

Unclassified

ED03493 Issue 1

KaR-R8145

Modern Energy: Impacts on Micro-enterprises

Phase 1 Task 2.2:

Final specification of Research Methodology

A report produced for UK Department for International Development

Paul Harris, Integrated Energy Solutions (Pty) Ltd, South Africa
Chris Hazard, Integrated Energy Solutions (Pty) Ltd, South Africa

Denise Oakley, AEA Energy and Environment

August 2003

Unclassified

Unclassified

ED03493 Issue 1

KaR-R8145

Modern Energy: Impacts on Micro-enterprises

Phase 1, Task 2.2:

Final specification of Research Methodology

A report produced for UK Department for International Development

Paul Harris, Integrated Energy Solutions (Pty) Ltd, South Africa
Chris hazard, Integrated Energy Solutions (Pty) Ltd, South Africa

Denise Oakley, AEA Energy and Environment

August 2003

Unclassified

DISCLAIMER

This document is an output from the Department for International Development (DfID) funded Engineering Knowledge and Research Programme (project no R8145). The views expressed are not necessarily those of DfID

Title	PHASE 1, TASK 2.2: FINAL SPECIFICATION OF RESEARCH METHODOLOGY Modern Energy: Impacts on Micro-enterprises		
Customer	UK Department for International Development		
Customer reference	R8145		
Confidentiality, copyright and reproduction	<p>Unclassified</p> <p>This report is the Copyright of AEA Technology and has been prepared by AEA Technology plc in collaboration with Integrated Energy Solutions (Pty) Ltd of South Africa under contract to the Department for International Development dated 25 September 2002. AEA Technology plc and Integrated Energy Solutions (Pty) Ltd accept no liability whatsoever to any third party for any loss or damage arising from any interpretation or use of the information contained in this report, or reliance on any views expressed therein.</p>		
File reference	j:fes/projects/international/dfid kar/microenterprise ED03493		
Report number	AEA/ENV/R/2422		
	<p>AEA Energy & Environment The Gemini Building Fermi Avenue Harwell International Business Centre Didcot OX11 0QR Telephone +44 (0) 870 190 6212 Facsimile +44 (0) 870 190 6318</p> <p>AEA Energy & Environment and Future Energy Solutions are business names of AEA Technology plc. AEA Energy & Environment is certificated to ISO 9001 and ISO14001</p>		
Authors	<p>Paul Harris, IES Chris hazard, IES Denise Oakley, AEA Energy and Environment</p>		
Reviewed by	<p>Name Tom Slesenger</p>	<p>Signature </p>	<p>Date </p>

Executive Summary

This DFID research project aims to test the hypothesis that the provision of modern energy services facilitates improvements to standards of living, via the establishment or growth of micro-enterprise, which create jobs and cash income, thus reducing vulnerability and enabling participation in the economy. The research methodology centres on pre- and post energisation surveys of communities through the gathering and assessment of quantitative data, with qualitative investigations to help understand the context of the data and the broader impact of such interventions. Phase 1 of the project centres on the development and testing of the methodology. This report provides a detailed description of all aspects of the integrated research process (methodology) that has been field tested and subsequently refined together with guidance for researchers, much of which was gained as lessons learned in the field. The overall methodology is characterised by the following steps:

1. Selection of sites for investigation with reference to the schedule for energisation in South Africa and India
2. Gathering of the community characteristics record and community log.
3. Preparation of the site for investigation:
 - Interaction with community leaders and gaining their support to do the research.
 - Informing community members about the research project.
 - Selection and training of researchers drawn from the community
4. Micro Enterprise identification sweep: calls to all households, buildings and activity areas within the geographical bounds of the study to explain the project and identify micro enterprise and business owners.
5. Analyses of sweep data – targeting of the quantitative research.
6. Micro Enterprise owner interviews conducted by members of research team with assistance from community interpreters.
7. Analysis of micro enterprise interview data.
8. Formulation of further research questions and identification of issues arising from the micro enterprise interview data (to be further explored through qualitative research).
9. Prepare for qualitative research:
 - Composition of focus groups
 - Identification of one to one interviewees
 - Invitation and briefing of respondents
 - Finalise qualitative research questions, aids and so forth
 - Conduct qualitative research
 - Analyse qualitative results
10. Undertake preliminary data analysis and data check.
11. Repeat 2-10 for post-energisation survey of the same communities
12. Conduct data analysis.
13. Consolidate all research findings
14. Feedback results and findings to the community
15. Prepare findings, results and final report.

Appendices A and B provide the definitive pro formas for conducting the micro enterprise identification sweep and the quantitative ME surveys. Appendices C-E provide detailed guidance and insight gained from the field trial in South Africa.

Table of Contents

EXECUTIVE SUMMARY

1. Introduction	1
1.1 Document Background	1
1.2 Integrated Research Process Context	1
2. Research Questions	3
2.1 Quantifiable impacts	3
2.2 Qualifying linkage	4
2.3 Exclusions	4
3. Research Models	5
3.1 Conceptualisation of a micro enterprise	5
3.2 Micro Enterprise impact on Livelihoods Model	8
3.2 Modern Energy Service on Micro Enterprise Impact Model	8
4. Research Framework	11
4.1 Assumptions, propositions and framework notes	11
4.1.1 Community level research	11
4.1.2 Modern energy intervention into the community	11
4.1.3 All micro enterprise will need to be evaluated	11
4.1.4 Micro enterprise has a direct impact on livelihoods and incomes	12
4.1.5 Longitudinal nature of the research - time related change	12
4.1.6 Delta or net change in micro enterprise activity and livelihood impact.	12
4.1.7 Single community application of the measures	12
4.1.8 Impact of other interventions during the research period	13
4.1.9 Limitations of assessment of only four communities	13
4.1.10 Measurement from the perspective of the community	13
4.1.11 Everything will be measured from the perspective of the micro enterprise.	13
4.2 Research time framework	14
4.3 Research Activity Framework	15
4.3.1. Community characteristics / key informants	15
4.3.2 Micro Enterprise Identification Sweep	17
4.3.3 Enterprise activity snapshot	17
4.3.4 Livelihood impact snapshot	20
4.3.5 External intervention log	21
4.3.6 Qualitative Information Gathering	21
4.4 Research analytical framework	22
5. Detailed research activity design	23
5.1 Field research context	23
5.2 Community characteristics record	24
5.3 External interventions log	25
5.4 Micro enterprise identification sweep	26
5.5. Completion of Quantitative Questionnaire (Enterprise and Livelihood Impact Snapshot) and data capture	30

5.5.1. Background to the Quantitative Questionnaire (Enterprise and Livelihood impact snapshot)	30
5.5.2 Administering the quantitative questionnaire (Enterprise and Livelihood impact snapshots)	33
5.6 Processing of the quantitative data	35
5.7 Overall Quantitative and Qualitative Conclusions	38
5.7.1 Sweep Results	38
5.7.2 Results from the quantitative questionnaires	39
5.7.3 Conclusions drawn from the quantitative data	42
5.7.4 Qualitative Data from ME Questionnaires	44
5.7.5 General Observation on Quantitative survey findings	46
5.8 Qualitative (participatory) research	46
5.8.1 SL framework as a format for presentation of the research findings	53
5.9 Overall data analysis	54
Appendix A: Micro enterprise identification sweep questionnaire	55
Appendix B: Quantitative Micro enterprise questionnaire (Enterprise Activity and livelihood impact snapshot)	56
Appendix C. Qualitative research – examples of generic questions	61
Appendix D. Focus Group Approach	69
Appendix E. Community focus groups – reports from Fisantekraal field test	71

1. Introduction

1.1 Document Background

This document fully describes the refined methodology and research techniques for Phase Two of the project entitled, Modern Energy: Impacts on Micro Enterprise in Southern Africa and India (DFID reference KAR project R8145).

The steps that are being enacted to progress Phase One and Two of the project, are as follows:

- Step 1: Develop the methodology and research techniques as a (theoretical) written document.
- Step 2: Agree the proposed methodology document with DFID, Advisors, AEAT and Project Teams in South Africa and India. Finalise Document 1.
- Step 3: Thoroughly test the methodology in a practical and representative live field situation in South Africa.
- Step 4: Taking lessons from the field trial refine and modify the document 'Development of research methodology' to produce a final project methodology in readiness for Stage 2.
- Step 5: Report and seek approval with DFID to proceed to Stage 2.
- Step 6: In Stage 2, deploy the research methodology in selected sites in Southern Africa and India to undertake the substantive investigation of modern energy and impacts on micro enterprise.

This document therefore consolidates all the methodology development work completed up to and including Steps 1 to 4.

1.2 Integrated Research Process Context

It is essential to understand from the outset that in terms of methodology, an integrated research process is necessary for stage two of the project. It is a logical, comprehensive and sequentially phased approach that builds on earlier stages of activity within the community under investigation. Each phase of activity must be effectively carried out to ensure a robust and replicable research methodology. In other words, subsequent phases of research rely very heavily on the earlier phases being properly completed.

Unless the community briefing is properly completed then legitimacy for subsequent interactions with the community will be in jeopardy. Unless community interviewers are properly selected, trained and monitored, then clear communications and initial data gathering from householders in the community about micro enterprise will be compromised. Unless maps of the community are provided and the system of unique micro enterprise location referencing is deployed vigorously, then the reliability and accuracy of data sets will be at risk. A crucial and highly challenging activity are the in depth micro enterprise interviews and unless these are conducted by high level research personnel, are carefully validated and checked, then the quality of further data sets will be in question. It is then from the analysis of this micro enterprise data that part of the subsequent qualitative research questions will be framed. And so it is throughout this modern energy and micro enterprise research methodology. Leaving out a step, failing to conduct necessary cross checks and validation routines, or failure with a host of other detailed methodological research

procedures that are involved with this approach may jeopardise the accuracy and quality of the data and therefore conclusions that can be drawn from such data.

With unlimited resources, especially time and skilled researcher hours, it is possible to design eloquent research methodologies that, among other things, have large samples drawn from a variety of sample frames. A multitude of validation routines can be deployed, multiple test sites can be investigated and large multi skilled teams of cross-cultural experts can analyse and interpret data, and so forth. In contrast, in relation to the questions posed for this particular research project and the complexity of the research environment, this project has very limited resources plus a number of rigid time constraints related to before and after energisation research windows of opportunity. The integrated research process has therefore been designed and tested with these realities squarely in mind. It leans therefore more towards pragmatism rather than theoretical normative research mores. This however, must in no way weaken the robustness of the research data gathered and therefore the conclusions that it is hoped may be reliably drawn, in completing the research project.

In attempting to research such a complex and multi faceted subject, as modern energy and micro enterprise, it is absolutely essential to follow the prescribed methodology in its entirety, in the sequence and manner prescribed, with objectivity and intellectual rigour. In conducting such research the need to objectively validate and cross check data from as many reliable sources as possible must be implicit within the research design, so various data gathering techniques to enable this to be done have been included and thoroughly tested in the research design process. The other overarching issue, when doing this type of research across several cultural frontiers, is the imperative of striving to ensure objective and clear communications; and, for the researchers to understand things within the ethos of the community members and micro enterprise operators. These issues have also been a focus of the research design.

The integrated research process that is described step by step in this report may be briefly characterised as follows:

1. Selection of sites for investigation with reference to the schedule for energisation in South Africa and India
2. Gathering of the community characteristics record and community log.
3. Preparation of the site for investigation:
 - Interaction with community leaders and gaining their support to do the research.
 - Informing community members about the research project.
 - Selection and training of researchers drawn from the community
4. Micro Enterprise identification sweep: calls to all households, buildings and activity areas within the geographical bounds of the study to explain the project and identify micro enterprise and business owners.
5. Analyses of sweep data – targeting of the quantitative research.
6. Micro Enterprise owner interviews conducted by members of research team with assistance from community interpreters.
7. Analysis of micro enterprise interview data.
8. Formulation of further research questions and identification of issues arising from the micro enterprise interview data (to be further explored through qualitative research).
9. Prepare for qualitative research:
 - Composition of focus groups
 - Identification of one to one interviewees
 - Invitation and briefing of respondents

- Finalise qualitative research questions, aids and so forth
 - Conduct qualitative research
 - Analyse qualitative results
10. Undertake preliminary data analysis and data check.
 11. Repeat 2-10 for post-energisation survey of the same communities
 12. Conduct data analysis.
 13. Consolidate all research findings
 14. Feedback results and findings to the community
 15. Prepare findings, results and final report.

2. Research Questions

In essence the research will endeavour to solve the following questions:

2.1 Quantifiable impacts

What is the quantifiable impact, from a livelihood perspective, through the provision of Modern Energy Services (not just electrification) for the establishment of new, and growth of existing, Micro Enterprise amongst the poor. The following considerations apply:

- *Livelihood perspective.* This perspective would be the evaluation of the cumulative micro enterprise impact on the poor using measures drawn from the conceptual frameworks provided by, DFID's Sustainable Livelihoods or the Poverty Reduction Strategy Papers. The focus being on the household/individual level impact and not the micro enterprise itself. Matters then to be qualified will be in the areas of economic activities (e.g. jobs, salaries, income), human capacities (e.g. education, health), tangible assets (e.g. finance capital, equipment, stocks) and lastly intangible assets (e.g. access to information, media). A key question will be to try to provide evidence that there is a relationship between energy inputs and incomes.
- *Micro enterprise.* A very small business that produces goods or services for cash incomes and generally operates in an informal part of the economy with between 1 and 10 employees.
- *Provision of modern energy services.* This concept refers to a significant or step change in the availability of modern energy services to a defined area, a typical example would be the electrification of a previously un-electrified area. Further, the service is assumed to mean a basic service (i.e. up to a meter point for electricity or access to bottled LPG) with an associated price, reliability and quality of supply, and with sufficient capacity (i.e. for electricity the capacity to provide productive motive power as well as lights, media, etc.). Other energies as well as grid electrification, such as LP Gas, generator sets and renewable energy can also be included where it is feasible to do so.
- *The poor.* The focus of the project and the questions are on the world's poor who inevitably do not have access to modern energy services. But it is accepted that these people can for the project purposes, be delineated into separate communities.

[Note: This question is aimed at statistically proving the proposition that the supply of defined modern energy services will create and grow micro enterprise and thereby positively impact on peoples livelihoods and incomes.]

2.2 Qualifying linkage

What are the significant factors and their interrelationships as a basis for understanding the enhanced deployment of modern energy services to maximise livelihood impact through micro enterprise creation and growth. The following considerations apply:

- *Significant factors.* These include types of micro enterprise (e.g. business sectors, growth potential “high and low”, reliance on energy, energy intensity, conversion costs, whether replicable) situational factors (e.g. external market potential, natural resources, climate, human potential), financial factors (e.g. access and running cost of energy, access to capital) and time (e.g. time to set up, growth of 2nd and 3rd generation micro enterprise), and so forth.
- *Interrelationships.* Includes practical links, cause and effect relationships, systemic understanding and hierarchy based on relationship/factor strength and importance.
- *Enhanced deployment.* Based on the identified significant factors and relationships the matter of enhanced deployment can be addressed with a view to proposing recommendations on the selection and deployment of activities in conjunction with the modern energy services to maximise micro enterprise development.

