was also held with Cornelia Khomalo, chairperson of a block committee of Ward 5.

4.1.1 Meeting with Busisiwe Mhlongo

Purpose: Developing an understanding of community organization and lobbying for community support of APPLES project.

The APPLES team introduced the objectives of APPLES to Busi. Since she works closely with the ward councillor one of the reasons for the meeting was to ensure that the ward selects representatives to participate in the NA workshop. At this point Zimbili had not been able to confirm representatives in spite of numerous calls to the ward councillor.

In the village of Nkweletsheni the traditional structures and geographical boundaries differ from the political structures and boundaries (predominantly ANC supported). Nkweletsheni is part of the ward 5. Ward 5 has ten committee members. Ward 5 is made up of different block committees. The local Ndunas (headmen) have their own committees. Ward 5 has approximately 6 Nduna's and about three Nkosi's (or Chief - more senior than Nduna) which gives an idea of the traditional "boundaries" that this Ward encompasses. In this area the Ndunas and Ward committees appear to have been working well together.

When discussing the energy sources and services that the energy centre should offer, Busi said that they had been told by their councillor that their area would be electrified by 2009. This apparently depended on the completion of a sub station in Kenterton. (Previous

discussions between Parallax and the KZN planning manager for Eskom indicated that, with luck, they could be electrified by 2012, and then many of the remote homesteads would not be connected).

On the IeC Busi said that she would be interested in seeing the centre provide educational opportunities for the unemployed youth in her area. She said that there were many matriculants who needed additional education training to increase their job opportunities.

An important point to note was that Busi is computer literate and has completed a secretarial course. She has a very close working relationship with the local councillor and the Ndunas. She would therefore be potential APPLES representative for the energy centre, though travel and her commitment to the councillor could be a problem. Again this discussion re-enforced the need to stay out of the local politics. It was obvious that her knowledge about energy was very limited and shows again the need to introduce “energy literacy” to the communities. She could offer her secretarial and computer skills to the community. She attended the workshop meeting the following day

4.1.2 Meeting with Cornelia Khomalo

Purpose: Investigating household energy sources and energy appliances used and establishing the potential for supporting micro-enterprises

Cornelia Khumalo is the block committee chairperson in her area and also runs a micro enterprise.

Cornelia showed us her cooking area. She uses a 6kg gas cylinder for cooking and a 19kg cylinder for her 120L Zero gas chest deep freeze. This freezer cost her R4000, for which she paid cash. She uses this gas freezer to store cold drinks, polony and suckers (frozen popsicles) which she sells to her neighbours. The cost of fetching the gas from Highflats is R25 to bring back a full 19kg cylinder and R10 for the 6kg cylinder. She does not pay for the transport for the empty cylinder to Highflats. She pays R25 each way for her own taxi fare. She pays R200 to fill the 19kg gas cylinder, once a month, She pays R100 to fill the 6kg cylinder. Gas is primarily purchased from Moosa or Triangle Stores in Highflats.

In addition to using gas she uses paraffin for slow cooking and an open wood fire in the kitchen hut for space heating and boiling water. Cornelia said that although she generally preferred using gas, in winter using wood has the added benefit of space heating. Her main concern around using wood was the indoor smoke created when using wood on windy days and the potential danger from snake bites when collecting wood in the forest in summer.

The household uses three different energy sources for cooking i.e. wood, paraffin and gas.. The Khumalo family owns one primus stove, and two 6l gas cylinders with cooker tops. The paraffin stove is preferred for boiling water. Cornelia pays R22 for 5l of paraffin at the local store. She pays R100 to refill her 6l gas cylinder in High Flats and pays R10 for its transportation.

Cornelia also has a 50Wp solar home system that was purchased from the local Switch On business that was established in the previous Parallax activity in the area. This is used to provide electricity for lighting (x4) and media appliances (a black and white TV and a music system). With the system she also charges cell phones (@R5.00 per phone) and car batteries (@R10.00 per charge) for customers that live close to her. In addition she sells

polony at R0.50 per slice. Based on this entrepreneurial activity, it could be feasible for her to become a sub distribution point for the IeC for her area. When asked what her prime needs would be, she responded that she would like to buy gas at a lower price (the transport cost is high as is the per kg cost as compared to buying in Durban). She would then be able to increase her profit and make cooking easier.

4.1.3 Meeting with P.P. Ndlovu.

Purpose: Investigating possible impact of new energy centre on existing local business

The question arose on how the proposed energy centre would impact on the existing small and large businesses in the area and that we should find out what was being charged for the various energy products and services being offered by them. On this basis, it was decided to visit P.P. Ndlovu, a former ward councillor in uBuhlebezwe and owner of several spaza stores, including the Riverside Store in Nkweletsheni that hosted the Switch On business.

Ndlovu was happy to see the APPLES project team based on previous contact, but was probably not so happy with the message. The APPLES team explained the objectives of the APPLES project to Ndlovu. He was very interested to hear that APPLES will be exploring opportunities with existing businesses. But he did appear to be concerned when told about the energy centre and the services that it intends providing. As the owner of three large stores in the area, he would lose energy related sales. He could (would) not say what his sales were for paraffin and gas or what he paid for these products. He said he would have to look these up. It was obvious that he had no intent to do so. He did mention that unemployment was high in the area and that his business had suffered because of this. (It may be that the locals were shopping in Highflats because his prices were too high). Judging from the number of small trucks piled with groceries and passengers in Highflats, this could well be the reason for this reduction of sales. This was confirmed by Zimbili.

Ndlovu did say that the sale of gas and paraffin was important to his business. He mentioned that gas had become very expensive, but in spite of this people (especially teachers) continued using gas. Paraffin heaters are another appliance used by households in this community. He said there are quite a few people that own gas fridges and freezers - these people use their fridges and freezers to "sell stuff". Regarding payment, Ndlovu confirmed that he does give credit at his shops and he indicated that he had no debt payment problems.

4.1.4 Jolivet meeting, Ward 7 (1200 people), & Ward 8 (9000 people)

Jolivet is located on the main road from the coast to Highflats and Ixopo. It is obviously a relatively affluent area when compared with Nkweletsheni and has been partially electrified. The community meeting was held in the Jolivet community hall. It was arranged by the deputy mayor Nkosiyezwe Vezi. He was able to get all six ward committee members of ward 8 to attend - it was clear that he was closely linked to the committee and that they respected him. Ward 7 is run by a different councillor who could not attend the meeting, though he promised that three of his ward committee would attend the workshop.

The APPLES team explained the reasons for setting up an energy centre, that a satellite centre could be established in Jolivet, and what the expected outcome would be. It was emphasized that this process was at a very preliminary stage and that nothing could be confirmed regarding the future of the process.

4.1.5 Other Issues

As part of its poverty alleviation the uBuhlebezwe municipality provides a two plate gel fuel stove and 5 litres of gel fuel per month to the poorest families. Those families that have a joint income of less than R1200.00 per month are eligible for this grant.

4.1.6 General Conclusions

The planned community meeting in Nkweletsheni did not take place. This suggests that extra effort will be required in the future to persuade the local councillor and local Ndunas to support the APPLES initiative.

The uncertainty over grid electrification may be a contributing factor to the “reluctant” participation in Ward 5. In the discussions with Busiswe Mhlongo, this issue was raised repeatedly when she was asked about her current energy use, her energy needs and the energy centre. She said that a sub-station will be built and then they would have electricity.

In Highflats it seems that many of the solar home systems made available through the community business Switch On Energy Services are used to produce an income. Households owning a system will often charge cell phones and batteries for a fee. This small business may be stimulating the SHS market in the area, instead of the need for basic energy services. The consumer motivation for SHS needs to be investigated to determine whether this is an appropriate means of future local energy supply.

In terms of the needs assessment, further investigation may be required into the appliances that are generally used by households regularly charging batteries to establish their energy needs. Judging from the appliances used in the households visited, it is unlikely that the current 50Wp solar home system meets the energy needs of these households. It is likely that those households charging their batteries for a fee have similar appliances. Soon these households are likely to experience problems with their batteries, particularly SHS owners. This factor is known to affect customer satisfaction (withholding monthly re/payment is a potential indicator) and perceptions on renewable energy as a possibility for fulfilling basic energy needs. It may also indicate the need for education around the potential and limitation of SHS usage.

In the meeting with Cornelia Khomalo, she was reluctant to reveal her sources of income (though she was eventually persuaded by the local project team members). Her reluctance is not unusual. In previous studies, people have been known to either inflate or deflate their income depending on the objective of the study. This may pose a challenge for the APPLES in relation to the income levels of other households as well. It will be necessary to determine the varying levels of household income for the targeted area/village to determine the services that the energy centre should offer. Knowledge of income levels may also help the APPLES team motivate for an energy subsidy from local or national government. For instance, it does not make sense to stock SHS if the income levels in the area indicate that people will not be able to afford this type of product. If the energy centre is to provide access to ICTs as well, then the “ability to pay” for these services becomes a determining (success/failure) factor. Micro-financing issues may need to be addressed by APPLES to ensure that local energy services are affordable.

Credit history information may provide some measure of the local households' "ability to pay" for services that the energy centre intends to offer. It may also be shared with potential micro-credit organizations to enable households to purchase energy appliances or to explore micro-enterprise opportunities.