[Note: This question is aimed at qualitatively developing answers to the proposition that modern energy services can be delivered with complementary activities that will maximise livelihood and income impact through local micro enterprise creation and growth.]

2.3 Exclusions

Questions or aspects that are expressly excluded from the scope of this project include:

- Overall household/individual livelihood changes that results from the introduction of modern energy services. – Focus rather on the micro enterprise associated livelihood impact.
- The impact on livelihoods by changes in external employment, in other words adjacent factories, migrant labour etc. – Focus rather on the local micro enterprise impacted by the introduction of modern energy services and the associated livelihood impact in the community being studied.
- This is an energy and micro enterprise investigation, hence it is not a detailed study of micro enterprise enablers, operation and economic assessment. – Focus is on how energy enables and supports growth of micro enterprise.
- How energy impacts directly on livelihoods. – Focus on how energy impacts micro enterprise and thereby livelihoods.
- An economic modelling project looking at flows of income and expenditure, aggregate and sectoral surpluses/deficits within defined communities (however, in order to gain a robust understanding, it is planned to collect data on some of these aspects).

3. Research Models

Before developing the research framework, it is important that the context for the questions is well understood. To help this process the following contextual Models have been developed, to represent the focus of the research questions.

3.1 Conceptualisation of a micro enterprise

There is need to understand the contextual environment of micro enterprise activity:

- ***on the inputs side***, what is required, how these are obtained and from who / where are these obtained
- ***on the outputs side***; how does the business promote or advert its existence and products / services, who are the customers (internal or external to the community).

Figure 1 conceptualises a total generic micro enterprise – the degree to which the various inputs and outputs are represented in any one micro enterprise will be dependent on the characteristics of the business, associated household, community and external environment.

Figure 1: Conceptualisation of a ‘generic’ micro enterprise

OUTPUTS (into the external environment)		<div>Generic micro enterprise</div>	INPUTS	Sources	How	From who
Word of mouth	Promotion / advertising		Premises / land	Work space at home	Home	Home
				Rented	Cash payment	Landlord
Formal marketing activities – leaflets etc			Light	Natural	-	-
Sign with prices	Electricity			Cash payment	Service provider	
Customers inside community	Traditional fuels			Cash / exchange	Shop / supplier	
	Solar PV			Cash?	Service provider (own equipment)	
Customers outside community	Electrical Power		Electricity	Cash payment	Service provider	
People in community			Traditional fuels	Cash / exchange	Shop / supplier	
External people			Solar / wind	Cash?	Service provider (or possibly own equipment)	
Purchasing power e.g. food, water, energy, health and education	Income (surplus)		Local resource	Collect	Natural resource	
			Piped supply	Cash payment	Service provider	
Community service for customers e.g. weekly paid employment, pensioners	Credit facilities		Equipment	Hire / lease (share)	Cash / share	Supplier
				Purchase	Cash	Shop / Supplier
			Tools	Hire / lease (share)	Cash / share	Shop / supplier
				Purchase	Cash	Shop supplier
			Raw materials	Own labour	Own / family Employees	Own / family
				Purchase	Cash	Shop / Supplier / farmer
			Fresh produce	Own labour / grow	Own / family	Employees / Farmer
				Purchase	Cash	Shop / farmer / supplier
			Commodities (stock)	Purchase (incl credit)	Cash	Shop / supplier
				Exchange / barter	Other goods	Contacts
			Skills / motivation	Inherent	-	Own
				From training	Cash / agency	Training centre / NGO
			Knowledge	Inherent	-	Own
				From training	Cash / agency	Training centre / NGO

R8145 Modern Energy: Impacts on Micro enterprises
Final Specification of Research Methodology

	Information	Informal sources	Own contacts	Own contacts
		Formal sources	Community resources / internet	Provider / NGO / public institution
	Initial investment	Cash saving (own or close relatives)	Cash	Own / family
		Family contacts	Cash / loan	Close contacts
		Micro or other credit	Loan	NGO / institution
	Operational capacity	Human resources	Owner / family	Owner / family
	External source of cash flow for community members	External employment	Paid cash	Local businesses and services

3.2 Micro Enterprise impact on Livelihoods Model

The purpose of this research is to quantify the impact of modern energy on the creation and growth of micro enterprise activity and to enhance our understanding of the linkages between energy and other enablers. But how does ME activity, and its growth, impact on the livelihoods and incomes of those individuals owning / operating these small businesses? Does this impact spread beyond the individual household and into the community as a whole or even further? This research is not undertaking a full Sustainable Livelihoods analysis however, the micro enterprise impact on livelihoods model (Figure 2) draws on the *assets* and *vulnerability context* components of the SL framework in order that analysis of the findings can be 'standardised' to enable comparison between communities in different locations / countries. The research team fully recognises that this model has clear limitations due to the highly contextual nature of both the process and the findings, particularly from the qualitative cause and effect research.

3.2 Modern Energy Service on Micro Enterprise Impact Model

Following the introduction of Modern Energy Services - a step change - there may be a number of changes that occur within individual existing micro enterprises and / or for micro enterprise activity as a whole. The distinction here being that this is "facilitated" growth as opposed to "natural" growth (i.e. without the energy intervention).

This model (Figure 3) needs to show how micro enterprises will change, die and / or how new ones come to life following the intervention of modern energy services.

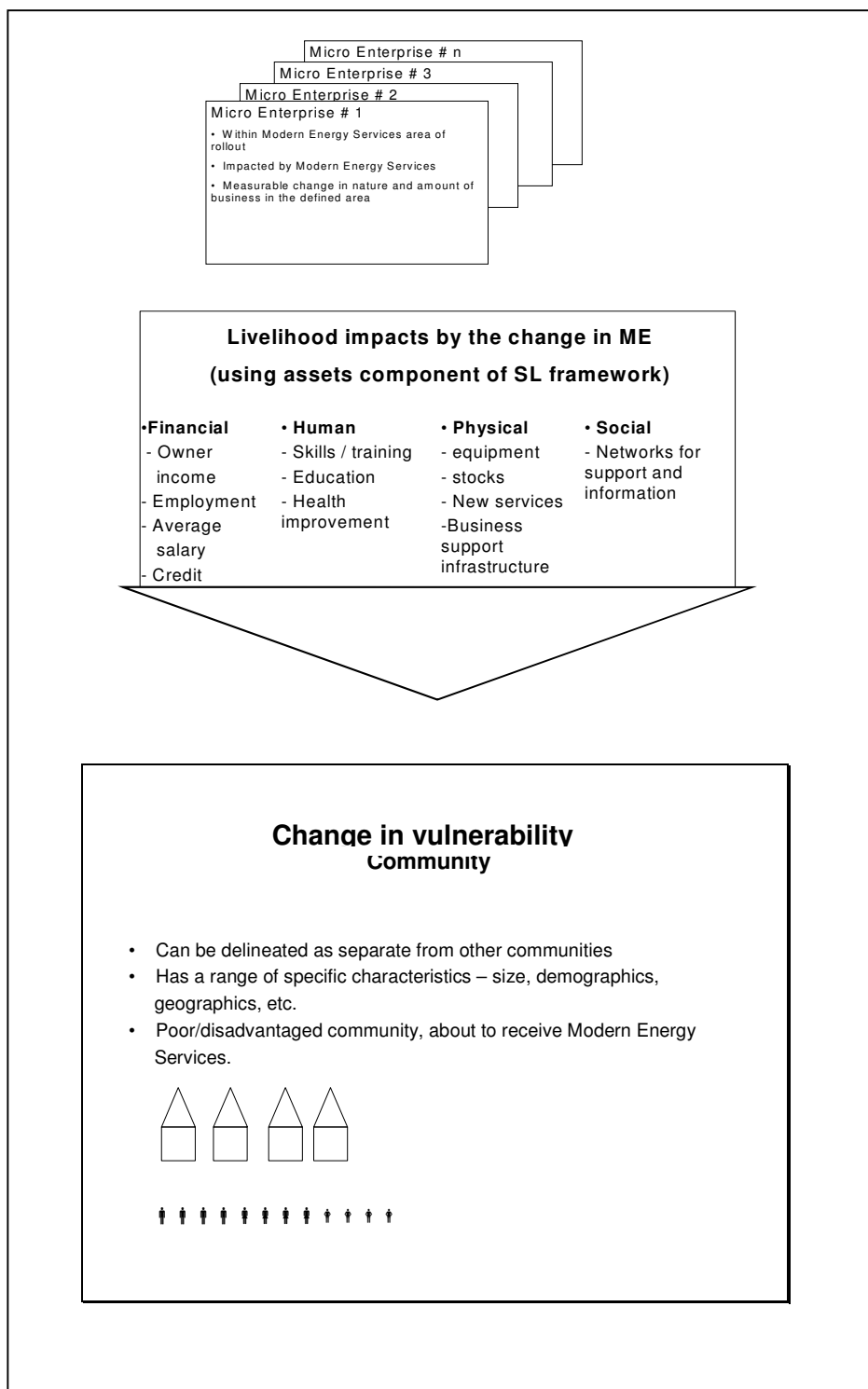


Figure 2: Micro enterprise impact on livelihoods model

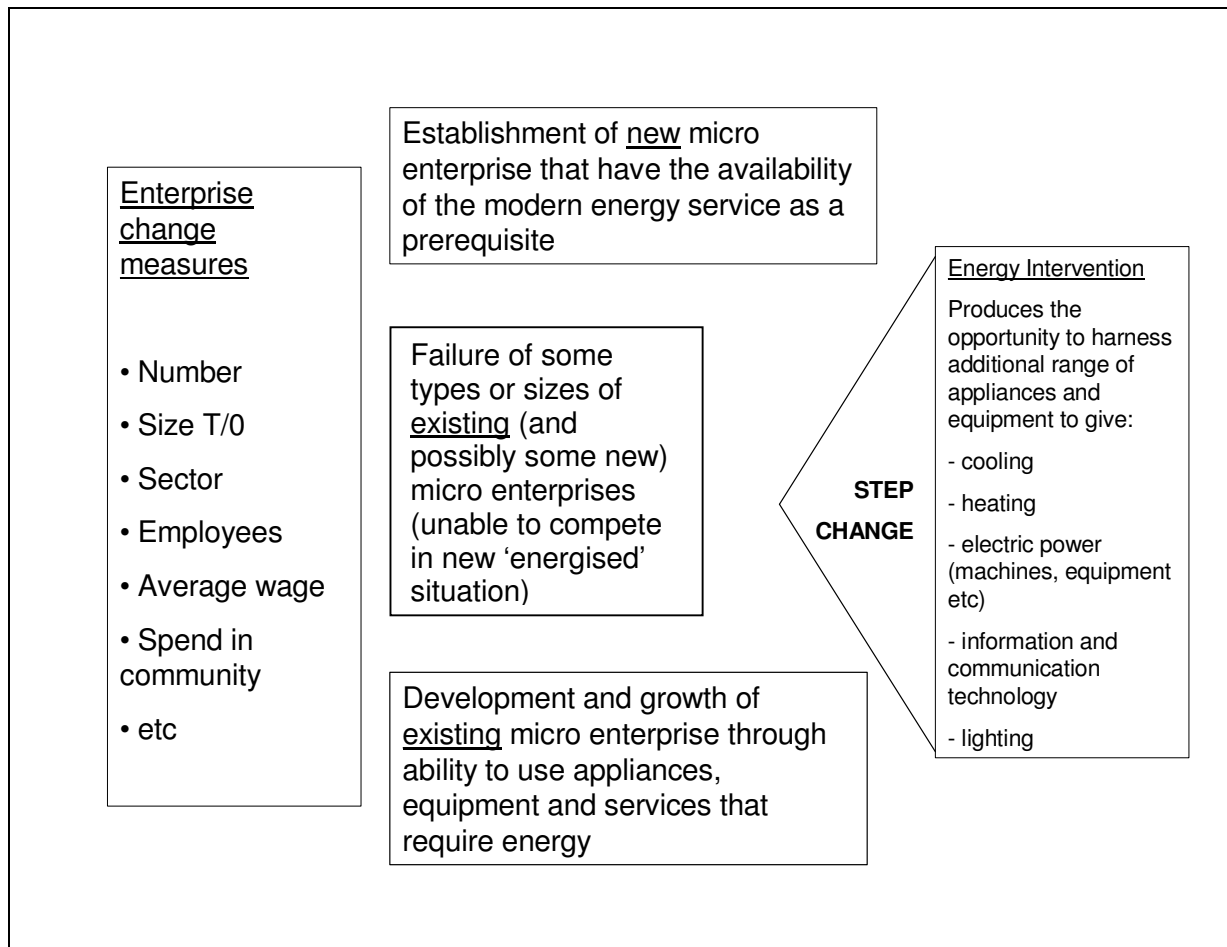


Figure 3: Modern energy services on micro enterprise impact model

4. Research Framework

4.1 Assumptions, propositions and framework notes

Based on the preceding inputs, proposed research questions and models, the following assumptions, propositions and notes outline the reference framework that guided the design of the research framework for implementation in Phase Two of the project.

These points are intrinsic within the framework set out in the next sub sections. Kindly note that the list below and the preceding set of research questions, together with the following frameworks are the core areas agreed amongst stakeholders at this stage of the project.

4.1.1 Community level research

The research will focus on a number of delineated urban and rural communities, areas of poor households, in Southern Africa and India.

- Whilst the communities selected will be typical of many others in the respective regions, they will never form world, or even country wide, basis for extrapolation.
- The research universe will therefore consist of a number of defined poor communities in both urban and rural areas.
- The results will apply to these communities and their particular circumstances.
- General conclusions will however be drawn where it is feasible to do so on a reliable basis.

4.1.2 Modern energy intervention into the community

As a prerequisite to the selection of any community, it is imperative that a modern energy intervention is imminent and will be of a substantial nature.

- The intervention needs to be of a rollout nature, in that it will effect a step change on the community from an energy perspective.
- Delivery of a modern energy intervention would have an impact on the type and nature of the micro enterprise operating in a community.
- The introduction of modern energy to the community will allow for the testing of this exact hypothesis proposed in the project.

4.1.3 All micro enterprise will need to be evaluated

At the core of the research framework is a decision to scan, quantify and characterise all legal and reputable micro enterprise active within a community at a given point in time where it is feasible to do so:

- Only by evaluating the total micro enterprise activity within a community can their impact on livelihoods be determined.
- Following the introduction of a modern energy service in a community, failure to evaluate the total micro enterprise activity could give rise to error as the changes in activity could be the result of closure or reduction in some existing micro enterprise activities.
- Measures will be required for this approach that specifically look at evaluating the operation of each micro enterprise found.
- Only evaluating all micro enterprise will give the necessary statistical basis for comparison, as any sampling techniques across different 'before' and 'after' energy

intervention communities would be highly biased and be unrepresentative unless all micro enterprise are counted.

4.1.4 Micro enterprise has a direct impact on livelihoods and incomes

Whilst micro enterprise can be evaluated from the perspective of the enterprise in itself, there is a second major component of the project in determining the livelihood impact of the micro enterprise.

- One implication of having micro enterprise in the community will be an impact on the livelihoods and income of individuals, households and the community as a whole, possibly positive and negative.
- Changes in the nature and number of micro enterprise will correspondingly vary the impact on livelihoods and incomes.
- These impacts need to be measured from the perspective of the community i.e. what are the important livelihood and income attributes from their perspective.

4.1.5 Longitudinal nature of the research - time related change

Clearly with a step change with modern energy provision impacting on micro enterprise, the results will be constantly changing for a period, necessitating the need to measure before the intervention, and after the intervention since many (up to 80%) new micro enterprises fail within the first year (Ref: Andrew Barnett commentary provided to the project team as part of the consultation process) and it takes time for the community to establish ME activity, at least 12 months need to elapse after modern energy provision before the post survey is conducted:

- It is proposed that a before and after survey (over a total period of upto 18 months) be conducted.
- This number of surveys proposed together with the number of sites investigated and the complexity of the research activities, will determine the volume, level and timing of resources required.

4.1.6 Delta or net change in micro enterprise activity and livelihood impact.

For both impact of the modern energy services on micro enterprise activity, and in turn the impact of micro enterprise on the livelihoods, it is proposed that the net change (delta) is measured.

- The delta will examine how much the intervention has changed the nature and number of micro enterprise and the variation in livelihood and income impact that the community is experiencing.
- The measures for each will need to be subtracted to determine the change after a period of elapsed time, e.g. Total income of community members from ME activity before the intervention, subtracted from the total income of community members after the intervention.
- Changes on other assets e.g. social, financial, human and physical capital will contribute to reducing vulnerability of individuals, households and the community, and may therefore also be relevant in determining whether a change in livelihood sustainability has occurred.

4.1.7 Single community application of the measures

By evaluating one community independently through longitudinal research, a range of externalities and local characteristics are excluded.

- Comparison between different communities would result in the need to try and normalise the data in an attempt to remove differing impacts on the micro enterprise and livelihood impact changes. The longitudinal approach in only a few communities will mean that real understanding is gathered on each, however the question of how broad is the application of the lessons needs to be raised. By evaluating four substantially different sites during phase two of the project, there will be an opportunity for between site comparisons. This comparison will be focused on evaluating how generic are the lessons that have been extracted, thereby giving an indication of how broadly the lessons can be applied to other communities. This could take the form of an analysis where the impacts on the micro enterprise and livelihood impact change are compared between the sites together with the externalities.

4.1.8 Impact of other interventions during the research period

In an attempt to understand only the energy intervention impacts there is a need to monitor what other externalities impact on the community and micro enterprise during the test period.

- A log of all activities and events within the community or that impact on the community needs to be maintained during the research period, together with investigation of such impacts. This will need to be systematically examined at the beginning of the 'after' survey, detailed understanding of this recent history will be gained through qualitative research and the overall findings used to aid interpretation of the statistical analysis of the quantitative data.

4.1.9 Limitations of assessment of only four communities

Due to finite project resources only a limited number of communities can be assessed, which means that the statistical results, whilst being statistically reliable for the surveyed communities, cannot be extrapolated on a predictive basis to a broader spectrum of poor communities receiving energy interventions. However, we will aim to show a statistical relationship between the supply of modern energy services and micro enterprise, and to identify the resulting livelihood and income impacts.

4.1.10 Measurement from the perspective of the community

An approach that needs to be incorporated is the inclusion of the community and individual weighting factors, so that for example the livelihood impacts may be weighted and rated in accordance with the ***communities' perception and needs***. Qualitative participatory research will be essential in this regard and will need to be done in association with the quantitative data collection.

- It would be incorrect to measure the impact from the perception and needs of the researchers.
- Identification, review, ranking and finalisation of measures needs to take place within each community surveyed (i.e. informed by discussions with micro enterprise owners and community members).

4.1.11 Everything will be measured from the perspective of the micro enterprise.

Both the enterprise, livelihood and income impacts will be measured by engaging the micro enterprise and not the community in terms of the quantitative data collection. Part of the qualitative research will however also engage non ME owners in the community. But, the primary focus will be on ME activity rather than community focused.

- Rather than trying to obtain statistical information from receivers such as the community, individuals, local leaders etc., the outputs of the micro enterprise will be measured. Note, that in terms of the community intervention log and other qualitative engagement a broad range of receivers and influencers will be engaged.
- Measurement by means of the community as receivers would be incredibly difficult as their livelihoods are impacted from countless sources. Differentiation between these, by say, a member of the community would be virtually impossible.
- The micro enterprise, methodologically, will be the independent variable, together with the energy intervention and these are the focus of isolation, measurement and study.
- Dependent variables include general community livelihood levels, income levels, financial surpluses, well being and so forth.

4.2 Research time framework

Time line	Research Stage	Research Activities
Start	Initialisation of research site	<ul style="list-style-type: none"> • Site selection and confirmation • Access and legitimacy • Phased briefing of community (leaders, key stakeholders, potential participants) • Identification and training of community researchers / interpreters
First month	Pre intervention research. (Base line data)	<ul style="list-style-type: none"> • Community characteristic (including semi structured interviews with key informants) • Micro enterprise identification (sweep survey) • Enterprise activity snapshot • Livelihood impact snapshot • Qualitative interviews (limited) • External intervention log
Next 3 months	Modern Energy Intervention, e.g. electrification or energisation of the community area. A step change in energy access	<ul style="list-style-type: none"> • Monitoring of the electrification/ energisation progress • Updating of intervention log
		<ul style="list-style-type: none"> • Data Analysis
At 3 month intervals	External (non-energy interventions and events)	<ul style="list-style-type: none"> • Update intervention log (Note 1)
1.0 to 1.5 years after electri-fication	Post intervention research	<ul style="list-style-type: none"> • Micro Enterprise identification (sweep survey) • Enterprise activity snapshot • Livelihood impact snapshot • External intervention log update • Qualitative interviews • Community characteristic update
		<ul style="list-style-type: none"> • Data Analysis
Note 1: Where it is feasible to do so, arrangements to be made for the intervention log to be constantly updated by a competent and reliable member of the community.		

4.3 Research Activity Framework

Based on the above field research methodology, it will be necessary to deploy the following minimum list of research instruments and activities:

- Community characteristics / interviews with key informants.
- Micro Enterprise Identification sweep.
- Enterprise activity snapshot.
- Livelihood impact snapshot.
- External intervention log.
- Determination of net or delta changes.
- Qualitative information gathering.

Each of these are now described and specified.

4.3.1. Community characteristics / key informants

Evaluation of micro enterprise changes within a defined community will require an understanding of the community itself. Hence, at the beginning of the research the community characteristics will be assessed and further regularly updated throughout the life of the research project. Types of characteristics on which information should be gathered include:

Characteristics	Source
Name of community Size and Area of Community Location and Map Reference Community map showing infrastructure Number and Type of Dwellings Population and Demographics: Description and nature of population Permanent /Migratory Language Groups Social Divisions Education levels / literacy rates Incidence of AIDS, TB, etc	<div> Local Authority Local Clinics Local School Local Church Leaders </div>
Average income per household Employment / Unemployment	Community leaders and local NGO's
Energy supply and suppliers: Electricity Liquid Fuels Solid Fuels (coal, coke etc) Biomass	Members of community and respective utility and energy suppliers
Other relevant distinguishing features.	Observation / enquiry

Much of the information listed above is of a quantitative nature and as such will be sourced through the collection of secondary data from within the community and from external sources where such data is collated. To gain further insight into how the community has developed, how it operates and to identify any specific problem areas, positive aspects, significant events and current / previous initiatives, it is necessary to conduct discussions with members of the community that have key roles and responsibilities e.g. police, church, business leaders, leaders of NGOs providing assistance within the community (present / past if accessible), leaders of community based organisations (CBOs), energy suppliers; and other relevant bodies and individuals. Their perspectives on a particular issue will almost certainly vary and in some cases may even be contradictory – at this stage in the investigation the main purpose of these interviews is to enhance our understanding of the community as a whole and not to explore any particular issues in detail. Where relevant to the understanding of areas important to this study, multi-faceted issues or those where many different perspectives are identified can be further explored during the qualitative information gathering activities.

These interviews should be semi-structured in nature using, primarily, a series of open questions through which the views of the respondent can be gathered. Using an overall checklist of potential areas to be explored, the questions that will be asked will need to be tailored for each interview depending on the area of operation / knowledge of the respondent. The following are examples of the types of issues that could be explored:

Issues	Example questions
1. Community situation and future development	Has the community changed over the last 2 years – if yes, how? Would you say these changes are positive or negative? What are the specific events / people / issues that have led to these changes?
2. Specific initiatives in the community	Have there been any initiatives aimed at raising living standards, increasing incomes, enhancing community utilities (particularly energy) and / or enterprise development etc? Explore those that are indicated to find out what was done / is being done and the impact. If you could make changes in the community, what would you suggest should be done? What kind of services / shops etc does the community need? What do you think should be done to establish these?
3. External impacts on the community	Has anything occurred outside the community that has made a difference? Facilitate the discussion to identify what occurred, who benefited / suffered as a consequence, what is the lasting effect? (a key area here is to gain an insight into the level and types of external employment that are available to people from the community and that therefore increases the level of cash flowing into and around the community)
4. Social divisions within the community	Ask them to describe who lives in this community (this will highlight key influencers, different social groups and any associated problems such as poor or elite households, streets, districts etc) Facilitate the discussion to identify whether they perceive specific sections of the population to be advantaged and disadvantaged, and why? Try to identify whether there are any groups who may be strong / poor positions with regard to access to / effective use of the proposed modern energy services or establishing a small business. What social problems, if any, occur amongst members of the community – are there any groups that are perceived to be isolated – if yes, explore why?

This part of the investigation should also be used to identify and obtain other relevant reports that may provide collated data or present the findings of other organisations ('secondary sources') that have worked in the community e.g. the power utility may have already undertaken a detailed community survey in preparation for the provision of modern energy services.

4.3.2 Micro Enterprise Identification Sweep

Core principal within the research methodology is the need to measure the total extent of micro enterprise activity (all) taking place within the community. However, from a research perspective the challenge will be the identification of the micro enterprise.

With the research being constrained to a defined area or community, identification of the micro enterprise will be achieved through a methodical house to house type sweep of the area. That many of these activities are hidden means careful investigative sweeping is required.

Thus, the first step towards a process of engaging the micro enterprises is to obtain the following information:

Information	Reason
Geographic position	To facilitate future access
Primary Business type	Initial categorisation for statistical interview
Owner or 'manager' contact details	Access for interviews, focus group
Preferred interview time	Enable greater % first time access

The Micro enterprise identification sweep questionnaire is provided in Appendix A.

4.3.3 Enterprise activity snapshot

The aim of this research activity will be to determine, at a given point in time, the extent and nature of micro enterprise being undertaken within the community area and a range of information about the business. Subsequent "snapshots" of this data will give the research team the opportunity to evaluate the delta change in micro enterprise activity. The micro enterprise information and measures required are broad and are listed below. The following is an 'ideal' list of data; the majority of these items have been incorporated, with modifications as a result of the lessons learned during the field trial, into the quantitative survey questionnaire.

In later stages of the research, those indicators identified as of importance and value to the micro enterprise respondents (i.e. from their perspective) will be ranked and weighted (also with assistance of ME owners), and used as the basis for analysis of the data collected during the quantitative survey.

Activity	Measure / Indicator
Type of Enterprise - nature of business Date when enterprise started	<ul style="list-style-type: none"> • Types of good produced or services provided • Date
Date of energy connection if different from enterprise start date	<ul style="list-style-type: none"> • Date
What prompted you to decide to start your business?	Note reasons:
<p>Income</p> <p>Income trend</p> <p>Costs – Materials/Stocks</p> <ul style="list-style-type: none"> • Labour • Energy • Other (prompt for other important inputs such as water, raw materials) <p>Profit / Surplus</p>	<ul style="list-style-type: none"> • Turnover Rands Per week, month, year (Estimated Rands if barter “in kind”) • Income trend over last 5 years (if appropriate) • Expenditure Rands Per week, month, year • Surplus – Rands per week, month, year
How do you access/purchase inputs required for your business?	
Number of Employees Man hours worked	<ul style="list-style-type: none"> • Total number • Total number
Skill factor of employees	<ul style="list-style-type: none"> • Education Standard • Training attended • Plus skills inventory matrix
“Value Added” element of the enterprise	<ul style="list-style-type: none"> • Income / (Income – (material costs and overheads))
Productivity	<ul style="list-style-type: none"> • Average Income / Man hours
<p>Energy usage</p> <ul style="list-style-type: none"> • Types of energy used • Purpose of use • Security of supply • Quantity and cost • Connection/up front cost • Any constraints to access to energy <p>How important is energy</p>	<ul style="list-style-type: none"> • Matrix tick box of types • Matrix tick box of options • Units / Rands per week / month / year • Hours/day • Ranking matrix plus reasons.
What positive impacts to your business?	
What negative impacts to your business?	

<p>Assets used</p> <ul style="list-style-type: none"> • -Premises • -Equipment • -Computers / Telephone etc • -Stores / Stock <p>Total estimated Asset Value</p>	<ul style="list-style-type: none"> • Number and type • Type, size and number • Type, number • Type and estimated value <ul style="list-style-type: none"> • Rand Value
<p>Type of income</p> <ul style="list-style-type: none"> • -Cash / Cheque • -Is credit given to customer / how • -Bad debt level 	<ul style="list-style-type: none"> • Description • Yes / No Description • %
<p>Does business have a bank account</p>	<ul style="list-style-type: none"> • Yes / No
<p>Market and customers</p> <ul style="list-style-type: none"> • -Estimated customers • -Internal from community • -How accessible is the external market • -External from community • -Average value of transaction • -How has your market changed with better energy services • Has the quality of your product/service improved <p>Nature of market</p> <ul style="list-style-type: none"> • growing • maintaining • contracting <p>Competition</p> <ul style="list-style-type: none"> • Who is the competition • How strong is the competition and why 	<ul style="list-style-type: none"> • Number • Percentage or estimated number • Percentage or estimated number • Rand value <ul style="list-style-type: none"> • Micro enterprise opinion matrix <ul style="list-style-type: none"> • Question: Verbal description
<p>Ownership and control of Assets</p> <p>Environmental impact</p>	<ul style="list-style-type: none"> • Who owns the business – question. • Owner-type matrix tick box e.g. owner community non operator owner community male/female owner <ul style="list-style-type: none"> • What waste and emissions Watt usage Raw materials used Noise
<p>Prospects for Enterprise</p> <ul style="list-style-type: none"> • -Growth opportunity • -Growth constraints <p>What is important to owner, as a business</p> <p>Issues for growth and ranking</p> <p>Family members as employees</p>	<ul style="list-style-type: none"> • Qualified opinion of micro enterprise • Qualified opinion of micro enterprise <ul style="list-style-type: none"> • Qualified opinion of micro enterprise <ul style="list-style-type: none"> • Elicit up to 5 issues for micro enterprise <ul style="list-style-type: none"> • Micro enterprise to rank issues in order of importance. <ul style="list-style-type: none"> • Number and %

4.3.4 Livelihood impact snapshot

Here the aim of the research activity will be to determine at a given point in time the extent of livelihood impact from the micro enterprises within the community area. Subsequent “snapshots” of this data can be compared to enable the research team to understand the extent and nature of the changing micro enterprise impact. The livelihood impact and measures that will need to be included are:

Livelihood impact	Measure
Local livelihood choices / opportunities for community members	<ul style="list-style-type: none"> • Total number of micro enterprise's in community. • Perceived employment opportunities
Household Income <ul style="list-style-type: none"> • -Owner margin / profit • -Employee salaries 	<ul style="list-style-type: none"> • Distribution and averages • Distribution and averages
Job: Livelihoods <ul style="list-style-type: none"> • Men • Women • Part time • Full time • Breadwinner / no breadwinner 	<ul style="list-style-type: none"> • Material headcount members
Well being impact <ul style="list-style-type: none"> • Education • Health • -Quality of local services from micro enterprise's • -Media • -Choice 	<ul style="list-style-type: none"> • Matrix of education standards of employees • Sickness absence from work • Satisfaction perception rating matrix • TV / radio / computer / newspaper / ownership / usage • Perception rating matrix
Security of income	<ul style="list-style-type: none"> • Perceived livelihood security
Reduced vulnerability <ul style="list-style-type: none"> • -Personal control of affairs • -Asset ownership and control • -Empowerment 	<ul style="list-style-type: none"> • Perceptions matrix of choices, disposable income, Personal aspirations, savings. • Asset Inventory • Economic opportunities matrix • Training / Education opportunities Matrix
Fiscal independence	<ul style="list-style-type: none"> • VAT - Yes / No
Opportunities – Independence <ul style="list-style-type: none"> • -Mobility • -Access to information • -Studying / test / improvement 	<ul style="list-style-type: none"> • Age / number of dependents • Type of transport • TV / radio / newspaper usage • Yes / No What?
Gender <ul style="list-style-type: none"> • -Who owns the business • -Who runs the business and takes major decisions • -Who controls the finances 	<ul style="list-style-type: none"> • Male / female • Male / female • Male / female
Enhanced environment	Perceptions of micro enterprise's
Prospects for enterprise <ul style="list-style-type: none"> • -Growth opportunities • -Growth constraints <p>Micro enterprise's provide indicators of how they judge asset success and what is important to them and the community.</p> <p>Family livelihood / support / empowerment</p>	<ul style="list-style-type: none"> • Micro enterprise opinion and matrix ranking • Number of family members employed in micro enterprise.