Local project team members expressed some concern about the visit to PP Ndlovu on the basis of conflicting political allegiances. It seems that there is some tension between the local councillor and Mr Ndlovu because they are from different political parties. Mr Ndlovu was also the previous ward councillor. It was suggested that the ward councillor should not be informed about the visit Mr Ndlovu, demonstrating the extent of political tension in the region.

4.2 Needs Assessment Workshop

The workshop started at 9.30am and all of the participants provided their details (Annex 9). 10 people attended from wards 5, 7 and 8. (Ward 5 is far more rural than the other wards, and is a poorer community. This is probably because of migration to the area that was electrified, and the main road running through the area). Significant time was spent explaining the objectives of the APPLES project. Since the funding of the project had still not been confirmed at this point, it was decided to explain the project as having a phased funding approach with the needs assessment being the first phase for which funding had been secured. However, the APPLES team emphasised the potential value to the community and the local municipality of the energy needs assessment report even in the absence of further funding.

4.2.1 Goals

The workshop was composed of four key goals:

- Defining priority energy needs
- Defining the energy centre services
- Defining business opportunities: existing and new
- Defining the capacity building requirements

However, before addressing these key issues, it was important to spend time defining the concept of energy to the participants. This step, which is often overlooked in such external interventions, was an essential part of the process since drawing meaningful input from the workshop participants was dependent upon them understanding the issues and options available before making any proposals for the focus of the APPLES project.

4.2.2 Defining Energy

Different energy sources relevant to the area were considered (defining renewable and non-renewable), looking at current uses and then suggesting alternative options and defining potential opportunities. Due to the perception of renewable sources of energy as being 'inferior' to grid electricity, some time was spent explaining e.g. that electricity from solar panels could be used in the same way as grid electricity but that it depends on the size of the

system. Of course a major issue is the cost. Another important issue explained was the reason for the fluctuating price of paraffin and gas since people often commented on the rising cost of paraffin and gas at the local spaza and are distrustful of the prices charged.

Energy sources considered in particular detail included:

Renewable energy (issues such as government policy to reduce greenhouse gases, increase share of electricity generated from renewables)

- Solar: solar water heaters, solar dryers, water pumping, solar for electricity (PV panels, solar home systems, telecommunications, MPCCs with long distance education and training, tele-health services etc, telecentres
- Wind: wind mills, wind turbines, mini-grid hybrid systems

Non-renewable energy (issues such as impact on the environment during the production process and environmental impact when used as a fuel)

- Crude oil: international market, price fluctuations, refining, paraffin, gas, petrol and candles
- Coal: coal mining, production process, idea of different power levels (voltage) at substations-step down, electricity pricing, energy efficiency, energy “switching” in poor households

Energy use was also considered in some detail (explained in conjunction with the above energy sources and energy related appliances). This included:

- energy for cooking and heating
- energy for lighting
- energy for transportation
- energy for ICTs

4.2.3 Determining Goals

To determine the community energy needs, workshop participants were helped to imagine their “energy dreams” as current reality – this process stimulates creativity in thinking and practice in order to imagine new possibilities and to allow these possibilities to inspire the work towards the vision of a needs-centred energy centre. Each individual shared their ideas with the partners in the group and then in the plenary session. Through dialogue, individual vision became a shared vision.

The most common energy requirement idealised by participants was electricity:

- they use wood to cook but would like electricity to run a microwave
- they use paraffin or a wood fire to boil water but would like to use an electric kettle
- when cutting hair they would like an electric clipper
- the spaza shop uses a gas fridge and they would like to have an electric fridge
- instead of a broom they would like an electric vacuum cleaner
- they use a coal Iron they would like an electric Iron.

- the mechanic uses a hand pump but would like a compressor for pumping and spray painting
- a mother in the group uses an iron pot for baking over a wood fire and would like an oven
- the mechanic uses a blow lamp would like to do electric welding
- at community meetings they take notes by hand would like a computer
- they sew using a hand-powered machine and would prefer an electric machine
- the hairdresser uses curlers but would like to use electric tongs
- they don't want to walk so far for water but rather want it pumped to their houses.
- the school feeding scheme uses wood for cooking, electrical stoves would be better.
- radios use a lot of batteries, electricity would be better
- they charge cell phones with car batteries and would prefer to use electricity

Other non-electrical energy-related needs included:

- when going to the spaza shop, they use a donkey to carry the goods - a vehicle would be better.
- to call a community meeting they use a loud haler, but would like a amplifier in a car
- children walk to school but they would like to go by taxi or bus.
- they would like to learn skills in their local region instead of going to the city (the skills mentioned were carpentry and welding)
- they don't want to cut the verges of the roads by hand but rather they want to use petrol grass cutter

Their preferred use of electricity may be categorised into domestic activities, community services and small business interests. The activities requiring electricity were:

a) Domestic activities:

- Cooking
- Boiling water
- Water Collection
- Radio/TV
- Ironing
- Vacuuming
- Warming food – microwave

b) Community services:

- Computers – writing minutes of community meetings
- Schools – feeding scheme (cooking), computers, overhead projector, copies, faxes
- Skills development centres
- Baking – bread, catering
- Transportation
- ICT services listed– faxing, emailing, printing, internet access, typing, photocopying
- Community meetings – microphones, posters

c) Small businesses:

- Welding – gates, burglar bars, car exhausts

- Carpentry
- Spaza shops – lighting and refrigeration
- Hair salon – tongs, hair clippers, hairdryers
- Sewing
- Motor mechanics – welding, spray painting
- Cutting grass

A second step to determining energy priorities was for the individual workshop participants to consider their current energy-related activities. By comparing their current reality with their energy dream, participants were able to determine their energy needs. This process included thinking about “where you get the energy from, how you get it, what you use it for, who uses it”. By defining their energy *use*, the participants were able to make a direct link to their energy *needs*. In their groups they wrote down their energy dream and then also their current reality.

Finally, all the workshop participants were asked to rank the energy needs identified. The participants discussed and agreed on a final ranking which will help APPLES to understand the energy priorities of the targeted communities.

Having established their priority energy needs, the workshop participants were then asked to imagine the energy centre as a change that can take a step towards the group energy dream by satisfying the needs identified. They were asked to consider what services the energy centre will need to offer to help fulfil their energy dream. These ideas were shared in groups to bring some overall priorities. A list of services required from the energy centre was developed.

To consider local business opportunities from greater access to energy, the participants were asked to consider their energy dream and their ideal energy centre, and then to imagine what energy-related local businesses may be explored. The group discussed how energy may improve existing businesses, how new businesses can be created with different energy sources, and especially how the services offered by the businesses can improve the lives of people in their area.

Capacity building requirements were identified by asking participants to imagine the skills that they and their community required to make their energy dream become a reality. This time, participants were asked to consider all the components of their energy dream (energy priorities addressed, energy centre providing relevant services and energy-related local businesses operating successfully). Then they were asked to consider what capacity or related skills related exist in the community that APPLES could build upon. And then to consider the skills that are required.

At the conclusion of the workshop, the APPLES team explained how the information collected will be used. The phased funding approach was again emphasised and the team stressed that APPLES did not want to raise expectations regarding the energy centre. All participants were thanked for their involvement and hard work in representing their community in the workshop.

4.2.4 Strategic Considerations

A number of issues were identified during this visit that will need to be taken into account by APPLES in order to ensure an appropriate strategy for the sustainability of any interventions:

- Transport services, especially to Nkweletsheni, are generally irregular and expensive. The APPLES team raised this as an issue, suggesting that the local councillor together with the municipality should take it up with taxi operators or the Department of Transport. More directly, the cost of transporting gas was considered to be a significant issue and should be addressed.
- The prices charged for paraffin and gas at local spaza shops should be improved by perhaps negotiating with suppliers and setting reasonable local prices
- Cooking, wood and water collection are not “appreciated” as they are seen as women’s work
- Gas appears to be an important source for cooking in this area and generally used and accepted as an alternative to wood
- Energy efficient wood stove options should be explored since it became apparent that wood will always be used
- Since Jolivet and Nkweletsheni are far apart, the costs of transportation for local APPLES representatives will need to be budgeted when organising meetings and/or training
- Household, community and (local) government “energy literacy” is an important aspect that the APPLES team needs to introduce as a first step at different levels

5. Stakeholder Engagement, Lucingweni

The visit to Lucingweni took place from 21-23 March, although much of 21 March was devoted to travelling from Highflats. The intention at Lucingweni was to conduct a similar process to that planned for Highflats, with a community meeting expected to be held on the first day and a workshop with a small number of participants representing the target community on the second day.

The situation in Lucingweni before this visit was very different from that in Highflats due to the recent GRACE project work that has provided an excellent foundation for APPLES. Community representatives were identified as part of GRACE and have been subject to energy awareness raising and capacity building for the 2-year duration of the project. However, for the APPLES project, it was necessary to explain the intentions to the wider community and ask for their endorsement to use the local GRACE contacts as representatives for APPLES.

5.1 Community Meeting

The expected meeting schedule that had been agreed in advance using local contacts did not occur. This was most likely due to the meeting arrangements not being communicated to households – this breakdown in communication needs to be investigated to avoid similar disruption in the future (see general conclusions below).

Instead, a joint meeting was held, which included the GRACE representatives, the community leaders (Councillor Mziba, member of the local authority Exco responsible for community services, sent Councillor Tunzi to represent her), the community representatives for the APPLES needs assessment workshop and the paraffin project service provider

(Monwabisi from the company Sithubeni CC). Villages surrounding Lucingweni were represented, together with a small number of participants from the electrified Lucingweni region. The local ward 20 councillor, Mpongo, acted as the chair and the interpreter for the meeting.