4.3.5 External intervention log

Changes in a community and the micro enterprise can come from many sources and drivers. Examples being, energy upliftment, development programmes, macro environmental changes etc. As part of background data, for use during the qualitative analysis, a log of intervention and external influences needs to be maintained during the research period.

Typically, the log will include:

- Details of any initiative that impacts on the community e.g. an NGO sponsored training programme for entrepreneurs.
- Duration and scope e.g. 3 year programme for 6 persons at a time.
- Likely impacts on micro enterprise developments e.g. increase in entrepreneurial skills in the community, can be a reason for increased micro enterprise activity during the test period.

4.3.6 Qualitative Information Gathering

A range of qualitative information will be gathered and documented throughout the project. Qualitative research will be widely deployed to explore and understand the quantitative data, trends, significant local interventions and to validate collected data.

However, the most important role for qualitative research techniques will be to conduct in-depth participatory cause and effect research to fully understand the various factors impacting micro enterprise, especially from a modern energy provision perspective, what the linkages are; and, how they interrelate (if at all) with each other. Qualitative information gathered will also be an essential part of the overall methodology, to ensure reliable information is gathered and understood about how the micro enterprise players themselves and members of the community see things and perceive and rank issues to do with local enterprise, energy matters, gender, health, empowerment, education, environmental matters and so forth.

The research approach will involve:

- Group sessions with defined groups.
- Individual, in depth, interviews with selected groups.
- Focus groups on livelihood linkages and particular issues.

The nature of this interviewing and discussion approach will include features such as:

- Highly open ended, participatory, neutral and cross cultural.
- Double interviewer from the project team to allow for real time feedback and facilitation – processing, validation, classification and identifying areas for more investigation.
- Participatory approach with skilled social analysts.

It will be essential that skilled facilitators plan and undertake the participatory research. This must be neutral without prejudice. It will also be absolutely essential to ensure confidentiality, legitimacy with the community, micro enterprises and respondents and that trust is established and honoured by the research team.

The project methodology provides for an undertaking to be given to all respondents that the results of the research project will be shared with them, in an appropriate manner and at an appropriate time.

4.4 Research analytical framework

There are a number of different analytical activities within the framework.

4.4.1 Determination of net or delta changes

Here the focus is to compare the micro enterprise activity and livelihood impacting measures following the post intervention research snapshot. For each measure the 'before' and 'after' results are compared and adjusted to a similar basis e.g. = or – 100%. These results should be graphically represented to indicate the overall trends. Whilst conclusions on individual measures can be drawn (e.g. the amount of micro enterprise activity measured on a total “turn over” basis – increased or decreased) any conclusion, of the overall positive and negative impact, is more difficult. Here a weighting system is recommended where, from the perspective of the community, the different measures are scored and then an overall composite number is calculated in an attempt to conclude a positive or negative growth in micro enterprise activity and livelihood impact. This volume measure will need to be disaggregated into the different enterprise types, to give impact of energy on particular types, and impact of particular types on components (e.g. assets, vulnerability context) within the SL framework.

4.4.2 Qualitative analysis

As the project endeavours to understand the change (hopefully growth?) in “volume” and type of Micro Enterprise and the linked impact on income / livelihoods following the introduction of modern energy “enablers” into the community, the question must be posed – Have other factors contributed to the change as well? How? To what extent?

An initial analysis of the quantitative data together with the historical data should be undertaken to highlight possible areas for further focused investigative (participatory) research.

The participatory research and analysis aims to identify ‘cause and effect’ relationships that may also be the underlying reasons for the change in volume of micro enterprise. Here techniques one-on-one interviews, group sessions, etc. are utilised. High level of social research & interview skill and real time processing of feedback is required to enable further associated questions to be asked during the interviews and community group discussions.

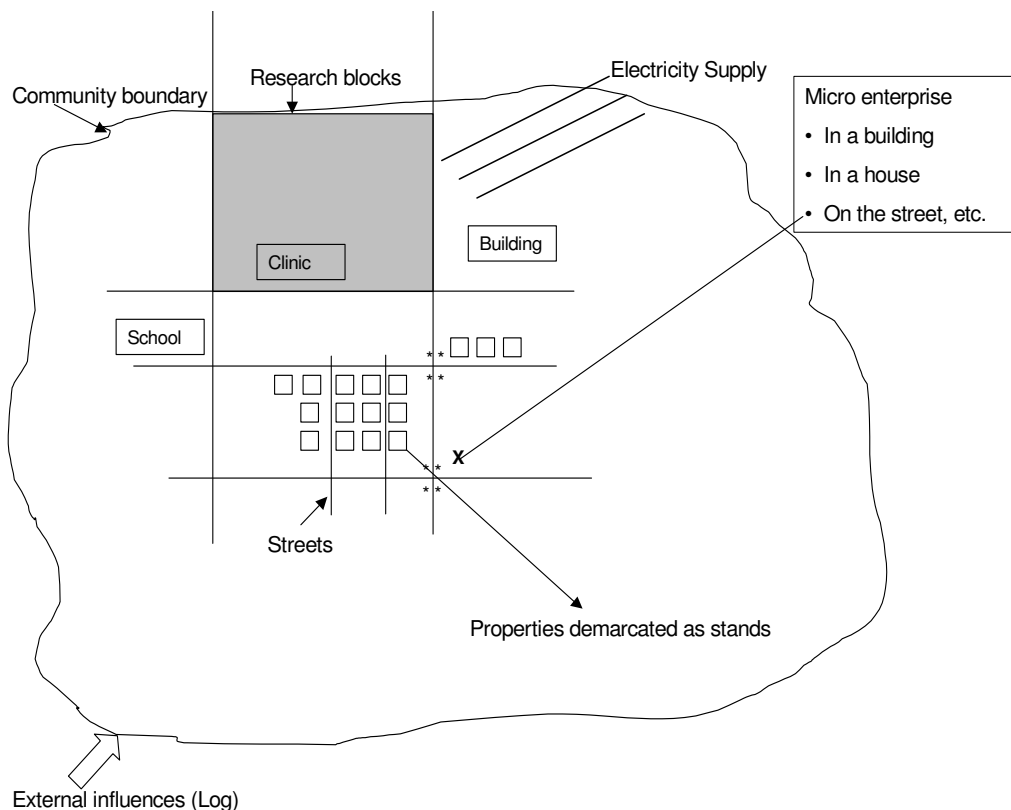
5. Detailed research activity design

This section of the methodology development covers the design of the detailed research activities including community engagement, questionnaires, research modus operandi and data analysis techniques. Starting with a description of the practical field research context the different steps are developed.

5.1 Field research context

Significant practical consideration needs to be given to field research to ensure a smooth interaction with the selected community and the highest probability and accuracy of data gathering.

The following picture is intended to describe the community context from a field research perspective.



Matters for consideration include:

- Access to the community will not be possible unless permission and legitimacy can be established through the local political/community/municipal structures.
- Detailed research of this nature will have an impact on the community who are often highly integrated and outsiders create significant focus. This needs to be carefully “managed” in association with the local leaders.

- Inclusive/exclusive rules to apply to business activities.
 - The micro enterprise must be located and active geographically within the area.
 - The trade needs to be plied within the area; and, adjacent areas in the case of manufacturing where products are made in the community but sold outside the community
- Practical considerations:
 - Language and the need for interpretation.
 - Use of persons from within the community for translation and research assistant duties, thereby leaving a practical legacy of experience and income in the community through the project.
 - The need for a meeting hall / room for focus groups and other interfacing .
 - Physical access and distance to the community.
 - Safety and security of personnel.
- A systematic process is recommended whereby:

Step 1:	Presentation and discussion with community leaders to obtain understanding, support and co-operation. Agree wages and employment / training arrangements for community assistants
Step 2:	Community leaders advise community of project, activities, timescales and roles for community members.
Step 3:	Community recommend candidates as interviewers / community project assistants (followed by interview and selection by project researchers)
Step 4:	Training of community researchers / assistants
Step 5:	Conduct various stakeholder consultations (for Community Characteristics Record and External Intervention Log)
Step 6:	Conduct quantitative surveys (Micro Enterprise Identification Sweep and Quantitative Questionnaire – Micro Enterprise and Livelihoods Impact Snapshots)
Step 7:	Collate and process quantitative data / identify issues for further exploration using qualitative research
Step 8:	Plan and undertake Qualitative (participatory) Research (e.g. Focus Groups, in-depth one-to-one discussions, etc.)
Step 9:	Overall analysis of data and project findings / Project reporting
Step 10:	Detailed feedback of project results to community and local businesses.

The various research instruments and activities identified are outlined in more detail in the following sections.

5.2 Community characteristics record

Purpose: To provide information about the community necessary to conduct the overall research required for the project. This information is also critical in terms of enabling suitable test communities, to be identified and selected for detailed investigation.

Modus operandi:

Characteristics on which information should be gathered are shown under section 4.3.1.

This information will be required at various stages:

- before selecting a community as a test site
- update and validate prior to 'before' survey
- update and validate prior to 'after' survey.

In practice, community information will have to be regularly updated throughout the community research to ensure relevant information is collected, validated and is continually up to date.

Researcher guidelines:

A community characteristics data file is created with a template of required information. A senior member of the research team will gather the information from appropriate sources through personal enquiries, phone enquiries, scrutinising documentation (such as local authority plans, maps etc.) and enquiries with community leaders, and, local residents.

It is essential that the community characteristics data is validated and checked with different sources, as necessary, to ensure accuracy and reliability.

After the completion of the quantitative surveys of ME's in the community from the relevant data should be added to the community characteristics data file.

5.3 External interventions log

Purpose: This log aims to provide information according to three primary dimensions:

- time: when did things occur
- what: nature and description of occurrence, intervention, etc.
- impact: identifiable impact on Micro Enterprises.

This information will be crucial as input to the qualitative research to understand relevant interventions that have occurred together with external (from outside the community) influences potentially impacting the variables under investigation.

Modus operandi:

A community diary / log is created together with appropriate data gathering methods. These may be a list of key respondents such as local authority officials, community leaders, and, reliable individual community members. Focused interviews to elicit and validate historical interventions and events; and, the impacts.

In terms of current interventions taking place during the life of the research project, these will also be gathered through observation by members of the research team in the conduct of the various surveys and qualitative enquiry activities.

However, together with the community characteristics data file, the community log must be an overt and structured research tool that must become a living document or map throughout the project for continual reference, validation and refinement.

Researcher guidelines:

The community diary/log must be allocated to a senior member of the research team or a competent and reliable member of the community since it will require high level research skills both to set up the log framework document and more importantly ensure rigorous data collection, validation and regular updating. This document will be a primary source of data for the qualitative research.

5.4 Micro enterprise identification sweep

Purpose: Identify all Micro enterprise activity within the community, and determine their associated geographical position, type and contact details of the owner manager.

Modus operandi:

- Literally sweep (walk every part) of the community geographically, checking every house/building/structure, plus outside areas (street corners, etc.) for micro enterprise.
- Engage a person or persons at each geographic position to answer basic micro enterprise identification details.
- Utilize research assistants drawn and trained from the community, with a very structured approach to obtain the minimal information required.
- Utilise simple questions and aids.
- Basic researcher contacts and training required.
- Remunerate on a completed questionnaire basis.
- Utilise spot checks to validate researcher accuracy.
- One A5 page response per premises, micro enterprise. (See Appendix A).

Research Guidelines:

1. Place a new questionnaire on the clipboard.
2. Walk to the next house, building, micro enterprise.
3. Write down the address
4. Knock and look for a person _____ No. —————> mark for a repeat visit.

Yes. Give the introduction “Good day. I am ‘A. Brown’ and I am acting on behalf of Integrated Energy Solutions a company undertaking research in the Fisantekraal community. I have a letter of authority and my identity card if you wish to check them. You may have already heard of the research from the community leaders. Could I take a few minutes of your time to ask you a few questions?”

5. “Do any business activities take place on this property/in the home. Are there any visually evident or ask more questions giving examples, e.g. spaza, cooking food, shebeen, car repairs ...
6. No. —————> Thank you for the time —————> Tick ☐ N
Yes —————> Tick ☐ Y

7. "I will now ask four questions on the business:

- Major activity?

Write description.

- Size of operation? Tick

Bia Med Small

- Name, address, Tel of owner

Note details.

- Preferable time for a detailed interview

Note day and time.

8. "Thank you very much for the time, the detailed research team will make contact in the next few days.

9. Date, time and sign questionnaire.

5.4.1. Selection of Community Interviewers

Although the participation and assistance of the community leaders should be sought in providing community interviewers, it is considered essential, that the research team directly select, train, manage and remunerate the community members involved. To leave these functions to the community may lead to favouritism, potential conflict in the community and poor quality of field research.

Having estimated the workload to carry out the household sweep interviews the number of interviewers required to complete the exercise must be calculated. Every opportunity should be afforded for members of poor communities to work and benefit from the research. Minimum requirements should also be set as criteria for selecting interviewers. These need to include matters such as, currently unemployed, literate with a basic standard of education, have clear handwriting, live in the community, be bilingual to facilitate translation and possess identification.

5.4.2. Training of Community Interviewers

A structured training process of at least 2 hours is recommended that consists of the following steps:

Issue of Clip Boards, Pens and Paper: Each interviewer is asked to take notes of the training and advised that the trainer will go through the notes together later in the session to check understanding. They should also be advised that there would be some role-playing to check their understanding.