(It seems that there was some confusion with the date of the meeting since the local Chief was told that the meeting should have been held on the previous day. The Chief came towards the end of the meeting, but did not participate).

5.1.1 Proceedings

Purpose: To introduce the APPLES project to the Lucingweni community and to establish their support for the proposed local energy centre.

The APPLES objectives were explained to the meeting. As in Highflats, the phased project and funding approach was emphasised since the funding of the project has still not been confirmed. However, the APPLES team explained that, even in the absence of APPLES phase II, the needs assessment report could still benefit the community. The report will give the local municipality a clear indication of the energy needs of the community and this could contribute towards improved service delivery in the area, which is a vital aspect of governments' strategic policy.

The role of the APPLES team was also explained - as facilitators in the establishment of the IeC. This involves developing existing resources and bringing together relevant stakeholders to establish the energy centre.

After the presentation of APPLES and some general discussion, the people present also confirmed their acceptance of the GRACE contacts as the local APPLES representatives. It was agreed that the GRACE women had the skill to transfer the information.

5.1.2 Other Issues

During the community meeting, a discussion about Eskom electricity was raised. People asked about whether the energy centre would delay the arrival of grid electricity from Eskom. The councillor made it clear that they, as the municipality, have made a promise to electrify Lucingweni by 2009. He was very clear that this was their responsibility and that the community members should not be asking APPLES about this commitment. Again, as in Highflats, the APPLES team will have to be careful regarding this promise of electricity from local government.

There was also a short discussion about the mini-grid system. The general mood of the meeting was that the mini grid was not acceptable and that they wanted "real Eskom electricity". The APPLES team made it clear that the mini-grid and the proposed energy centre are separate projects. The team also informed the meeting of the DMEs intention to make a decision about the future of the mini-grid system soon, based on an evaluation study recently commissioned by the department. It was explained that, in the long term, the energy centre may be linked to the mini-grid system, but not in the foreseeable future since this project had a limited period within which the energy centre must be established.

There is a massive education task required from APPLES as there clearly is very little understanding as to the cost of cooking with electricity, what the various energy options are or what the mini-grid's capability is. If this education is done properly, and the mini-grid is operational, it will be useful to explore whether it could be a future anchor for the energy centre, which could provide the maintenance and revenue collection task. (The energy centre could also provide the same service to Hluleka).

Sithubeni CC were invited to attend the community meeting. They have the contract to supply paraffin to the Lucingweni area. This is done via agents that were set up by this young BEE company. They deliver 20 litres of paraffin every two months to homesteads that have been identified by the municipality. The criteria being that the monthly income for the homestead should not be more than R1,500.00. The councillor admitted that the data base of the municipality was not up-to-date and that, because of the change in the boundaries of the local authority, some of the targeted homesteads were not receiving the paraffin.

5.1.3 General Conclusions

The local chief was not there for the entire community meeting, apparently because he had been travelling to/from Umtata and arrived late. The APPLES team was told by the local councillor that he had not been given the correct day and time and that he had expected the meeting on the 21st March instead. In fact, it seems likely that the issue is more complex than was admitted by the councillor. A variety of sources have indicated that there may be some hostility between the Chief and certain ward committee members around his failure to follow guidelines that have been agreed to e.g. employment of locals for development /poverty alleviation projects⁴. One area has also been the mini-grid system and hence anything related to energy appears to be dismissed by him.

On the issue of the mini-grid there is some suspicion that the Chief may be condoning the vandalism of the solar modules. This is strange since initially the project was supported by him. In fact his homestead was used as a storage facility for equipment. The keys for the system and the community hall, were also left with him. No access is permitted without his permission. However, when local residents were asked about the recent damage to the solar panels, their comment was, "...how can you expect the panels to be looked after if you don't pay the person who provided the security". The links between the Chief and Shell Solar, the installers of the mini-grid should be investigated further by APPLES before any association between the Chief and the energy centre is agreed.

The energy committee was established to oversee the mini-grid hybrid project in Lucingweni. APPLES may benefit from persuading this committee to be involved in APPLES, perhaps as the "steering committee" to whom the APPLES representatives are accountable locally, and also to ensure the ongoing support of the local councillor and local Ndunas.

It is clear from various discussions that the issues surrounding the mini-grid system require some resolution soon. Issues around ownership, maintenance and servicing need to be clarified as soon as possible before there is further damage to the community as conflict

⁴ This community is highly organized. There are many sub-committees in place to deal with a variety of community-related issues. Each of the five villages has a committee that consists of both political and traditional representatives. Collectively these representatives, together with the Chief, act on community issues. These community structures have agreed on guidelines related to e.g. land allocation, development/poverty alleviation project employment opportunities, etc.

around the system deepens. Missing from the discussions, however, is a link to a comprehensive information and education campaign within the community.

In the past, when the mini-grid system was working, households have been known to be cooking with electricity from the system - people had purchased two-plate stoves to do so. This level of consumption exceeds the design capacity of the mini-grid. This suggests that the community has not been educated sufficiently about the system and what energy services it can and cannot provide.

People have previously been very unhappy with the mini-grid system due to its unexpected limitations, and wanted it “removed” because the electricity was perceived to be “inferior”. This appears to have changed. The general impression from local sources during this visit is that the community wants the system. (There are indications that this is linked to cellphone usage, with people in the area having the ability to charge cell phones and generate an income, though some confirmation of this is required). Something seems to have shifted perceptions, despite the recent vandalism indicating otherwise.

Another issue related to the system is the danger that the potential of the technology is being overplayed for a number of reasons. A primary one is that, as a pilot project, there are vested interests in ensuring that it is perceived as a “model” for rural electrification to be replicated possibly not just in South Africa but also in other African countries. For APPLES, increased awareness of the issues surrounding the mini-grid system will be required to ensure that any approach adopted by the proposed energy centre meets the real community needs rather than using the supply-driven approach that led to the mini-grid.

5.2 Needs Assessment Workshop

The workshop began at 10h00 with a brief explanation of objectives of the APPLES project. A similar procedure was followed as in Ixopo except now everything had to be done via local interpreters, Zimbili and Nonthobeko, though they grasped the concepts and were able to lead the discussions. The workshop was attended by 12 delegates being the GRACE team and members of the ward committees of the surrounding villages (see Annex 10 for list of participants).

The same goals were identified as for the workshop in Ixopo and some time was devoted, as in Ixopo, to the definition of energy.

5.2.1 Determining Goals

The workshop participants were first asked to give their ideal requirements for a better life. Some of the current problems identified included lack of work opportunities, inability to pay school fees and lack of clean water. Requirements ranged mainly around water supply, better roads, a clinic nearby, computer centre, education for children and jobs. They specified the need of electricity for a better life and particularly electricity for a computer centre (there was a strong perception that without computer skills their children will not get work).

After taking some time to discuss various energy sources, the participants were asked to consider what form of energy is currently used by them and the surrounding local businesses. The list of activities is given below:

- Boiling water – Paraffin, gas, wood
- Ironing clothes – Paraffin , gas, wood
- Transport – Petrol, diesel, oil, water, air
- Cooking – Wood, paraffin, gas, electricity (there was no understanding as to the relative costs of these energy sources for cooking purposes)
- Welding – Generator, gas (oxi acetylene), Battery ?
- Hair salon – Electricity, solar
- Cell phone charging – Solar, battery, Generator

When asked to set priorities on their needs, it became obvious that a lot more energy information needs to be provided; the lack of knowledge clearly influenced much of the two hours that it took to set the priorities. The eventual list of the top 10 priorities was as follows:

1. Cooking
2. Lights / Water pump
3. Clinic
4. Fixing roads
5. Computer, fax, typing / washing machine
6. School feeding programme / School TV
7. Baking / plumbing /spaza shop
8. Charging batteries, cell and car / Petrol, Diesel, oil, air (no petrol station nearby)
9. Boiling water / Ironing
10. Welding / Solar power systems

The most commonly mentioned ideal energy source was electricity – as it was for Highflats. Using the same categories as the Highflats results, the demand for electrical services is summarised below:

1. Domestic activities

- Cooking
- Boiling water
- Water pumping
- Lighting – including street lighting
- Charging cell phones
- Homework – lighting
- Radio
- Watching TV

2. Community services

- Computers – faxing, emailing, printing, internet access, typing, photocopying
- Catering – school feeding scheme
- Invitations to community gatherings – using radio, writing letters, using sms

3. Small businesses

- Plumbing – gas, generator
- Spaza shops – tills, public phones, lighting and refrigeration (cooldrinks, ice-cream, polony, beer)
- Hair salon
- Sewing

- Mechanics

One major addition to the demand for electricity is the need to service transportation – a local petrol station is required.

The final step for the workshop participants in deciding energy needs was to prioritise the issues identified. This completed the first major goal for the workshop.

The other goals (identifying the services required of the energy centre, deciding on small business opportunities and determining the capacity building needs) were all addressed in sequence in a similar fashion to the procedure in Ixopo. Useful results were also achieved in Lucingweni and the participants were thanked for their efforts at the end of the day.

5.2.2 Strategic Considerations

Some of the issues identified and the questions raised by local interaction with the APPLES team during this visit will be important to consider further if the sustainability of any intervention is to be secured. These issues included:

- The need to consider the APPLES relationship with Chief
- Eskom and the local municipality need to inform the local community of the planned electrification process - this should also be considered by APPLES
- Why were the “keys” to the community hall not handed over to the APPLES team as arranged – this shows either a lack of communication within the community or a lack of the Chief’s support for APPLES
- Why were some project team members told that the mini-grid was a “rubbish thing”, even though other team members reported a positive feeling towards the mini-grid?
- There is a need to consider co-operation with Monwabisi from Sithubeni, the paraffin service provider
- The activities of Switch On Energy Services in Highflats were of interest to participants, particularly the installation, maintenance and financing of the solar panels supplied (see 2.1.1) – this could provide useful practical experience
- The potential for solar systems to power the use of information and communications technologies (ICTs) in Lucingweni should be considered.

6. Energy Requirements

In Ixopo, the energy needs listed were:

Domestic activities	Current use
• Cooking	Wood, paraffin, gas
• Boiling water	Paraffin, wood
• Water Collection	Walks to river with bucket
• Radio/TV	Batteries, SHS
• Ironing	Coal, wood
• Vacuuming	Broom

Community services	Current use
<ul style="list-style-type: none"> Computers – writing minutes of community meetings 	By hand
<ul style="list-style-type: none"> Schools – feeding scheme (cooking), computers, overhead projector, copies, faxes 	Wood, gas (cooking), teacher writes on black board for learners to copy notes
<ul style="list-style-type: none"> Skills development centres 	Too far and expensive to travel
<ul style="list-style-type: none"> Baking – bread, catering 	Wood (in iron pot)
<ul style="list-style-type: none"> Transportation 	Taxi/bus prices too high and infrequent
<ul style="list-style-type: none"> ICT services listed– faxing, emailing, printing, internet access, typing, photocopying 	Only available in town
<ul style="list-style-type: none"> Community meetings – microphones, posters 	Posters are written up, loudhailers
Small businesses	Current use
<ul style="list-style-type: none"> Welding – gates, burglar bars, car exhausts 	Blow lamp
<ul style="list-style-type: none"> Carpentry 	Hand held saw
<ul style="list-style-type: none"> Spaza shops – lighting and refrigeration 	Paraffin, gas
<ul style="list-style-type: none"> Hair salon – tongs, hair clippers, hairdryers 	Scissors for cutting, towels for drying, curlers (more time consuming)
<ul style="list-style-type: none"> Sewing 	Hand driven sewing machine
<ul style="list-style-type: none"> Motor mechanics – welding, spray painting 	Blow lamp, hand pump (affects quality)
<ul style="list-style-type: none"> Cutting grass (along the roads) 	Hand shears

These needs were ranked by the workshop participants in order to determine the priority energy needs around Highflats. The ranking evolved into five levels of priority, with all the levels having more than one need listed.

	Priority Energy Need	Priority Energy Need	Priority Energy Need
LEVEL 1	Clean water on tap – the river is too far and the water is often dirty	Cooking – Paraffin, LPG and wood (wood is the cheapest option, electricity too costly)	
LEVEL 2	Local skills developmt centre with electricity for computer, welding, carpentry learnerships	Computer access	Electricity for a stove to cook and bake
LEVEL 3	Boiling water at home – paraffin	Spaza shops – gas for refrigeration, candles for lighting to stay open longer	
LEVEL 4	Radio and TV – batteries	Transportation	Solar system – for ICT services (as listed above)
LEVEL 5	Local school feeding	Boiling water at	

	scheme – wood , gas	school – paraffin	
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In Lucingweni, these were listed as the energy needs:

1. Domestic activities	Currently uses
• Cooking	Wood, paraffin, gas
• Boiling water	Paraffin, wood, gas
• Water Collection	Fetches water from the river needs water pumping project
• Radio/TV	Batteries, mini-grid system
• Ironing	Coal, wood
• Cell phone charging	Mini-grid, solar panels
• Charging car batteries	Mini-grid, solar panels
• Lighting	Paraffin, candles
2. Community services	
• Schools – feeding scheme (baking/cooking)	Wood, gas, solar for TV
• Petrol station	Taxis often get stuck without petrol
3. Small businesses	
• Catering	Wood , paraffin, gas
• Plumbing	Generators, gas
• Spaza shops – lighting and refrigeration	Paraffin, gas
• Sewing	Hand driven sewing machine
• Mechanic	Gas

The participants discussed and agreed on the final ranking of priority energy needs. The ranking again evolved into five levels of priority energy needs, with all the levels having more than one need listed. In Lucingweni this process took very long to come to an end. There was a lot of discussion on what the priority needs should be. However, time was allowed to let this process to come to a natural end since the discussions were likely to assist the participants in developing improved energy learning and awareness.

	Priority Energy Need	Priority Energy Need	Priority Energy Need
LEVEL 1	Cooking – wood, paraffin and gas	Electricity for lighting and water pumping	
LEVEL 2	Water project – water from the river is often dirty, some areas there		

	is no easy access		
LEVEL 3	Building clinic – clinics are too far and there is no transport at night (people have died)		
LEVEL 4	Fixing roads project – very little development projects because of access		
LEVEL 5	Electricity for ICTs – computers, faxing, typing		

7. Role of Energy Centres

In Highflats, the products/services required from an energy centre were listed as:

- Energy efficient lights for 220V
- Battery sales (including car batteries)
- Gel fuel stoves and gel
- Paraffin in safety bottles
- Coal
- Computer centre
- Solar cookers
- Energy appliances
- Paraffin and gas heaters
- Skills development, training
- Battery charging (cell and car)
- Cell phone air time
- Candles
- Solar power sales and installation
- LPG
- Tokens for pre paid electricity
- Public telephone facilities
- Sale of wood and charcoal
- Sale of gas
- Communal TV/ radio facilities
- Wood stoves

In Lucingweni, the products required from an energy centre were listed as:

- Paraffin
- Petrol
- LPG
- Solar panels
- Diesel
- Batteries

- Oil for cars
- Globes (lighting)
- Cellphones and cellphone airtime
- Brake fluid
- Two plate stoves
- Paraffin and gas heaters
- Low-energy lights
- Candles
- Matches
- Cooldrinks
- Gas fridges

Services that could be provided by an energy centre in Lucingweni, or by small local businesses associated to the centre, included:

- Public telephones
- Computers for faxing
- Catering (using gas, paraffin, wood)
- Baking (using gas, paraffin, wood)
- Extended spaza shop services including public phone, gas, fridge for cold meat, yogi, ice cream, beer and cool drinks
- Battery charging – Cells phone (currently costs R5) and car batteries
- Area for homework (providing lights using candles, paraffin)
- School feeding (using gas, paraffin, wood)
- Boiling water (using gas, paraffin, wood)
- Clean water for the sick - the clinic was too far away and no transport available (there is a great need for a clinic)
- Mechanic services (using oxi acetylene gas)
- Plumbing services (using diesel generators and gas)
- Lighting, TVs and street lights

8. Small Business Opportunities & Financing

In Highflats, the following new energy-related companies could be supported by the energy centre:

- Ice-making
- Petrol sale (idea from Jolivet wards despite a petrol station in Jolivet)
- Public phone facilities (phones, airtime and pre-paid cards)
- Solar systems
- Paraffin sales
- Cell phone airtime
- The sale of petrol
- Solar water pumps (to pump water from the river to a vegetable garden)
- Sale of vegetables
- Local hairdresser
- Gas shop to buy and refill gas, including delivery
- Pre-paid electricity tokens.
- Cell phones and car battery charging facility

- Sale of pre-paid electricity cards
- Supermarket (rather than spaza shops that overcharge)
- Sale of energy efficient lights
- Internet centre
- Skills centre: brick laying, bookkeeping, computer literacy, computer technician, sewing

The energy centre could help to develop a range of existing businesses including:

- the Hair salon – services improved with electric tongs, hair clippers, hairdryers
- Spaza shops - could have gas fridges (to sell meat, cold drinks) and solar lighting (to open later)
- Bricklayers
- Welders
- Bookkeeping – electronic record keeping with computers

In Lucingweni, the new businesses listed were:

- Computer centre
- Public phone facilities
- Computer and cell phone repairs
- Cell phones and Battery charging using solar panels
- Petrol station
- Sewing centre
- Cold storage facilities– selling fish, meat, cold drinks etc.
- Vegetable gardening project – water pumping
- Wood sales
- Gas sales
- Sales of paraffin heaters
- Local hair salon

Existing businesses that could be developed were:

- Spaza shops –tills, airtime, cell phone and battery charging, public telephones
- Wood and gas sales
- Expand domestic gardening – irrigation for vegetables
- Catering – gas, electricity, baking also for catering for schools
- Expand mechanic services
- Battery charging

(The above may already be in operation but all could use the energy services discussed above. In some cases the reason for similar existing and new businesses being listed is because the community would like to see more of these).