The timetable for the household sweep interviews should be explained. The availability of the interviewers to meet the above timetable should be checked and confirmed.

The training is then recommended to consist of the following steps:

1. Presentation and interactive discussion about the project.
2. Terms of the job are explained, discussed and agreed.
3. ID and a letter of support from the Community Leaders should be shared if this is available
4. Training on ME Identification Sweep Questionnaire.
5. Role Playing.
6. Allocation of areas.
7. Check notes and further questions.
8. Date of next meeting.

The following aspects of training require special mention:

Terms of employment

- A fixed fee per completed questionnaire.
- All houses, shacks, huts, flats, garden shacks etc in allocated area to be interviewed.
- Spot checks by members of research team in the field and at group review meetings. NB: This is recommended to be an essential activity to ensure professional data gathering.
- Interviewers must carry ID and a copy of supporting Community Leader paperwork to show to all householders.
- Each interviewer assigned own area for which they must take full responsibility.
- Payment made only when complete job finished, after spot checks, accurate information with neat handwriting (for data input staff).
- Payment made at wrap up meeting.

Training on ME Identification Questionnaire

This is a crucial and time consuming element of the training. Key areas of understanding that are required are:

- Unique location reference.
- Type of micro enterprise.

A significant amount of time will be required explaining the system of unique location referencing. Practical exercises, the use of local maps and so forth must be used to ask a series of questions to ensure understanding. With regard to what we mean by micro enterprise or small business, a brainstorm of all the different types of small business and emphasis on the criteria of 1 to 10 employees are very useful.

Role Playing

This will prove to be an invaluable practical training and learning method. Each interviewer should be asked to act as an interviewer and the trainers then acted as householders raising a range of answers and queries to test the interviewers understanding. This should be done with much humour and each role-play done in front of the whole group thus providing both an individual and group learning activity.

Allocation of Areas

Using a large map of the community, it should be broken down into roughly equal areas (a sixth each if there are six interviewers for example) and an area allocated to each interviewer, after due consultation with the group regarding their languages and any preferences for certain areas.

5.4.3. Completing the Micro enterprise identification sweep

Following the training and tasking of the interviewers the following steps were undertaken to complete this aspect of the research.

Step 0. Management of the interviewers in the field.

On a regular basis over the duration of the sweep activity in the field regular checks must be made on the interviewers. The focus of the checks should be on data accuracy, speed and meeting of the deadline and an initial understanding of the sweep success. The step plays a

very important role to quickly identify and rectify any difficulties and to ensure the sweep activity remains on schedule.

Step 1. Collection of the completed questionnaires and payment

Next the interviewers are assembled at the completion of the sweep for processing of the completed forms and payment. Each interviewer is required to sort the completed forms into a numerical order to assist with data checks and later capture. Next further spot checks should be completed; a correctness comparison against visually collected data on enterprise within the community and for completeness the forms are compared against the allocated area with the aid of a large map of the community. Once the research team member is satisfied with each interviewers work, a pay packet is prepared, that includes the cash owed and a payslip for signature of funds received.

Step 2. Data capture

An Excel spreadsheet has been prepared that contains the correct columns for capture of the sweep data. The columns are based on both what fields the sweep contained and an understanding of what post capture processing will require. A sort or initial processing field is added, that being a business type. Whilst the interviewers will have captured a description of what the business does, a set of standard types is provided to the data capturer with training on how to allocate the correct type against each questionnaire captured. In other words the data capturer is required to perform an initial processing decision during capture. An example from the spreadsheet is given below with some comments on the data:

SWEEP DATA CAPTURE SPREADSHEET												
Geographic position			Enterprise activity			Operation		Business contact details			Interview	
Stand number	External enterprise	Second dwelling	M E	Business	Business detail	Days/ week	Weeks/ month	Owner	Address	Tel	Day	Time
719	A, B, C...	1,2,3 ...	Y/N/R	List	Description	e.g. 7	e.g. 4	e.g. Mr A. Jones	Same	9767777	Sat	10h30
73	A	0/y		Baker	Baking cake	1	2	Elizabeth Booys	same		Saturday	
271	A	0/y		Baker	Baking cakes, muffin, ba	7	4	Own as a group fo 4	271 Foxtrot Str	072 424 4368	Tues or Thu	Anytime
38	A	1/y		Barber	Barber Shop & Saloon	7	4	??				
627	A	0/y		Carpenter	Carpenter			Mayengeke Melane	Boulevard Str			
817	A	1/y		Carpenter	Furniture builder and Ba	7	4	Linbela Nohale	817/1 Boulevard	072 334 0717	Monday	

Interviewers battled with the correct coding system

List of predetermined business types. Each record is allocated one.

Missing data was obvious on some forms

Step 3. Data processing

Following the capture of the data a sort routine is utilised that prepares the output/information for use in the next phase of the project. The data is sorted with the primary sort being the enterprise type, thereby grouping all similar businesses and secondly on geographic location. This produces a file containing a final set of this data, sorted and a table of information suitably prepared for printing. Note that all the "No" marked enterprise questionnaires should also be captured to help identify any missed properties.

Step 4. Preparation for the quantitative interviews

Sweep capture data has variables for each piece of information on the questionnaire. The analysis focuses on identifying the number of each micro enterprise per type. This data must then be reviewed by the researchers and used to focus the detailed statistical interviews accordingly.

By sorting the data by primary and secondary fields, the quantitative interviews can be targeted at the correct enterprises. Firstly, the grouping by type gives an immediate understanding as to which enterprises are found within a research area, and secondly the number of each. In terms of targeting a proportion of the enterprises for quantitative

interviews, a statistical approach will be adopted (where small numbers of a particular type are present, it is likely that all of the enterprises will be interviewed).

5.5. Completion of Quantitative Questionnaire (Enterprise and Livelihood Impact Snapshot) and data capture

This is the activity whereby a defined proportion of the micro enterprises are visited and a detailed personal interview is conducted with the business proprietor.

5.5.1. Background to the Quantitative Questionnaire (Enterprise and Livelihood impact snapshot)

From the comprehensive field test conducted in South Africa it was possible to test the following issues regarding this aspect of the research process:

- Is the micro enterprise questionnaire a robust research method to collect the required ME information?
- What information is difficult to elicit from respondents?
- What is the reliability of information/answers provided by ME respondents?
- What validity questions or interviewing processes are necessary to ensure reliable and accurate data acquisition?
- Comprehension by respondents of various types of questions, terminology and levels of question complexity?
- Differences in responses from different classes of respondent?
- Use of the questionnaire as a structured information gathering instrument and the most appropriate sequence and structure?
- The questionnaire as a standardized and therefore objective interviewer guide?
- Replicability of the questionnaire?
- Data and information checking and input routines for subsequent validation and analysis?

Based on experience gained from the field trial involving 63 interviews conducted across 14 different types of micro enterprise conducted by a team of five experienced researchers a detailed critique was conducted. The various lessons learned are described below:

Is the questionnaire a robust research method?

In terms of the information gathering requirements for this stage of the overall research process, a structured questionnaire research method is practical and reliable. It does need time however with each interview taking anything from 45 to 90 minutes depending on the circumstances of the interview situation. Experienced interviewers are essential together with the need of conducting the interview in the local language, often with the aid of an interpreter. Since much of the information is confidential in nature, the trust of the respondents must be gained and the interviews must be conducted on a one to one basis.

It will be essential to provide a brief 'story card' to be used by interviewers to provide ME respondents with a standardized introduction before commencing the interview. This will need to include a statement of how long the interview is likely to take and whether it is convenient or whether another appointment should be made. It should also include an assurance about confidentiality, the purpose of the study, who the interviewers are, their company and other relevant local information.

What information is difficult to elicit from ME respondents?

Generally ME respondents are cooperative and very forthcoming with information about their business activities. However certain types of business operator are not comfortable disclosing financial information regarding turnover, costs and profits. There were two classes of reluctant respondent. Firstly, some were simply not happy to disclose such information. Reasons included suspicion and fear that their competitors would gain access to the information. These needs must be respected and where respondents showed such reluctance then no further direct questions should be asked about these matters. The other reluctance arises where respondents do not know the answers, in the form that the information is being sought.

To address these difficulties regarding income, costs and profit constraints when they arise it becomes necessary for interviewers involved in the field test to become innovative and to seek other information, that is less threatening or more easily understood, but nevertheless enables the income, costs and likely profits to be deduced.

This deductive approach involves indirect questioning techniques such as stock related questions, sale size and volume related questions, margin questions. Plus the access of indirect sources of information such as external suppliers for stock related information. The Quantitative Questionnaire (Appendix B) has been amended and re-organised in light of the findings from the field trial.

Apart from income and profit information, where certain respondents may be uncomfortable in disclosing this information, all other questions will be answered frankly within the understanding of the different respondents. Cultural differences will have to be monitored however since what works in one location or country may differ elsewhere. Despite this, by adopting a flexible and where necessary deductive approach all the required information should be freely available from respondents.

What is the reliability/accuracy of the answers provided by ME Respondents?

From the practical field test, all respondents answered frankly the questions asked. There were no attempts to mislead. However, this is cross-cultural research and it is of paramount importance to listen very carefully to answers given by respondents and to ask a host of supplementary questions to ensure mutual understanding and to cross validate information shared within the interview. To ensure a robust and replicable questionnaire various validity and cross check references have been added to assist the interviewer and the respondent with this process.

It is also recommended that a check sample of ME's be interviewed twice, from a different perspective by different interviewers, to check the understanding of the interviewer and the sampled respondents. This needs to be completed as part of the ME snapshot interview set up arrangements.

In terms of the key information required for this project such as the impact of modern energy on ME, the level of incomes generated, the number of livelihoods enhanced, ownership of the business and assets and gender issues, the information obtained via the standardized questionnaire interview approach was extremely accurate, rich and revealing.

What additional validity questions or interviewing processes to enhance accuracy?

The matter of income, costs and profit has already been described. Other concepts that require careful explanation to respondents are matters such as competition, market growth, the connection between energy and business and so forth. Storyboards, role playing and practical locally orientated examples all play a role and should be used by the interviewers involved. The role of translators is also a crucial area to ensure full understanding and accuracy of responses. The refined sequencing of the questionnaire also aims to provide a more logical flow of questions so that the whole interview discussion becomes more of a flowing discussion about micro enterprise where one topic can logically follow on from others. Something that is extremely valuable is to ask respondents to show the interviewer various aspects of the business. Often by seeing and sharing with respondents the business premises, the customers, the types and range of products being traded and so forth a host of other information becomes clear to the interviewer. This greater understanding then can become the basis for supplementary questions. Various opportunities also arose to talk to others involved in the ME and where this is possible these people also are a rich source of information.

It is very important that interviewers should ask respondents for the opportunity to call again to clarify any other points that may arise. **Following each interview** (also see *Step 2* below), the interviewer must go through the questionnaire in detail noting any additional information, before it is lost to memory. At this point should any queries arise then these should be immediately clarified with the respondent.

Comprehension of questions by Respondents?

This is generally very high among both different language groups. No major problems need arise regarding comprehension. It must be emphasised however that it is the role of the interviewer to ensure that the questions as written on the questionnaire are made comprehensible to the respondents. The questionnaire is not designed for the questions to be asked verbatim from the questionnaire but as a prompt to the interviewer. Hence, there is a need for highly skilled interviewers and competent translators.

Differences in responses from different classes of Respondent?

There will be a number of discernable differences in types of response from different types of respondent. Women were more forthcoming generally than men, owners rather than employees of the ME are more knowledgeable and self assured in answering the various questions, Afrikaans respondents were more suspicious than Xhosa and so forth. These differences need to be monitored and managed. However, none of these differences proved to be a major constraint and can be managed within the aims of the project. Responses varied also between different types of business. Shabene owners by the nature of their trade were suspicious and more time was required to win their trust and some of the many Spaza operators, sensitive to competition, were reluctant to share income and profit information. All of these potential difficulties once identified may be readily solved within the framework of the project methodology. Differences will exist in every community and they will need to be identified and managed within the values and aims of the project.

Use of the questionnaire as a structured and standardized tool for gathering information on and about Micro Enterprise activity?

It is successful for this purpose. The questionnaire provides a structured and standardized ME information gathering tool for the purpose **of this project**. However, whilst wishing to deploy a standardized questionnaire to ensure objectivity, it must be recognized that it will be the interviewer, their skills and how they deploy the questionnaire that will be relied on heavily to ensure objective, validated and accurate information. This is a complex and challenging sphere of enquiry. However, the major challenge lies not in the area of the respondents understanding of questions or their preparedness to give accurate information. Rather, it lies in the efficacy of the enquirer. Providing the questionnaire is properly deployed, it will provide a robust information gathering tool for the project.

Information checking and validation for data analysis input.

As previously mentioned, each interviewer should check the contents of each questionnaire immediately following each interview and then immediately call back to the ME respondent to clarify any outstanding matters.

5.5.2 Administering the quantitative questionnaire (Enterprise and Livelihood impact snapshots)

Members of the project team must carry out the detailed quantitative interviews using the Micro Enterprise Questionnaire. See Appendix B.

Purpose: To collect quantitative (statistical) and some limited qualitative data on a defined proportion of micro enterprise activity identified within the community according to a structured questionnaire.

Modus operandi:

Step 1: Interviews

- Hold a detailed 'snapshot' quantitative questionnaire interview with the defined proportion of micro enterprises (selected randomly for those categories which comprise a large number) identified in the community from the sweep survey.
- Possibly sort the interviews, so that different researchers can concentrate on a few specific enterprise types enhancing specific understanding.
- Project team personnel to undertake these interviews to ensure maximum knowledge gain for subsequent analysis activities. This research will also require high-level interview skills.
- Each project team member to be accompanied by a community guide/interpreter.
- Interviews timed to best suit the entrepreneurs.
- Repeat visits until all owners/managers interviewed.
- Pre printed questionnaires correctly structured for data capture.
- Gifts to be given to each respondent as a token thank you, e.g. pen and note pad to assist with their business.

Researcher guidelines:

1. Place a new questionnaire on the flip chart.
2. Walk/drive to the next premise and find/meet up with the owner/manager of the previously identified micro enterprise.
3. Constantly look for enterprises missed during the first sweep and note for a 'snapshot' interview [interviewers / community assistants need to have a totally legible list of all MEs identified or a large map with all MEs clearly marked for reference].
4. At each micro enterprise location look for additional enterprises within the same premise.
5. Engage one owner/manager at a time.
6. Give the introduction. Good day, I am A N Other and I work for [company or project title] and we are undertaking research in the xyz community. I have a letter of authority and my identity document if you wish to check them. You were more than likely contacted by the initial researcher (name from sweep form) or have heard of the research from the community leaders. The purpose of the research is to understand the role electricity/energy has played in your enterprise establishment. May we complete a questionnaire as part of understanding your business? Please note that all information will be treated with complete confidentiality. In return we will give you a small gift of our thanks. The interview will take approximately 45 minutes.
7. Go through questionnaire ...
8. Conclude the interview with thanks and presentation of the gift if available.
9. Ask whether they would be prepared to take part in a more detailed interview or group discussion at a later stage?