When considering potential micro/small business opportunities in Lucingweni, the following organisations are potential stakeholders for the implementation phase of the APPLES project:

<http://www.usa.org.za/index.html> - their idea of digital villages in association with Microsoft, and perhaps their telecentre experiences may be interesting

<http://www.seda.org.za/content.asp?subID=1> - potential funders for small/micro enterprises and they have branches in Umtata and KZN

<http://www.khula.org.za/> - accessing micro-loans for SMMEs

9. Capacity Building Needs

In the group feedback session in Ixopo, these were listed as:

Existing skills	Skills/services gap identified
Bookkeeping	Energy literacy
Community health worker	Transport services
Driver	Business negotiation skills
Meeting organizer and minute taker	Computer literacy
Solar installation	Micro-financing
Electrical repairs	Education/training facilities
Teachers	ICT services
Hairdresser	

In the group feedback session in Lucingweni theses were listed as:

Existing skills	Skills/services gap identified
Plumbing	Hair salons
Carpentry	Baking
Painting	Computer maintenance
Bricklaying	Shoe maker
Computer skills	Solar system technician
Fencing skills	Life saver
Cooking	Police forum
Drivers	Security
Sewing	Electrician
Artist	Business plan writer
First aid	Driving skills
Fishing	Management skills.
Baking	
Catering	

10. Overall Conclusions

The workshops held in Ixopo and Lucingweni provided very useful feedback from which future APPLES activities may be based. These two meetings with community representatives were very interactive and provided most of the information needed, notwithstanding the lack of energy literacy. The visit to assess energy priorities in the community has raised a number of issues that will require further investigation, though this can be completed as part of work package 5, to establish energy centres as a basis for facilitating access to energy services in rural communities.

10.1 Energy Priorities

At the outset of the site visit to discuss the APPLES project with members of the target local communities, four key objectives were agreed. These related to the overall aim of this work package which was to determine the energy priorities of the people in the areas selected to host energy centres. All four areas of priority energy requirements were addressed during the interaction with local community representatives.

10.1.1 Community Needs

One objective of this assessment was to identify energy-related needs of the community that can be provided by the Energy Centres. This focus was important to convey to the community representatives since the APPLES project does not intend to address all the community development needs, and does not have resources available to do so. Identifying the key energy-related issues was therefore an essential part of this process.

The key needs identified that should be considered by future APPLES project activities in these communities were:

Highflats	Lucingweni
Clean water (e.g. water pumping)	Cooking
Cooking (using affordable energy sources)	Lighting
Local skills development centre	Water project (including water pumping)
Computer access	Electricity for ICTs
Sales including refrigerated products, with after dark opening times	Petrol station
Radio and TV	
Solar system for ICT services	
Local school feeding scheme	

A general need for improved “energy literacy” was identified in both areas, suggesting that the energy centres should include some form of energy awareness-raising services.

10.1.2 Energy Centres Activities

Determining which Energy Centre operations would be welcomed by the target communities to address the needs identified in 10.1.1 above was an essential component of the investigation, and will form the foundation for activities developed through the APPLES project. Agreeing such activities with community representatives should enable full buy-in and support from the community and therefore offer good prospects for sustainability after the completion of the APPLES intervention.

The activities suggested by community representatives were:

Highflats	Lucingweni
Sales of relevant fuels and appliances	Sales of relevant fuels and appliances
Host a computer centre	Computers for faxing
Provision for skills development & training	Public telephone facilities
Public telephone facilities	Cellphones & cellphone airtime
Cell phone airtime	Battery charging
Spaza shop services	Spaza shop services
	Area for homework

The main Energy Centre activities proposed by local community representatives were very similar in both locations. In addition, suggestions were made for services that could be provided by local businesses supported by the energy centres (see 10.1.3 and 10.1.4).

10.1.3 Local Energy Business Services

Energy-related services will be possible to provide to the local communities once energy is made available through the proposed energy centres. Local businesses can be established to offer these services, though the viability of such businesses will depend upon the potential local market and the entrepreneurial capabilities of local service-providers. To provide APPLES with an indication of business possibilities, community representatives gave their suggestions as to what services would be welcomed in the community.

The services that seem to have greatest potential within the framework of the APPLES project, to be provided by local businesses once energy is made available, are:

Highflats	Lucingweni
Public phone facilities	Public phone facilities
Petrol sale	Computer and cell phone repairs
Solar water pumps	Cell phone & car battery charging (solar)
Gas shop for sales and refills	Petrol station
Battery charging facilities	Sale of goods requiring cold storage
Internet centre	Vegetable garden using pumped water

Existing hair salon improvements	Catering for schools
Existing spaza shop improvements	Existing spaza shop improvements
Vegetable garden using pumped water	

10.1.4 Capacity Development Needs

Having identified some market opportunities for new local, energy-related businesses, it was important to determine the skills available within the communities and the areas where capacity development would be useful and welcomed by potential local entrepreneurs. A number of areas were identified by the community representatives:

Highflats – Skills Available	Highflats – Skills/services Required
Bookkeeping	Energy literacy
Community health worker	Transport services
Driver	Business negotiation skills
Meeting organizer and minute taker	Computer literacy
Solar installation	Micro-financing
Electrical repairs	Education/training facilities
	ICT services
Lucingweni – Skills Available	Lucingweni – Skills/services Required
Plumbing	Hair salons
Carpentry	Baking
Painting	Computer maintenance
Bricklaying	Shoe maker
Computer skills	Solar system technician
Fencing skills	Life saver
Cooking	Police forum
Drivers	Security
Sewing	Electrician
Artist	Business plan writer
First aid	Driving skills
Fishing	Management skills
Baking	
Catering	

10.2 Other Issues

Highflats:

1. Timing of future electrification – to provide a firm foundation for APPLES activity, there is a need to find out Eskom plans for grid supplies, and to educate the community
2. Transport/distribution costs – current transport costs from suppliers in Highflats to local communities are a relatively large proportion of the price paid by those residents who are able to afford the available energy supplies. The cost of distribution of energy sources in the future will need careful consideration by the energy centre.
3. Competition with other operators – establishing an energy centre to provide energy fuels, services and appliances will clearly impact negatively on existing suppliers. Monitoring of the reaction from relevant stores in Highflats and spaza shops in local communities will be required. Some negotiation with owners may also be necessary.
4. The gel fuel initiative supported by the local uBuhlebezwe municipality will need further investigation to determine whether this will impact upon the operation of the planned energy centre.
5. Expanding local support for APPLES is required. This could be achieved by requesting that the project is discussed at the next community imbizo that is called. The deputy mayor could be approached to address the community at this imbizo since he has expressed great interest and shown support for the APPLES project.
6. The APPLES team will need to tread carefully regarding the promise of electricity from local government for the target area. Although there is some confusion over the latest national policy, it seems that there has been a policy change from “electricity for all” to the “energisation” option, i.e. grid electricity is no longer guaranteed for all areas. This message has probably not yet filtered through, or alternatively is understood by local government and communities particularly in affected remote rural areas. If the proposed energy centre is seen as the “alternative” energy delivery vehicle, or as a replacement for electricity, local people will be reluctant to support the establishment of the centre. Upcoming elections may also highlight this issue so APPLES will need to determine the actual plans of Eskom, ensure that the project is not an excuse to delay electrification, and educate the local population accordingly.
7. The use of solar home systems for income-generating services such as cellphone charging will require some investigation by APPLES. This may present a wider opportunity, or undermine any local entrepreneur looking to establish such a community service. The market demand should be investigated. There may be potential for the establishment of micro-enterprises that sell solar cell phone chargers to local households
8. Some assessment of market demand and affordability may be required by APPLES to determine which products/services will be most relevant for the energy centre to offer. A micro-financing component to energy centre services should be considered
9. The APPLES team should consider the need to investigate the quantities of paraffin and gas sold at the local stores to give an indication of the viability of the energy centre. Since the centre may impact on local businesses, it is unlikely that they would

be willing to share this information and perhaps their suppliers should instead be approached. Local household credit histories could also be assessed to determine affordability issues.

10. Clearly deep seated political divisions exist in the area around Highflats. If APPLES intends to use the existing community structures, then APPLES will have to accept the inherent alignment with the structures. It will be important for APPLES representatives to understand that they may be perceived to have ANC sympathies due to local government support and national government funding.

Lucingweni:

1. The potential for conflict between the arrival of Eskom grid electricity and the establishment of an energy centre must be addressed by the APPLES team to ensure the backing of local stakeholders and community.
2. The distinction between APPLES and previous interventions in Lucingweni that have produced the mini-grid, must be made clear to the community since the mini-grid now faces a very negative perception locally. Following an effective education programme, and external efforts to provide an operational mini-grid, APPLES could consider some association in the future. Some co-ordination with ongoing DME activities in the area, related to the future of the mini grid, will be required.
3. Some links between the energy centre and the paraffin programme supported by the local municipality (and managed by Sithubeni CC) should be considered during the APPLES project to avoid unnecessary duplication of activity and enable some co-ordination.
4. The key issue regarding the position of the local Chief will need to be addressed at some stage by APPLES. There is clearly friction between the chief and the ward committee. The chief cannot be ignored if APPLES is to achieve a sustainable outcome. However, it now seems that APPLES can continue without his wholehearted support since the project already appears to have the full support of the ward committee, (including traditional authority representatives) as well as that of the local municipality, and more recently, since the community meeting, the support of the community as a whole.
5. APPLES should also be aware of the Chief's links to Shell Solar. There are reports from local sources that the Chief has received money from Shell Solar, though local contacts are not clear about the reasons why these payments have been made to him. Some contact from APPLES with the Chief will be required to clarify his motivations, his interests and the likelihood of his support for the project.
6. In order to spread the APPLES influence and support, links with the local energy committee should be considered. As in Highflats, the APPLES team should request that the project be discussed at the next community Imbizo that is called. The ward councillor Mpongo could be approached to address the meeting about APPLES because of his support in the community and his contacts within the local municipality.