Step 2. Post interview initial data processing

Following the interviews, each interviewer is required to complete post interview processing of the data obtained during the interview. The nature of the data recorded during the actual interview may often be in a form that does not match the consistent or comparable data format requirement specified in the questionnaire. Hence, post-interview data processing is an important aspect of each interview / completed questionnaire, and prepares the ground for efficient data-processing.

The process is further facilitated by the development of a spreadsheet for the capture of the quantitative data, since this step increases the precision of the refined raw data. A guidance note is prepared for all the interviewers to assist with the post interview initial data processing. This takes the form of specifying in light grey on a blank questionnaire the exact fields and ranges that will be needed for the spreadsheet.

As part of this process the types of data are also characterised and included in the guidelines. These are:

1. Numbers – an example will be Income in R/month. Of course the correct units of this data is very important.
2. Predetermined lists – for example all the Business types are preset with code letters for each. This ensures that the correct spelling is used for accurate sorting and counting within the table.
3. Capture of written words for descriptive questions such as “why did you start your business” ... “I lost my job and had no other means of income”.

These fields have been added to the copies of the questionnaire shown in Appendix B and are incorporated as a separate column in the questionnaires for use in Phase 2 of the

project. This would be similar to the “For official use” column found on many institutional forms. Were applicable, the spreadsheet contains comment boxes that indicate the data description, type and range.

The post-interview initial data processing also enables the interviewer to capture any issues that he /she wishes to highlight for further exploration through qualitative research.

Step 3. Data capture

Once the interviewer has completed the post interview questionnaire processing, the data is captured in the Excel spreadsheet. A combination of interviewers and data capture personnel may be used for this process. Both categories of person are able to undertake the work, however, the data capturer will be much faster and naturally less expensive in terms of person costs. The main disadvantage that may require consideration is that they are unfamiliar with the data although this should not lead to any difficulties if the post-interview processing has been correctly completed.

A number of copies of the spreadsheet may be populated, with each capturer completing a portion of the questionnaires. The three copies can then be simply and effectively merged into one full data set.

Please note that the data is captured in the spreadsheet against the sweep data, in other words adjacent to this as an indicator of which enterprises identified during the sweep were evaluated.

5.6 Processing of the quantitative data

Purpose: Creation of a data capture routine, plus analysis logic (what data to average, add, etc.) that will reflect the levels of micro enterprise activity and sustainable livelihood impacts.

Modus operandi:

- An Excel data capture template.
- Logic for development and programming of averaging and other analysis algorithm.
- Capture of all completed questionnaires – by data capturer
- Run analysis tools.
- Print reports and assess.

Guidelines:

- Two separate data capture routines have been prepared. One is for the capture of the initial micro enterprise identification sweep questionnaires (see Section 5.2.3 Step 4). The second, dealt with here, being for the detailed statistical interview questionnaires completed on each micro enterprise.
- For the quantitative data questionnaire most of the information will be captured. The first data processing will focus on the sorting of data into similar enterprise types for cross checking and extraction of common comments and inputs. The processed data will then be reviewed by the researchers and will be used to provide direction for the qualitative interviews. For example who to invite, how many at a time, what should be the thrust of the questions for data validation, ‘cause and effect’ etc.

Having created a populated spreadsheet with all the data, the actual data analysis can now take place.

Presented below are the methodology and analysis actions that will be carried out on the quantitative data and that can be followed in the spreadsheet from the Fisantekraal field test.

Step 1. Data check

Here the raw data needs a primary rearrangement and quality or correctness check. This takes the form of sorting the entire data table on primary Column S the enterprise type, then secondary Column B the address. Here the purpose is to group the quantitative interview data into one block, the remaining sweep records (i.e. those where no micro enterprise was identified) now being positioned below. Next the data in each row is checked to ensure correctness and type consistencies. A number of changes may be made, particularly where the data capturer typed notes, or comments in place of values of predetermined list words are required.

One issue that needs clarification is the need to exclude questionnaires that contain insufficient information. This is completed by deleting the enterprise type description code and rerunning the sort. These records will now be shown next to the sweep data below the block of quantitative data.

A problem that may be experienced is the inclusion of information with the number or predetermined list symbol as a verbal comment. Including this text in the field means that sorting or calculations on the field will be a problem. It is therefore recommended that these verbal comments or non-numeric inserts are added as a cell comment (i.e. NOT in a cell containing a number or pre-defined list symbol).

Step 2. Statistical significance

The next step is to check the statistical significance of the data. Here the number of interviews and qualitative data records obtained need to be checked against the enterprise numbers obtained during the sweep to ensure statistical relevancy (in the case of Fisantekraal field trial this was not the case due to the restricted number of interviews).

For example, to achieve a 95% confidence level the number of enterprises that should be sampled are:

Enterprise number	Required sample size
10	10
20	19
50	43
100	74
200	116
300	143
500	176
800	203
1000	214

An additional column is added adjacent to the enterprise type (Columns S & T) and the number of each type counted by entering count numbers. These figures are then transferred to the sweep table analysis table to complete the analysis.

During Stage 2 the enterprise types judged to have low representation (which will be highlighted as either orange or red in the electronic data processing spreadsheet), will need additional questionnaires completed and captured before the analysis can continue. It will be critical to complete the analysis while still in the field to the point where statistical significance can be checked, in facilitate easy access for the additional questionnaires.

Step 3. Sweep accuracy

Accuracy of the sweep data is important as it indicates how trust worthy the sweep data is. During capture of the quantitative questionnaires a Y or N is answered if the address on the questionnaire matches with the list of enterprise identified during the sweep. Analysis is undertaken by checking and highlighting the “N” cells in column Q and in turn counting them and comparing with the total number of completed qualitative questionnaires.

Step 4. ME activity measure

For the ME activity measure a basket of indicators has been selected and the results processed from the raw data. As follows (note actual calculations are in the excel fields):

- Number of households per enterprise, simply based on the sweep data totals.
- Average enterprise turnover per community household, calculated from the total turnover for the number of surveyed enterprises, (60 in the case of the field trial) increased to represent all the enterprises and divided by the total number of houses.
- Average enterprise profit per community household, calculated from the total profit for the total surveyed enterprise, increased to represent all the enterprises and divided by the total number of houses.
- Average enterprise turnover per enterprise, calculated from the total turnover for the surveyed enterprises divided by the total number of enterprises found in the community.
- Average enterprise profit per enterprise, calculated from the total profit for the number of surveyed enterprises divided by the total number of enterprises in the community.
- Total people employed per community household, calculated from the total male and female employed people, plus the total number of business (i.e. number of owners assuming one in each case) divided by the number of houses.
- Total people employed per enterprise, similarly the total divided by the number of enterprises.

Data lessons related to interviews and the capture:

- Some inconsistency in the data related to hours worked, number of employees, owners time etc – need for researchers and data capturers to be consistent and accurate in the way they record and capture data. Giving the interviewers and data capturers a full briefing is essential. Also it is essential to immediately and consistently complete post interview capture columns on the questionnaire. Here it is also important to check the calculations on the questionnaire itself. This discipline will encourage researchers to even return to the enterprise owner to validate data as soon after the interview as possible.
- One particular enterprise (such as a large beer wholesaler, for example in the field trial) may skew all the data. One immediate response will be to approach the beer supplier to validate the accuracy of turnover figures and correct accordingly.
- Data captured must be the correct format within each column to make analysis work easier, e.g. units should not be added during data entry – these are included in the cell formats; comments should not be added with numbers – these should included as “comments”.
- Similar words need to be used for equipment types, to allow for standardised spreadsheet based analysis.

Step 5. SL impact indicators

For the SL impact measure a basket of indicators has been selected and the results processed from the raw data. Please note that the actual calculations are clearly shown in the spreadsheet, by selecting the results cell associated measure.

Step 6. Fuel and equipment statistics

Similarly for the fuel and equipment related statistics a basket of indicators has been selected and the results processed from the raw data. Please note that the actual calculations are clearly shown in the spreadsheet and can be accessed by selecting the results cell associated measure.

Step 7. Other quantitative conclusions

Apart from the above indicators and statistics a range of additional calculated conclusions can be drawn from the data. These are mostly stand alone in nature not requiring a delta calculation. Please note that the actual calculations are clearly shown in the spreadsheet, by selecting the results cell associated measure.

5.7 Overall Quantitative and Qualitative Conclusions

A range of quantitative and qualitative conclusions may be extracted from the analysed data.

As an indication of what can be obtained during Stage 2 of the project the results obtained from the field trial and data treatment routines, are discussed below.

For all three sets of measures: Enterprise activity, SL impact and fuel/equipment measures, the indicators are all calculated and would be quite appropriate for the delta calculation in Stage 2.

5.7.1 Sweep Results

The following table was prepared and extracted from the spreadsheet "Fisantekraal Sweep Results.xls" created during the field. It summarises the type of results that will be produced from the data collected during the Phase 2 work:

Enterprise numbers identified during the sweep			
Enterprise type	#	% of enterprises	% of total properties
Baker	2	0.63%	0.15%
Barber	1	0.32%	0.08%
Carpenter	2	0.63%	0.15%
Creche	2	0.63%	0.15%
Eskom - Electricity vendor	1	0.32%	0.08%
Arcade Games shop	1	0.32%	0.08%
Hairdresser	3	0.95%	0.23%
LPG Gas refiller	1	0.32%	0.08%
Photographer	3	0.95%	0.23%
Printing T Short logo's	1	0.32%	0.08%
Seamstress	13	4.13%	0.98%
Shebeen	58	18.41%	4.36%
Shoemaker	8	2.54%	0.60%
Spaza	195	61.90%	14.65%
Take Away	3	0.95%	0.23%
Transport	4	1.27%	0.30%
TV Repairs	1	0.32%	0.08%
Vege seller	13	4.13%	0.98%
Vodacom - telephone kiosk	1	0.32%	0.08%
Welding shop	1	0.32%	0.08%
Fire Wood seller	1	0.32%	0.08%
Total Enterprise	315	100.00%	23.67%
Non enterprise properties	1016		
Total properties surveyed	1331		

Key findings from the sweep survey undertaken in Fisantekraal were:

- Total of 1331 sweep questionnaires completed and captured.
- In 23.67% of the homes an enterprise was found.
- Shabeens and Spaza shops account for 80.31% of the enterprises!
- Incredibly 3 out of every 20 homes are trying to make some additional income through selling to their neighbours.

5.7.2 Results from the quantitative questionnaires

The following sets of results and measures have been prepared and extracted from the spreadsheet "Fisantekraal Quantitative analysis v2_0.xls", created from the field trial data:

Statistical relevance of the results:

Enterprise numbers identified during the sweep				Qualitative data			
Enterprise type	# from sweep	% of enterprises	% of total properties	# of records	% of sweep	Statistical significance	
Baker	2	0.63%	0.15%	1	50.00%		
Barber	1	0.32%	0.08%	1	100.00%		
Carpenter	2	0.63%	0.15%	2	100.00%		
Creche	2	0.63%	0.15%	2	100.00%		
Eskom - Electricity vendor	1	0.32%	0.08%	1	100.00%		
Arcade Games shop	1	0.32%	0.08%		0.00%		
Hairdresser	3	0.95%	0.23%	2	66.67%		
LPG Gas refiller	1	0.32%	0.08%	1	100.00%		
Photographer	3	0.95%	0.23%	1	33.33%		
Printing T Short logo's	1	0.32%	0.08%		0.00%		
Seamstress	13	4.13%	0.98%	4	30.77%		
Shebeen	58	18.41%	4.36%	8	13.79%		
Shoemaker	8	2.54%	0.60%		0.00%		
Spaza	195	61.90%	14.65%	22	16.92%		
Spaza/Shabean - count as a spaza				10			
Meat merchant - count as a spaza				1			
Take Away	3	0.95%	0.23%		0.00%		
Transport	4	1.27%	0.30%		0.00%		
TV Repairs	1	0.32%	0.08%		0.00%		
Vege seller	13	4.13%	0.98%	2	15.38%		
Vodacom - telephone kiosk	1	0.32%	0.08%		0.00%		
Welding shop	1	0.32%	0.08%	1	100.00%		
Fire Wood seller	1	0.32%	0.08%		0.00%		
Total Enterprise	315	100.00%	23.67%	59	18.73%		

Notes relating to the field trail data:

- Number of interviews conducted in the field test was not planned to give statistically relevant data.
- A total of 59 acceptable interviews completed and data captured.

Sweep accuracy:

Sweep Accuracy		
Total interviews	63	100.00%
Geographic match to sweep data	56	88.89%
Geographic mismatch to sweep data	7	11.11%

Notes from the field trial:

- Only 11% of the addresses noted during the quantitative interviews did not match the sweep data. The main reason for this inaccuracy was the illegibility problem with the small copies of the township layout. Hence, the interviewers made mistakes. [See Section 5.3.2 Step 1 for lessons learned]

ME activity measure:

Micro Enterprise activity composite measure

#	Individual indicators	Units	Result	Comments
1	Number of households per enterprise	Households per enterprise	4.23	One enterprise for every 4.23 houses!
2	Average enterprise turnover per community household	R / household / month	R2,352	
3	Average enterprise profit per community household	R / household / month	R305	
4	Average enterprise turnover per enterprise	R / household / month	R9,937	Average turnover per enterprise
5	Average enterprise profit per enterprise	R / household / month	R1,290	Average profit per enterprise
6	Total people employed per community household	# / household	0.45	Includes an owner, giving nearly half a job per household
7	Total people employed per enterprise	# / enterprises	1.9	Includes as owner, giving nearly two jobs per enterprise
8	Productivity (Income/person hours)	R / hour	R32.1	Skewed by high wholesalers income
9	Average Stock value	R / enterprise	R1,534.5	
10	Percentage of customers internal to community	%	91%	
11	Percentage of customers external to community	%	9%	
12	Average transaction size	R / transaction	R39.0	
13	Others ??			

Notes	
1.	All data corrected to represent the full community, despite being statistically incorrect in this instance as the raw data is not statistically significant.
2.	All data normalised into a per household or per enterprise indicator, to normalise any change in community size between snapshots
3.	These are all measures that will be compared for net change (Delta) from before to after electrification.
4.	

Sustainable Livelihood impact measure:

Sustainable Livelihood impact composite measure

#	Individual indicators	Units	Result	Comments
1	Average employees income per community household	R / household / month	R27	
2	Average owners income per enterprise	R / household / month	R348	
3	Enterprise owners per community household	# / household	24%	
4	Involvement of owner family members	%	28%	
5	Community based ownership	%	100%	
6	Female enterprise ownership		48%	
7	Male enterprise ownership		42%	
8	Joint ownership		10%	
9	Others ??			

Notes	
1.	All data corrected to represent the full community, despite being statistically incorrect in this instance as the raw data is not statistically significant.
2.	All data normalised into a per household or per enterprise indicator, to normalise any change in community size between snapshots
3.	These are all measures that will be compared for net change (Delta) from before to after electrification.
4.	

Energy and equipment statistics:

Energy and equipment related statistics

#	Individual indicators	Units	Result	Comments
1	Electricity consumption per enterprise	R / Enterprise / month	R157.00	
2	LPG consumption per enterprise	R / Enterprise / month	R1.83	
3	Paraffin consumption per enterprise	R / Enterprise / month	R0.42	
4	Wood consumption per enterprise	R / Enterprise / month	R0.83	
5	Battery consumption per enterprise	R / Enterprise / month	R0.47	
6	Average fuel cost per month	R / Enterprise / month	R160.55	
7	Energy importnace average	#	4.7	Value is from a 1 to 5 scale, i.e. very high!
8	Equipment penetration - Refirgerator	# / Enterprise	101.7%	Manually calculated totals
9	Equipment penetration - Freezer	# / Enterprise	68.3%	Manually calculated totals
10	Equipment penetration - Coldroom	# / Enterprise	1.7%	Manually calculated totals
11	Equipment penetration - Electric sewing machine	# / Enterprise	3.3%	Manually calculated totals
12	Equipment penetration - Electric iron	# / Enterprise	5.0%	Manually calculated totals
13	Equipment penetration - Manual sewing machine	# / Enterprise	5.0%	Manually calculated totals
14	Equipment penetration - Electric Stove/oven/microwave/kettle	# / Enterprise	8.3%	Manually calculated totals
15	Equipment penetration - Paraffin cooker	# / Enterprise	5.0%	Manually calculated totals
16	Equipment penetration - Hair dryer	# / Enterprise	5.0%	Manually calculated totals
17	Equipment penetration - Radi/ juke box/hifi	# / Enterprise	26.7%	Manually calculated totals
18	Equipment penetration - Lights	# / Enterprise	36.7%	Manually calculated totals
19	Equipment penetration - Woodworking power tools	# / Enterprise	13.3%	Manually calculated totals
20				
21	Others ??			
22	Others ??			

Notes	
1.	All data corrected to represent the full community, despite being statistically incorrect in this instance as the raw data is not statistically significant.
2.	All data normalised into a per household or per enterprise indicator, to normalise any change in community size between snapshots
3.	These are all measures that will be compared for net change (Delta) from before to after electrification.
4.	

Other calculated quantitative data:

Other quantitative based conclusions				
#	Calculated indicator	Units	Result	Comments
1	Percentage of enterprise started after electrification	%	68%	At least 68 % of the sample started up after electricity arrived
2	percentage of original owners	%	95%	Most are originally owned businesses
3	Average educational level		5.8	
4	Average yearly activity		94%	100 % would be equal all year
5	Average area of premises	meters squared	17.4	
6	Percentage of businesses giving credit		78%	
7	Credit % of turnover		17%	
8	Bad debt %		4%	
9	Percentage of enterprise having a bank account		48%	
10	Adjudged percentage with growth potential		77%	
11				
12	Others ??			
13	Others ??			
Notes				
1. All data corrected to represent the full community, despite being statistically incorrect in this instance as the raw data is not statistically significant.				
2. All data normalised into a per household or per enterprise indicator, to normalise any change in community size between snapshots				
3. These are all measures that will be compared for net change (Delta) from before to after electrification.				
4				

Qualitative data from the statistical questionnaires:

The last sheet in the spreadsheet contains a full listing of all the captured data of this type and provides an opportunity for extracting a range of additional conclusions from the quantitative questionnaires.

5.7.3 Conclusions drawn from the quantitative data

The following selective observations from the Fisantekraal field trail provide examples of the types of conclusions that it may be possible to extract from the data collected during the Phase 2 work:

Comment 1. Types of Enterprise

Very high number of trading businesses rather than manufacturing, 70% of the ME;s are Spaza's selling household consumables and over 18% Shabeens selling liquor and entertainment. Collectively 88% of the 315 total number of ME's identified. However these ME's are a significant source of employment, income and service to the community. There is data available on number of people employed, average income and so forth.

The remaining 12% of the ME's identified displayed a rich diversity of commercial activity with a number of manufacturing activities including:

- 2 small scale bakers
- 2 carpenters
- 1 printer of T shirts
- 8 shoemakers
- 1 welding shop
- 13 seamstresses

Some 9% of the ME's that were identified could therefore be classified as manufacturing, with some of these having significant potential for growth and serving markets outside the immediate community. The balance of the ME's were service activities like hairdressing, crèche, transport and TV repairs.

In terms of growth, some 77% of ME operators felt that their businesses had potential to grow providing constraints to growth could be overcome (see later).

Clearly from the quality and depth of data obtained further analysis can be undertaken relevant to the project including growth versus survivalist ME, those where energy plays a pivotal role; and, ME's that arise through natural versus facilitated growth.

Comment 2. Significance of ME in community economic life

Given that there are high levels of unemployment, a ratio of 1 ME per 4.23 households in the community is clearly very significant. The calculation of this ratio in Phase 2 before and after energy provision will be interesting. Average, typical and range of incomes associated with these ME's also revealing. Total people employed in ME's in the community at 0.45 people employed per household with 1331 households is significant. Clearly ME, however varied and modest that some may be, play a crucial role in economically sustaining this particular poor community.

Significance of types of ME: an analysis of the distribution of incomes from the various ME's will show a high weight towards small survivalist ME's, especially among the smaller Spaza Shops and Shabeens. At the other end of the distribution there are a moderate number of highly successful and profitable business entities within the community

It would have been possible to analyse the significance of ME in this community from an economic perspective from various perspectives with the data that was collected (and therefore this data collected during Phase 2 should be very revealing).

Comment 3. Ownership

ME ownership is fairly equally split between men 42% and women 48%. However, that the majority of owners are women indicates the gender empowering element of ME and that in many cases, where there is no income for family the women create livelihoods to support their children. Women are also often more restricted to remain at home to care for children and other dependent family members and therefore more prone to start small home businesses, often in spare time to augment family income. That 10% of the ME's are jointly owned by women and men links to mainly to husband and wife partnerships and such partnerships are probably higher than reported in practice.

Clearly from a livelihood perspective, ownership has been quantified and shown to be an important delta.

Comment 4. ME and energy

A most profound finding is that at least 68% of the sample of ME's only started their businesses after the community received electricity and that all the businesses ranked having electricity as highly important to their business activities. It ranked, on average at 4.7 on a 5 point scale with 5 being high. This is clearly a valid delta and criteria for measuring the impact of modern energy services on ME creation and growth.

When reflecting on the appliance ownership data it is clearly evident why electricity is so essential for the ME's in this community. Information gathered about energy also reveals several ways that refinements to energy provision and supply may stimulate yet more sustainable ME in poor communities. Just some of these include:

- Cost of connection: keep the cost low or subsidised
- Cost of energy consumed: perhaps have a ME tariff linked to business success criteria. Prepaid metering is helpful to ME's since they can budget and pay as they go. Many of the ME's are cash businesses.
- Reliability of supply. If electricity supply is prone to disruption it may be worthwhile to consider some standby facilities for essential supplies such as to cooler rooms

It is however, beyond the meter, where there is exciting potential to do more to stimulate and facilitate ME especially in offering ME facilitation packages including appliances and basic business training. In this community, often the business is indeed the appliance, whether it is an electric sewing machine, a cold drinks refrigerated display cabinet, a hairdryer or cooking stove and oven. Energy becomes potent as a livelihood facilitator when it is used, usually via an appliance, for some economic purpose.

5.7.4 Qualitative Data from ME Questionnaires

This information relates to the various verbal information fields in the ME Questionnaire database. This contains a rich range of essential information that is available for various analysis routines to meet the needs of the project. Shown below are just three research topics, selected at random, with a rudimentary analysis to illustrate the type and quality of data that may be derived:

Previous Training

This relates to what specific training did the various ME operators have prior to starting their businesses, and where training had been received what was the type of training and where received.

Some 75% of the ME sampled had received no training what so ever before starting their businesses showing a very high degree both of natural entrepreneurship; and, it must be added economic desperation. One is compelled to ask the question therefore just how much more could be achieved in terms of economic development and empowerment with proper orchestrated training and ME facilitation.

In contrast to the above some 5% of ME operators had received specific business skills training from various local small business development support bodies. Also another 5% had received specific training in their particular trade or enterprise such as hairdressing, carpentry and electricity vending. Another major source of training was learning from others, or alongside others or from previous employment. The owner of the crèche has worked for a number of years elsewhere in a crèche before opening her business. One of the carpenters had learned his trade working in a carpentry business before becoming unemployed. Many of the seamstresses had learned their skill from their mothers and some of the Shabeen and Spaza operators were either under the patronage and mentorship of larger local wholesalers or external suppliers.

In the case of a small successful baker, the Learn to Earn non-profit Christian development group who have a relatively new training facility adjacent to the community had trained and then facilitated with a second hand cooker, the business. This body had also been instrumental in also training several of the seamstresses.

External Markets

The role of external markets was explored with all ME respondents especially in terms of growing their businesses and increasing income into the community. Some 42% of

respondents had some opinion about his issue with the remaining 52% either having not considered it, considered it and concluded it has no relevance for their particular type of business; or, that the external market is beyond their reach. Of the 25 who did respond, 7 ME respondents actively engaged external markets in some manner. Some had a small passing trade such as a hairdresser who had some clients from outside the community, some street vendors had passing trade and some of the manufacturers sold their products either into local markets or far away via family and friends in the Eastern Cape. So what were the major constraints identified by ME respondents to reaching out to these external markets. They included comments such as:

- We are too isolated
- Too far away
- No transport
- No way to do so
- Strong competition elsewhere
- Lack of publicity

Here again lies a rich vein of opportunity where practical support could be provided to enable ME's in poor communities to reach larger markets and thereby grow sustainable enterprise that will increase local incomes and livelihoods. Without this access there will always be a major constraint to economic growth.

ME Growth

Some 77% of the ME respondents believed that their businesses had growth potential. This belief was held frequently in the spirit of 'If only, then yes my business can grow and then I could employ more people etc etc ..' From the verbal information gathered during the ME interviews and from a simple weighting analysis the constraints identified by MEC operators in this community, according to descending priority, are as follows:

1. Capital, Bank Loan - to buy equipment, build bigger premises, to put in security, more cold storage and so forth.
2. Working cash: to buy more stock, buy in bulk to get better discounts, to be able to advertise and so forth
3. Lack of space to trade/manufacture/ provide service/store products
4. High costs such as rent, rates etc
5. Low incomes and not enough money in the community
6. Too many competitors especially Spaza's
7. Bad debt (a minor problem since credit generally closely controlled)
8. Theft and security
9. Transport (to transport stock from suppliers and products to external markets)

Some 58% of ME respondents identified items 1 and 2 above as constraints to their growth. The capital requirements mentioned were also always modest. Here again lies an important area of facilitation in terms of micro business loans and financial skills training.

5.7.5 General Observation on Quantitative survey findings

Reflecting on the Fisantekraal field trial

All the data gathered in this community provides a fascinating looking glass into the world of ME in Fisantekraal. Many questions can be posed and answered with a reliable level of accuracy. However, the overwhelming conclusions that can be drawn are that the coming of electricity has been profound in being an essential precursor to the creation and growth of over two thirds of the ME's that exist today. The other conclusion that leaps out to even a casual observer is just how strong the entrepreneurial spirit, and indeed ability, is among the people of Fisantekraal and just how much ME they have created and sustain with minimal assistance, guidance or tangible support from others.

Where pragmatic and fit for purpose support has been provided, Fisantekraal has been a highly fertile environment for such initiatives to grow new sustainable enterprise and livelihoods. More can still be achieved in such rich soil with the eagerness of the local people to be economically empowered. So much more can be achieved in the future, with a few modest supportive interventions in parallel, or sequentially, with the provision of electricity.

5.8 Qualitative (participatory) research

A range of qualitative information will be gathered and documented throughout the project. Qualitative research will also be widely deployed to explore and understand the quantitative data, trends, significant local interventions and to validate collected data. However, the most important role for qualitative research techniques will be to conduct in-depth participatory cause and effect research to fully understand the various factors impacting micro enterprise, especially from a modern energy provision perspective, what the linkages are; and, how they interrelate (if at all) with each other. Qualitative information gathered will also be an essential part of the overall methodology, to ensure reliable information is gathered and understood about how the micro enterprise players themselves and members of the community see things and perceive and rank issues to do with local enterprise, energy matters, gender, health, empowerment, education, environmental matters and so forth.

Purpose: Qualitative, participatory research is used in the context of the overall project research framework for a number of purposes, including:

- To obtain information required for site selection from key stakeholders and informants (refer to Field Test on Research Methodology report)
- To obtain data and information in order to develop the Community Characteristics Record (refer to Sections 4.3.1 and 5.2)
- To explore and understand the quantitative data, trends, significant local interventions and to validate collected data.
- To elicit qualitative information from defined groups of respondents to provide insights into the causal relationships between selected factors or variables and micro enterprise and the impact of micro enterprise on the livelihood of households and the communities as a whole.

Modus operandi:

- Identify key issues arising from the results of the Micro Enterprise Quantitative Survey that should be explored further using qualitative research techniques.

Although a number of generic issues were identified during the Fisantekraal field trial, many questions and factors will be specific to each community setting and will be therefore be drawn from the results of the Enterprise and Livelihoods Snapshot surveys. The primary source of issues to be further explored through participatory, qualitative research will be the observations made by the project team researchers as a result of conducting individual interviews with micro enterprise owners. The guidance for conducting the ME quantitative survey (Section 5.4.2, Step 2) highlights the “post-interview initial data processing” as a key step for organisation of the data in readiness for processing and analysis. At the same time the interviewer is asked to identify and record those issues that he / she believes should be explored through the qualitative research. In the field test a number of issues were identified and these were used to create a series of questions that were explored within the focus group format:

Potential questions for qualitative research	Respondents				
<i>(generated to complement ME questionnaire)</i>	<i>ME owners mixed</i>	<i>Non-owners mixed</i>	<i>Indiv. Fem.</i>	<i>Indiv. Male</i>	
1. Purpose and value of ME to the community >>> ranking of SL measures from perspective of ME owners and non-owners	X	X			Select 6 ‘successful’ owners from different types of ME; Community non-owners – select 3 male and 3 female
2. Motivators / barriers for ME activity and growth	X	X			
3. ME volume measures – what is important to you about your business	X				
4. Energy – ownership, access, security, usage	X				
5. Other ME enablers – what are they, relative importance (from owner / community viewpoint)	X	X			
6. Gender perspective – one-to-one interviews			X	X	
Refer to Appendix C for detailed guidance for the above questions (used in the Fisantekraal field trial); this provides a broad range of issues and ‘drill down’ opportunities that may be useful for facilitators when selecting and designing the qualitative research in Phase					

- Select the participatory research technique most appropriate to exploration of each of the selected issues

Every context in which research is undertaken will be different and the choice of methodology for the participatory research needs to be carefully selected. These may be used in a one-to-one interview format or group environment (see Appendix D for guidance on the focus group approach).

The overall approach and methodologies will be based on observations by the project team and insight gained during the initial community engagement, micro enterprise identification sweep and the quantitative survey. This will also be influenced by discussions with community leaders and representatives, and the issues to be explored (involve community researchers, informants and translators in this process as appropriate).