7. It is clear that this site will be a challenge for APPLES and so it may be useful to consider a “step-up” approach. This could involve first using containers as demonstration sites for the energy centre concept. Another option may be to use the homesteads of the local APPLES representatives as demonstration sites for various energy technologies, so creating an energy centre network. This would allow local people to see “energy in action” and in this way a more demand-driven diffusion of new energy sources and technologies may occur. These different options for the APPLES energy centre format will be considered in the APPLES follow-up to this needs assessment.
8. Whichever model for the energy centre is eventually agreed, it will aim to use and develop local resources and capacity. This may involve head-hunting local people who have the appropriate skills, and convincing them to move back to the area. Good contact with local representatives will need to be maintained to assist this process.
9. Local people in Lucingweni have identified roads and water as the key barriers to development - energy is not currently seen as a priority. This presents a challenge for the APPLES project to raise awareness amongst the local community about the potential benefits of energy supplies for improved quality of life. A direct link to water provision (using water pumps) could be a useful approach.
10. Literacy and skills levels are relatively low in Lucingweni, probably due to the distance from any urban centres. During the community meeting and workshop, this constraint was apparent and made introducing energy as a concept very difficult, and exploring its potential even more so. This need for greater attention to energy basics will be a key factor for any energy centre concept that is developed in APPLES.

10.3 Key Stakeholders

In both locations targeted by this rural component of the APPLES project, it will be important to identify and engage appropriately with key local stakeholders. There have been many examples in the past of donor-funded projects in Africa that have been undermined because the interests of all relevant local parties were not taken into account. This can be a time-consuming process since understanding local conditions, issues and personalities requires detailed investigation. One of the reasons for selecting Highflats and Lucingweni as the rural locations for APPLES activities was that much of this preparation had been undertaken in previous initiatives involving the project partners. It was however important that links with local stakeholders were re-established and updated as necessary.

In the target areas, local stakeholders that will need to be kept informed of APPLES progress were identified, as indicated below:

HIGHFLATS	
Name	Position
Mr Martin Sithole	Municipal Manager
Mr Cassim Badat	Municipal Social Development Manager
Mr Duncan Dlamini	Municipal IDP Manager
Mr F Ndlovu	Councillor, Ward 5
Ms Busisiwe Mhlongo	Ward 5 Committee Member

Ms Cornelia Khomalo	Chairperson of Block Committee (Ward 5)
Mr P P Ndlovu	Local spaza owner & former councillor
Mr Nkosiyezwe Vezi	Deputy Mayor
	Chief
Mlamuli Biyase	Ward 7 committee member
Johannes (Unathi) Ngcobo	Ward 7 committee member
Lungani Mkize	Community development worker (Ward 7)
Nduduzo Nhlangulela (Boni)	Ward 8 committee member
Gugu Nzimande	Ward 8 committee member
Dudu Dlamini	Community development worker (Ward 8)
Busi Mlongo	Ward 5 committee member
Nesi Mkize	Ward 5 committee member
Hlengiwe Mkize	Youth league member (Ward 5)
Zimbili Khumalo	Youth league member (Ward 5)
LUCINGWENI	
Name	Position
Mr Sidelo	Speaker Nyandeni local municipality
Councillor Mpongo	Local councillor for Lucingweni
Councillor Mziba	ExCo Member; resp for community services
Mr Monwabisi	Sithubeni CC (paraffin distributor)
	Chief
Zweledinga Ncala	Ward committee member
Fikiswa Ndamase	Ward committee member
Cetyiswa Dluthu	ANC member
Zanele Mangxa	ANC member
Novuyisa Nompe	ANC member
Novumile Nqokotho	ANC member
Sylvia Sikwati	ANC member
Sindiswa Manipa	ANC member
Lindile Baskiti	Bucula resident
Andile Motshila	Bucula resident
Lathiswa Qhonono	Mdzwini resident
Makekani Masenene	ANC member
OTHER	
Name	Position
Ms Nomalanga Sithole	Exec Mgr: Support Service (NERSA)
Ms Machwene Molomo	Snr Mgr: Elec Policy Devt Admin, M&E (DME)
Mr Yaw Afrane-Okese	Manager, Renewable Energy, NERSA
Mr Zivumile Mgeyi	Manager, Khula Enterprise (Libode Office)
Mr Sihlalo Jayiya	Manager, SEDA (OR Tambo branch)
Mr Robert Maake	Manager, IeC Programme (DME)

ANNEX 1: WORKSHOP REGISTRATION FORM



Needs Assessment Workshop Participants' Registration Form:

Date:
Time:
Place:

Background Information:

1. Name
2. Approximate age at last birthday.....
3. Years of schooling completed
4. Occupation
5. Individual income: What best describes your income for the past year?
 - a) Less than R1 000
 - b) R1 000-R2 999
 - c) R3 000-R4 999
 - d) R5 000-R6 999
 - e) R7 000-R8 999
 - f) R9 000 or more

6. Are you the sole breadwinner in your household? (yes or no)
.....

7. What are your expectations of participating in this workshop today?

.....
.....
.....
.....
.....
.....

ANNEX 3: WORKSHOP CONSENT FORM



Date:

Place:

Statement of Informed Consent and Release Form

I, agree to participate in the APPLIES research project being conducted by Parallax and the Energy Research Centre, University of Cape Town, that intends exploring what the local communities' priority energy needs may be and how the provision of basic energy services may facilitate local development.

I understand that I will be participating in a needs assessment workshop. I commit to participating in all the interviews that may be required by the research team.

I understand that my privacy, and that of the other participants, will be respected by everyone participating in the study.

I also understand that the information that I share will remain anonymous, unless I explicitly agree to be named if and when required to do so by the researchers.

By signing the form below I give Parallax and the Energy Research Centre, University of Cape Town permission to use the materials like any tapes, and/or photographs produced during the APPLIES project, to be used by the research team for educational purposes including publications and exhibitions, world wide web and presentations. However, it is understood that this will be done in consultation with me and in a manner with which I am comfortable.

I have read and understood the information and I agree to participate in the study on this basis.

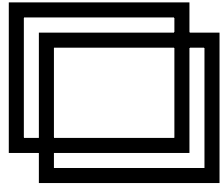
Signature

ANNEX 4: WORKSHOP PROGRAMME



Needs Assessment Workshop Programme

Time	Goal	Activity
08:30 – 09:00	Registration and tea	Participants to complete registration form
9:00-9:30	Outline of the day's activities	<ol style="list-style-type: none"> 1. Outline of the day's activities 2. Discussion of TAI workshop programme, structure, purpose and discussion 3. Emphasise needs driven approach of APPLES
09:30 – 10:00	Introductions using the TAI technique	<ol style="list-style-type: none"> 1. Importance of individuals 2. Need for full input/participation 3. Introduction to group by partner 4. How to use TAI to achieve workshop aims
10:00 – 10:30	Defining Energy: energy, ICTs, gender, leC & MPCC concepts	<ol style="list-style-type: none"> 1. Facilitator explains what energy means using power point or flip charts provided 2. Facilitator gives details of energy options that may be available to the target communities
10:30 –11:00	Energy NA Exercises: what are priority energy and energy-related needs in the target communities	<ol style="list-style-type: none"> 1. Use the TAI map to discuss in pairs
11:00-11:15	Coffee Break	
11:15 – 11:45	Energy NA Feedback	<ol style="list-style-type: none"> 1. Pairs feedback conclusions 2. Group agrees priorities
11:45 – 12:45	Energy Centre Services NA Exercises: fuels, appliances, ICTs, community benefits	<ol style="list-style-type: none"> 1. Facilitator explains what fuels, appliances, ICTs, community benefits (e.g. TV viewing, telephone access) can be considered using materials provided 2. Use the TAI map to discuss in pairs 3. Group feedback 4. Agreement of priorities
12.45 – 13.45	Lunch	
14:00 – 15:00	Local Business NA Exercises: existing services, opportunities, business needs, local entrepreneurs	<ol style="list-style-type: none"> 1. Facilitator explains how local businesses may be developed using new energy services 2. Use the TAI map to discuss in pairs 3. Group feedback 4. Agree which business opportunities to develop using new energy services
15:00: – 15:45	Capacity Building NA Exercises: energy, awareness, business, community, decision-makers, training	<ol style="list-style-type: none"> 1. Facilitator explains what capacity building may be offered by APPLES 2. Use the TAI map to discuss in pairs
15:45 – 16:15	Tea	
16:15 – 16:45	Capacity Building NA Exercises Feedback	<ol style="list-style-type: none"> 1. Pairs feedback 2. Group agrees priorities
16:45 – 17:00	APPLES implementation	<ol style="list-style-type: none"> 1. Facilitator describes how the feedback from the workshop will be used by APPLES (sets future expectations) 2. Group raises any other issues for APPLES to consider
17:00 – 17:15	Closing	Feedback on the days proceedings



Parallax

Sustainable Development Solutions

Alleviation of Poverty through the Provision of Local Energy Supplies (APPLES)

To Whom it May Concern

We are contacting you to request your support for a new initiative that aims to improve living conditions in the communities around Highflats in KwaZulu Natal through the provision of improved energy services. This initiative, the APPLES project, will provide appropriate energy supplies to the target communities – this is energy that should be affordable, accessible and acceptable to the local people. APPLES will facilitate the establishment of local energy centres to provide energy services to the local communities. Where appropriate, new micro or small business initiatives will also be supported by APPLES, using the new energy supplies to create job opportunities in the local areas. The APPLES project is expected to be completed at the end of July 2008.

APPLES is financed by the European Commission and the South African Government. If successful, APPLES will demonstrate an approach to remote rural energy service provision that will be promoted in Europe and will be used by the Department of Minerals and Energy in many other poor regions across South Africa. The overall goal of the APPLES project is to find a sustainable mechanism for the effective delivery of improved local energy services to poor communities in South Africa.

A focus of the APPLES project will be the promotion of renewable energy sources and energy efficiency. APPLES will use locally available resources, often based on renewable energy, to maximise security of energy supply and environmental protection, whilst increasing the access of consumers to a range of cost-effective and efficient energy options for household and business purposes. The establishment of new local businesses and/or the strengthening of existing capacity will be a key mechanism to provide affordable access to appropriate energy supplies.

The main activities of the APPLES project in Highflats are:

- 1) to understand the energy needs and energy priorities of households and small businesses within the target communities
- 2) to facilitate the establishment of a community energy centre to provide appropriate local energy services that are affordable and accessible
- 3) to facilitate the establishment of local micro and small businesses that will use the new local energy services
- 4) to promote the results of APPLES in Europe and South Africa

For our visit in March to your area the first phase of APPLES revolves around understanding the energy needs of the people in the target communities, which will provide the foundation for all other work. During this time the APPLES team will need to consult with all relevant community representatives, and the broader community, to introduce the project and help to determine which energy services will be most appropriate for the communities concerned.

We would appreciate the participation of ten to fifteen representatives from your community in the research exercise. From experience, we have found that women are often the most appropriate representatives since they have greatest awareness of household energy needs. However, before we proceed with the research, we would like to extend an invitation to meet with the community leaders of your area, and thereafter the community representatives, for us to explain our research project in order to elicit your views. We would like to suggest the following meetings within your community. We would highly appreciate your assistance in this regard.

Activity	Date	Time
Meetings with local community leaders, Nkweletsheni	Mon 19 March	09:00 – 10:00
Community meeting in Nkweletsheni to introduce APPLES project	Mon 19 March	10:00 – 11:30
Meetings with local community leaders, Joviet	Mon 19 March	13:30 – 14:30
Community meeting in Joviet to introduce APPLES project	Mon 19 March	14:30 – 16:00
Needs assessment workshop with selected community representatives	Tues 20 March	09:00 – 17:00
Planning meeting with people participating in the research for future field visits	Tues 20 March	As convenient

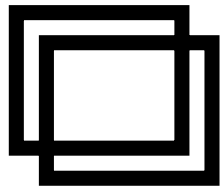
We would be very grateful for your support to assist the APPLES project to bring appropriate energy services to the people in the local communities. We need your help to understand what are the energy priorities in the target communities and how a community energy centre can address these needs. We will make every effort to adapt the APPLES project to include the advice of all local stakeholders, and hope to work with you to achieve local benefit from the APPLES project. The results from APPLES will be communicated to an international audience, and will hopefully lead to similar services being brought to many other communities in South Africa.

Yours sincerely,



Dean Cooper
Managing Director, Parallax (on behalf of the APPLES team)

The APPLES project is supported by the European Commission, the South Africa Government Departments of Minerals & Energy, and Science & Technology, the United Nations Development Programme, the Government of The Netherlands, the Government of Denmark and Oxford University (UK)



Parallax

Sustainable Development Solutions

Alleviation of Poverty through the Provision of Local Energy Supplies (APPLES)

To Whom it May Concern

We are contacting you to request your support for a new initiative that aims to improve living conditions in the communities around Lucingweni in the Eastern Cape through the provision of improved energy services. This initiative, the APPLES project, will provide appropriate energy supplies to the target communities – this is energy that should be affordable, accessible and acceptable to the local people. APPLES will facilitate the establishment of local energy centres to provide energy services to the local communities. Where appropriate, new micro or small business initiatives will also be supported by APPLES, using the new energy supplies to create job opportunities in the local areas. The APPLES project is expected to be completed at the end of July 2008.

APPLES is financed by the European Commission and the South African Government. If successful, APPLES will demonstrate an approach to remote rural energy service provision that will be promoted in Europe and will be used by the Department of Minerals and Energy in many other poor regions across South Africa. The overall goal of the APPLES project is to find a sustainable mechanism for the effective delivery of improved local energy services to poor communities in South Africa.

A focus of the APPLES project will be the promotion of renewable energy sources and energy efficiency. APPLES will use locally available resources, often based on renewable energy, to maximise security of energy supply and environmental protection, whilst increasing the access of consumers to a range of cost-effective and efficient energy options for household and business purposes. The establishment of new local businesses and/or the strengthening of existing capacity will be a key mechanism to provide affordable access to appropriate energy supplies.

The main activities of the APPLES project in Lucingweni are:

- 5) to understand the energy needs and energy priorities of households and small businesses within the target communities
- 6) to facilitate the establishment of a community energy centre to provide appropriate local energy services that are affordable and accessible
- 7) to facilitate the establishment of local micro and small businesses that will use the new local energy services
- 8) to promote the results of APPLES in Europe and South Africa

For our visit in March to your area the first phase of APPLES revolves around understanding the energy needs of the people in the target communities, which will provide the foundation for all other work. During this time the APPLES team will need to consult with all relevant community

representatives, and the broader community, to introduce the project and help to determine which energy services will be most appropriate for the communities concerned.

We would appreciate the participation of ten to fifteen representatives from your community in the research exercise. From experience, we have found that women are often the most appropriate representatives since they have greatest awareness of household energy needs. However, before we proceed with the research, we would like to extend an invitation to meet with the community leaders of your area, and thereafter the community representatives, for us to explain our research project in order to elicit your views. We would like to suggest the following meetings within your community. We would highly appreciate your assistance in this regard.

Activity	Date	Time
Meetings with local community leaders	Thurs 22 March	09:00 – 10:00
Meeting with community members to explain what the project is about and select people that are willing to participate in the project	Thurs 22 March	11:00 – 12:00
Community meeting to introduce APPLES project	Thurs 22 March	14:00 – 16:00
Needs assessment workshop with selected community representatives	Fri 23 March	09:00 – 17:00
Planning meeting with people participating in the research for future field visits	Fri 23 March	As convenient

We would be very grateful for your support to assist the APPLES project to bring appropriate energy services to the people in the local communities. We need your help to understand what are the energy priorities in the target community, and how a community energy centre can address these needs. We will make every effort to adapt the APPLES project to include the advice of all local stakeholders, and hope to work with you to achieve local benefit from the APPLES project. The results from APPLES will be communicated to an international audience, and will hopefully lead to similar services being brought to many other communities in South Africa.

Yours sincerely,



Dean Cooper
Managing Director, Parallax (on behalf of the APPLES team)

The APPLES project is supported by the European Commission, the South Africa Government Departments of Minerals & Energy, and Science & Technology, the United Nations Development Programme, the Government of The Netherlands, the Government of Denmark and Oxford University (UK)

ANNEX 7: CONTACT LIST

ANNEX 8: NOTES FOR WORKSHOP MODERATORS



Notes for Workshop Moderators

(Welcome)

Good afternoon, and welcome to our group discussion. My name is “*moderator’s name*” and perhaps you know Jocelyn Muller who will be taking notes and observing today. We are from the “*name of organisations*”. The discussion will be conducted in Xhosa and I hope that you feel at ease with this.

We’d like to finish the discussion by XXh00 with a break for tea from XXhXX – XXhXX. During this time the research team will meet for me to give Jocelyn feedback on the discussion. We would like to thank you for your sharing your time with us in advance.

We have asked you here today because we would like to hear your opinions, experiences or perceptions on development in your village. The information that you give us will be used for the research project that we will present to you. Please be ensured that you will remain anonymous and the information you give us will only be used for the purpose of this research project. For this reason we hope you don’t mind us recording this afternoon’s session.

Let me tell you a little about my role. My role is to guide the discussion by asking questions and listening and to make sure that everyone has an opportunity to speak. Let me explain the way things will happen. I will be asking about ten questions that require your consideration. After each question whoever would like to respond should do so. Please know that there is no right or wrong answer and I encourage you to speak honestly, openly and freely. I would like you to pretend or feel that we are visiting at someone’s home. In this meeting the conversation should flow in the same way that it would when you are visiting a neighbour. So more than one person may wish to share their views on a question, that is what we would encourage you to do. You may have the same view or a different view or you may even want to add to what someone else has said.

(Workshop ground rules)

To ensure that the discussion runs smoothly I’ll suggest a few guidelines. I’m sure that you have been in meetings where certain people dominate a discussion and you probably remember how this made you feel. Sometimes I may ask you to give someone else an opportunity to speak if you are talking too much or I may also ask the opinion of someone that is saying too little. The idea is that everyone should be given an equal opportunity to share their experiences and to express their views. Each person has something important to contribute. My role is to ensure that this happens.

Sometimes we get so excited that we forget and then we tend to interrupt others without thinking. So I may ask you to allow the person to finish first. Only one person can speak at a time and please ensure that everyone can hear you. Lets all agree to respect each other’s views. In fact differing opinions are often very useful to

us. Keep your responses simple/short so that everyone has a chance to offer their views.

(Opening question)

Let's begin by getting to know each other. let's start with you. Tell me your name, where you live and maybe something funny about yourself.

(Introductory question)

What do you enjoy about living in Highflats/Lucingweni?

(Transitional)

Could you share a story about a development project in your village that benefited you in any way?

(Key)

When people discuss development projects in your village, what is it that people discuss?

(Key)

What are the kinds of development projects that you envisage for your village?

(Key)

If you were to identify a development project that would be of immediate benefit to your community, what would it be?

(Transitional)

How do you think your community can contribute towards development projects?

(Ending)

Is there any advice would you like to offer in order to improve in development projects in your vilage

Break for tea

(Summarise)

The main points raised by group seem to be

The area where people have differed are

People seem to have agreed on

(Summary question)

How well has what I've said captured what has been discussed here?

(Final Question)

Have I missed anything?

Do you have other questions any questions?

Thank you for agreeing to be part of this discussion.

Some useful golden rules for the Moderator

1) Showing your interest in the person and what they are saying.

Remember that showing your interest in what the participant is saying works as catalyst. Showing an interest is translated by the expression on your face. Keep your eyes focused on the person you are interviewing as much as you can. It helps to make the respondent feel that what he or she is saying is important. People only enjoy talking to someone who is really listening to them.

2) Avoid that people give you the answers they think will please you.

It should not be forgotten that there is a strong tendency for all persons interviewed to reply in a way that pleases the interviewer. This is not what you want. To minimize the chance of this happening, you can remind the person from time to time that what is important to know is what they think about an issue not what “people in general think”.

3) Objectivity and neutrality.

It is essential that the interviewer remains totally objective and absolutely neutral throughout the interview. Some participants may try to make you ‘take sides’ on an issue. You must avoid doing so, though you can make it clear that you understand what they are saying.

4) Avoid that the respondent ‘goes off the topic’.

There is delicate balance between allowing the participant to mention other subjects during the interview, (which may be a key to understanding their answers) and keeping the interview on track. You must be your own judge here.

5) An interview will provide respondents with useful information.

On many occasions, the participants learn things in the course of the interview that he/she was previously unaware of.

6) Ensure that one person does not dominate the discussion

This workshop is a useful tool for allowing everyone an opportunity to speak and express their views on a topic. A skillful moderator should gently but firmly ensure that this happens.

ANNEX 9: IXOPO (HIGHFLATS) WORKSHOP PARTICIPANTS



Needs Assessment Workshop

Place: Ixopo (for Highflats)

Date: 20 March 2007

PARTICIPANT REGISTRATION FORM

Participant name	Area	Position	Contact no
Mlamuli Biyase	Jolivet (Ward 7)	Ward committee member	0737315117
Johannes (Unathi) Ngcobo	Jolivet (Ward 7)	Ward committee member	0762205849
Lungani Mkize	Jolivet (Ward 7)	Community development worker	0827434698
Nduduzo Nhlangulela (Boni - nickname)	Hluthankungu (Ward 8)	Ward committee member	0849825521
Gugu Nzimande	Hluthankungu (Ward 8)	Ward committee member	0768145377
Dudu Dlamini	Hluthankungu (Ward 8)	Community development worker	0833957812
Busi Mlongo	Sqanduleni (Ward 5)	Ward committee member	0731194662
Nesi Mkize	Ebutateni (Ward 5)	Ward committee member	0832420683
Hlengiwe Mkize	Sangcwaba (Ward 5)	Youth league member	0835907320
Zimbili Khumalo	Sangcwaba (Ward 5)	Youth league member	0836228901

ANNEX 10: LUCINGWENI WORKSHOP PARTICIPANTS



Needs Assessment Workshop

Place: Lucingweni

Date: 23 March 2007

PARTICIPANT REGISTRATION FORM

Participant name	Area (Ward 20)	Position	Contact no
Zweledinga Ncala	Hluleka	Ward committee member	0785329308
Fikiswa Ndamase	Gangeni	Ward committee member	0762205849
Cetyiswa Dluthu	Lucingweni	ANC member	0726937394
Zanele Mangxa	Gangeni	ANC member	0849825521
Novuyisa Nompe	Hluleka	ANC member	
Novumile Nqokotho	Hluleka	ANC member	0731306347
Sylvia Sikwati	Bucula	ANC member	0766515518
Sindiswa Manipa	Lucingweni	ANC member	0765036102
Lindile Baskiti	Bucula		
Andile Motshila	Bucula		
Lathiswa Qhonono	Mdzwini		0764036049
Makekani Masenene	Xhuthudwele	ANC member	0786864465

ANNEX 11: WORKSHOP FACILITATORS' GUIDE



Highflats/Lucingweni Needs Assessment Workshop: Facilitators' Guide

Date: 20/23 March 2007

Facilitators: Jocelyn Muller, Zimbili Kumalo, Herman Bos

Time	Goal	Activity
09:30 – 10:00	Registration & tea	Participants to complete registration form
10:00 - 10:30	Outline of the day's activities	<ol style="list-style-type: none"> 1. Outline of the day's activities 2. Discussion of TAI workshop programme, structure, purpose and discussion 3. Emphasise needs driven approach of APPLES
10:30 – 11:00	Introductions using the TAI technique	<ol style="list-style-type: none"> 1. Importance of individuals 2. Need for full input/participation 3. Introduction to group by partner <p>-Break into groups of two -ask the following questions:</p> <p>Discovery I – Will you share one dream of success with me?</p> <p>Discovery II – Explain your current reality in relation to this dream? Could you share an internal constraint that you experience that prevents you from achieving this dream Could you consider an external constraint that you experience?</p> <p>Discovery III – Imagine ways that you can change an internal constraint in order to achieve your dream Imagine ways that you can change an external constraint in order to achieve your dream</p> <ol style="list-style-type: none"> 4. How to use TAI to achieve workshop aims
11:00 – 11:30	Defining Energy: energy, ICTs, gender, IeC & MPCC concepts	<ol style="list-style-type: none"> 1. Facilitator explains what energy means using power point or flip charts provided 2. Facilitator gives details of energy options that may be available to the target communities
11:30 –12:30	Energy NA Exercises: what are priority energy and energy-related needs in the target communities	<p>Discovery 1</p> <ol style="list-style-type: none"> 1. Use a visualization exercise to imagine your day. Think about the different energy sources that you would like to use for different activities in your day in your household and community. This is your “energy dream” 2. In pairs share your “energy dream” with your partner 3. Report back in plenary <p>Discovery 11</p> <ol style="list-style-type: none"> 1. <i>Current reality</i> - Use a visualization exercise to imagine your day again. Now change this to thinking about the different energy sources that you currently using for different activities in your day in your household and community. This is your “current reality.”

		<p>2. In pairs share with your partner what your households energy and community energy needs are. Write these down on the paper provided</p> <p>3. Report back in plenary.</p> <p>4. Using the energy needs identified start ranking them quietly</p> <p>5. Discuss and agree on the final ranking of priority energy needs</p>
12:30-13:00	Lunch	
13:00 – 13:30	<p>Energy Centre Services NA Exercises: fuels, appliances, ICTs, community benefits</p>	<p>1. Facilitator explains what fuels, appliances, ICTs, community benefits (e.g. TV viewing, telephone access) can be considered using materials provided</p> <p>Discovery III</p> <p>1. Use a visualization exercise to once again imagine “energy dream”. Now consider what services the Energy Centre will need to offer to help you fulfill your dream. This is your dream for the Energy Centre</p> <p>2. In pairs share your “Energy Centre dream” with your partner</p> <p>3. Group feedback</p>
13:30 – 14:00	<p>Local Business NA Exercises: existing services, opportunities, business needs, local entrepreneurs</p>	<p>1. Facilitator explains how local businesses may be developed using new energy services</p> <p>Discovery III</p> <p>2. Use a visualization exercise to consider your Energy dream, Your Energy Centre dream and now imagine what energy-related Local Businesses may be explored, how perhaps energy may improve existing businesses, how new businesses can be created with different energy sources, especially how the services offered by the businesses can improve the lives of people in your area.</p> <p>3. Discuss in pairs</p> <p>3. Group feedback</p> <p>4. Agree which business opportunities to develop using new energy services</p>
14:00: – 14:30	<p>Capacity Building NA Exercises: energy, awareness, business, community, decision-makers, training</p>	<p>1. Facilitator explains what capacity building may be offered by APPLES</p> <p>2. Discovery II</p> <p><i>Inner ring-</i> Consider your Energy dream, Your Energy Centre dream and your dream for energy-related Local Businesses. Now consider what capacity or skills related constraints exist that may prevent you from achieving your dreams</p> <p>Share this with your partner</p> <p><i>Outer ring –</i> Again consider your Energy dream, Your Energy Centre dream and your dream for energy-related Local Businesses. Now consider what capacity or skills related constraints exist that you have little or no control over that may prevent you from achieving your dreams</p> <p>Share this with your partner</p> <p>3. Group feedback</p> <p>4. Agreement on priority CB needs</p>
14:30 – 15:00	APPLES implementation	<p>1. Facilitator describes how the feedback from the workshop will be used by APPLES (sets future expectations)</p> <p>2. Group raises any other issues for APPLES to consider</p>
15:00 – 15:15	Closing	Feedback on the days proceedings