Examples of participatory methods and their possible uses include:

Examples of participatory methods and their possible uses		
Method	Brief description	Useful for
Timelines	Historical profile of longer term events or trends	Changes in vulnerability of different groups / individuals Impact of policy changes
Seasonal calendars	Graphical depiction of seasonal events or trends	Changes in vulnerability of different groups / individuals Understanding assets and coping strategies
Transect walks	Land use / activity maps based on walking through particular areas	Quality and quantity of natural capital
Resource maps	Maps identifying natural and other resources	Existence of shared natural capital
Social maps	Maps locating key social features	Access to services and infrastructure
Preference ranking	Ordinal ranking based on pairwise comparisons, with reasons stated for the choices	Livelihood strategies, assets, access to services Understanding impacts from individual / community perspective
Matrix ranking	Preference ranking based on defined criteria with scoring	Access to infrastructure, livelihood strategies, investment choices
Wealth ranking	Assigned households to well-being categories	Strategies and assets needed to exit from poverty; relations between social groups
Venn diagrams	Diagrammatic representation of key institutional interactions	Social capital, relations between social groups, institutional and policy environment
<i>Extracted from DFID Sustainable livelihoods guidance sheets Feb 2000</i>		

The following techniques were tested during the Fisantekraal field trial to explore the issues indicated:

- *Open questions and facilitation to ‘drill down’ on the issues that added insight to the research questions*
- *Time lines (e.g. to identify and explore changes that had occurred in the community such as electricity connection, establishment of services, external employment opportunities etc)*
- *Social maps (e.g. to locate services, facilities, businesses and households)*
- *Matrix ranking (e.g. working with ME owners to explore access to assets required for their business and the importance of energy and understand the relative importance of different micro enterprise enablers from their perspective)*

All of the above have the potential to add significantly to the understanding of the data gathered through the quantitative survey however, their use could be

problematic in situations where individuals have limited experience of thinking in spatial and / or historical terms or where numerical skills are not well developed.

Although one-to-one in depth interviews were not specifically tested in the field trial, the planning and conducting of these will need to take account of each community context. The use of these in Phase 2 will be guided by the knowledge and experience of each local team and other key stakeholders from or working with the specific communities. Care is needed in the selection of interviewers and in the scheduling of this type of interview.

It is also important to note that the project will be taking place over very limited timescales and that the period for early engagement and gaining of legitimacy within the community will be 2-4 weeks. This will be followed by 1-4 weeks of quantitative surveys. In the pre-energisation phase in communities with no or only a very low level of ME activity, additional planning and management may be required to ensure that there has been sufficient visibility of the project team and interaction within the community prior to the qualitative participatory work).

- Identify and confirm availability of location (e.g. community meeting rooms) for one-to-one interviews and group discussions
- Using data and insight gained from the quantitative survey findings, select ME owners and non-owners that will be invited to the group discussions or to participate in a second more focused interview (involve community researchers, informants and translators in this process as appropriate)
- Invite participants using an appropriate method (e.g. directly through community research assistants / interpreters, via community leaders or business groups etc) ensuring that the purpose, data, start and finish times and meeting location are clear together with an indication of what will be expected of participants
- Communicate the process, details and list of selected participants to community leaders / any other key groups for information
- Hold a briefing meeting with research assistants / interpreters to ensure that they understand the purpose of the interview / group discussion, their role and the anticipated structure of the meetings
- Conduct and record / document the selected qualitative research activities (including observations on the effectiveness / difficulties of the process itself as well as detailed results / outcomes)

The focus groups were conducted in a manner that enabled one of the project team researchers to work closely with the community assistant / interpreter to facilitate the session whilst the other project team researcher took detailed notes. The purpose of recording all aspects of the discussion was to capture the answers from individuals within the group to the various questions and subsequent exploration, to observe and document the behaviour and reaction of the group and individuals to particular questions, facilitation techniques and equipment / materials that were employed, and to identify any specific approaches / techniques that were particularly effective or that caused difficulties (including impact on the group / individuals and the nature of the problems encountered).

- Conclude the interview / group discussion with thanks and presentation of a small gift to each participant in recognition of their time and inputs
- Facilitators for each individual interview / group discussion will collate and document the process and findings

Each of the researchers must write a note covering all aspects of the session that they have recorded. This should then be passed to the facilitator of that session for checking and to add any further notes and / or observations.

- Hold a de-brief with other facilitators and with all research assistants / interpreters to discuss the findings of the qualitative research and to identify any changes / key issues that have implications for the data gathering / research e.g. additional information that should be included in the community log / characteristics, missed key informants that should be immediately interviewed, areas that require specific attention during the post-electrification surveys.

Guidelines for management of the participatory research

It is very important to ensure that the qualitative research components enable the community members to provide the project team with their views and that we gain an understanding of the issues / information from their perspective.

The research approach could utilise a range of methodologies depending on the issues being explored and the context:

- Group sessions with defined groups.
- Individual, in depth, interviews with selected groups.
- Focus groups on livelihood linkages and particular issues.

The nature of this interviewing and discussion approach will include features such as:

- Highly open ended, participatory, neutral and cross cultural.
- Double interviewer from the project team to allow for real time feedback – processing, validation, classification and identifying areas for more investigation.
- Participatory approach with skilled social analysts.

Facilitators (project team members and local counterparts) will have role in both one-to-one interviews and group discussions however, this should be carefully managed such that it is the community participants that speak for the majority of the time during these sessions. This needs to be undertaken by a skilled researcher who is able to adapt the various generic approaches to create an open and effective environment in which facilitator / interviewer, interviewee and translators feel able to fully contribute. This must be neutral and without prejudgment. It will also be absolutely essential to ensure confidentiality, legitimacy with the community, micro enterprises and respondents and that trust is established and honoured by the research team.

Participatory work requires a structure within which to take place but the outcomes and the detailed path of the Q&As will be dictated by the responses of the participants: it will be essential for facilitators to be observant and engage in real time feedback. The style will be mainly 'open' questioning and it is essential that the framework of 'open' questions used to facilitate exploration of an issue within a focus group session, one-to-one interview or other participatory methodology is prepared beforehand (although must not be prescriptive or restrictive i.e. must allow free flow of ideas and views from the participants within the planned framework).

In order to fully capture the views / answers and the overall discussion, it will be necessary for notes to be taken throughout the proceedings (i.e. at least one of the project team must

be taking notes at any one time: the composition of the team that facilitates each focus group needs to be a minimum of 2 project researchers + 1 community assistant).

It is likely that at some point during a participatory research session the facilitation and answers will be wholly in the local language. To ensure that all those present understand these answers and can participate in / record the discussion, it will be essential to also maintain **proactive** local language facilitation / feedback into English. Briefing of the research assistants and interpreters will need to emphasise these requirements (coaching may be required to provide some practical experience prior to the 'live' sessions).

As part of the project methodology an undertaking is given to all respondents that the results of the research project will be shared with them, in an appropriate manner and at an appropriate time.

Qualitative research issues:

The following lessons were extracted from the process of undertaking the focus group discussions during the Fisantekraal field trial in Phase 1. They are presented as pointers and guidance for the facilitators and interviewers responsible for the selection, planning and implementation of the qualitative, participatory research methodologies (further insight resulting from the focus groups held during the field test is provided in the meeting reports provided in Appendix E):

- Time is an issue needing careful management
 - people arrived late and we started 40 minutes after the planned start time (appeared to have been informed about the start time for the meeting but this was not significant in terms of ± 10 minutes)
 - people left early (several participants had prior commitments)
 - [Lessons learned: either communicate the importance of starting at the defined time e.g. availability of individuals may be compromised if start / finish times change OR build in the **fact** that the sessions will probably start later than the time given; ask at the beginning of the session if anyone will be leaving before the end]
 - Several 'intruders' (not formally invited but heard about the meeting) were included in the groups; time taken to work out that they had not been invited and integrate them into the process
 - Focus groups were held under time pressure which is not always conducive to good understanding
- The mixed language group was well managed through the use of interpretation and the ability of most participants to understand / use of English
- Interpreter plays a key role in the proceedings and needs to be very well briefed, facilitated, encouraged and supported during the discussions – the use of pure interpretation would be difficult, cumbersome and time consuming
- On occasions, members of the group were lost due to a failure to interpret the words of others in a manner and at a speed that enables the discussion to flow and for all participants to remain involved
- Proved difficult to achieve conceptual understanding of some items; facilitators and community assistants / interpreters need to remain alert at all times to ensure that where difficulties arise alternative approaches are immediately introduced to describe or demonstrate specific concepts
- Consideration needs to be given to the temperature of the meeting room – may become too hot if outside temperature is high / meeting scheduled too close to mid day; at the time chosen for the meetings in Fisantekraal it was extremely hot and

although the majority of people stayed for 3 hours, the room was too hot for comfortable working during the last hour. Refreshments were essential and appreciated by the participants (and facilitators).

- The overall time of each session needs to be kept to 1 – 1.5 hours and separate focus group sessions should be held for each issue being explored i.e. either using different groups of people or by scheduling different times for the same group of people; in Fisantekraal we were attempting to ‘trial’ all 5 questions (using 2 discussion groups) in the space of a few hours
- It is essential to fully explain the purpose and confidentiality of the project, the nature of the research and the contributions requested from participants at the beginning of the focus group session; some participants were rather hesitant until they understood roles, process and requirements of them at focus group discussions and then they became more relaxed [*ME owners had previously been interviewed during the quantitative survey and were therefore more aware of the research and its objectives. None of the community members (non-ME owners) had any previous direct contact with the project, may need to select non-owners at an earlier stage and allow time to explain the project / their role in the qualitative work to them – either individually or in a group*].
- The selection of participants should be appropriate to the topic being explored in each focus group and those taking part must be willing and agreed to be open with information and their views; it is important to explain why people are being selected; in Fisantekraal the arrival of several curious ‘intruders’ was a consequence of ‘Why were certain people selected and not others?’
- Must be focused (on the particular issue being explored) yet flexible in approach (enabling appropriate tools to be used to elicit views / information and allowing new / relevant side issues to be explored further)
[e.g. motivators for starting business / key measures – use of post-it notes and stars on paper; test an approach with the group and if it fits make use of it during the session]
- Some group members may need prompting to encourage their full participation in the discussions, to elicit their answers / their views and to counter the dominant participants. It may be appropriate to lead the respondent on from their answer / view to obtain further detailed information or reach an agreement / consensus.
- Difficulties were encountered with recollection of timescales, both dates and periods of time over which events happened (amongst the people present in the focus the recollection of historical facts by individuals was often different). Triangulation and checking of timescales is vital to ensure the information is correct.
- It is essential to deploy group vs individual data capture for relevant needs within the focus group discussions, i.e. question posed for group response = generic matters; individuals prompted for their views – to capture different perspectives [here care must be taken not to focus on specific individuals and to cease questioning if the participant appears uneasy]
- Care must be taken not to build scenarios, i.e. ‘what if’ proposals, which will potentially create alarm for individuals or the group as a whole – a number of possible generic scenarios should be carefully prepared for use in the focus group sessions once the issues to be explored have been extracted from the quantitative survey findings.
- A variety of materials and equipment should be available for use by the facilitators and participants in the focus group. In Fisantekraal, pictures, maps (*which must be available for retention by the project team – see lessons learned, Appendix E*), drawings, adhesive stars and stickers, and paper pieces all worked well and proved very valuable in visualising concepts. A flip chart (or similar large areas for drawing / writing that can be seen by all participants) is essential.

- The ability of the participants to contribute to the priority or preference ranking (1, 2 and 3 etc) of a group of items needs to be carefully examined if this is to be effectively used in the focus group. Ranking exercises undertaken with the focus group in Fisantekraal did not work particularly well. The facilitator needs to initially 'test' this methodology and provide the necessary level of guidance (whilst maintaining their own impartiality) to move the process forward.

A key observation from Fisantekraal was that women were dominant in both of the focus groups (1 man was briefly present in the business owners group and 1 man in the community / customer group) and also all the community assistants were women. The focus of the field trial was to test the methodology and therefore further exploration of the underlying reasons for the dominance of women in these activities was not possible, but should be considered in the qualitative research in Phase 2.

Another area that requires consideration in the planning of Phase 2 activities is a response to the question 'How are we going to benefit? Will you help us?' which was frequently posed to the research team, particularly by ME owners. The provision of feedback to the community leaders / members on the results of the work presented in a way which addresses their priorities from their perspective is essential. This will add to the legitimacy of the team and increase the level of trust from the community; this is an essential component in ensuring the smooth transition into the post-energisation quantitative survey and participatory research. In Fisantekraal, there was a very positive response to the feedback provided by the project team following collation, processing and analysis of the data.

A further issue identified during the quantitative survey that may be appropriate as a discussion topic during the qualitative research was that some ME owners are reluctant to disclose certain types of information, primarily relating to profit, turnover and other financial information. The interviewers involved in the survey made a number of attempts to obtain this type of information using a deductive approach through other measures such as sales, stock turn, prices etc. The qualitative focus group provides an alternative environment for discussing these aspects more broadly however, as reluctance to divulge this information is for reasons of competition and special supply terms, these areas may actually be more appropriate for investigation using structured one-to-one interviews.

An important consideration for the **pre-energisation qualitative research** is that although there will be a consistent level of interaction / discussion with the community leaders, key stakeholders etc, the amount interaction with community members may be limited in communities with no or limited ME activity. The initial micro enterprise identification sweep work will provide some visibility for the project (community researchers) within the community however, the low number of quantitative questionnaires that would be completed in the pre-energisation phase would not maintain this profile prior to the qualitative research work. Under these circumstances consideration should be given to specifically raising the profile and visibility of the research work within the community prior to inviting community members to the participatory focus groups or for one-to-one interviews.

5.8.1 SL framework as a format for presentation of the research findings

Within the context of the Sustainable Livelihoods framework, we can explore the impact of micro enterprise by understanding how the assets of various groups within the community have been affected. Analysis of the findings from quantitative survey have indicated that the following assets have been enhanced:

Social capital – increase in the networks and relationships that generate the level of trust, reciprocity and exchanges between individuals within the community and which then provides (through availability of financial capital in the form of short term credit (i.e. formal or informal safety nets) local access to food and other essential supplies - this is intimately linked to **financial capital**; people travelling for stock are in contact with a wider network of external people and will bring news and information to the community through local networks of customers, and thus bring up the knowledge in the community – this is intimately linked to **human capital**

Financial capital – availability of credit from the micro enterprises within this community that is likely to be less readily available outside the community (where lack of networks / relationships would not provide the necessary trust for credit to be given); this may be linked through the increased opportunity for effective control and prioritisation of expenditure, to **human capital** and **physical capital**.

Human capital (not explored in Fisantekraal field test) – Increased incomes enables more children in the community to attend school and progress to a higher level (may also create differential between children of ME and non-ME households); Health indicators, such as number of people attending the clinic may change – negative impact if ME owners / families do not have the time to attend or positive impact if ME owners and their families become healthier through improved diet i.e. increased income enables them to obtain more, better and more varied food; Less time spent travelling trying to find services / products which are now available within the community >> less stress, more time available

Physical capital - Arrival and growth of infra-structural services such as affordable transport from within the community provides access to goods, services and employment opportunities from outside the community; ME provides access to affordable electricity (although no credit for connection or usage – pre pay meter) and other fuels; Access to information and networks through telephone service providers and ability to buy and use cell phones – linked to social capital as this also stabilises and enables development of personal and business relationships and networks

Natural capital (explored in a limited way within the environmental comments requested in the quantitative survey) – impact will depend on the nature and scale of the ME activity, whether use of natural resources occurs at a sustainable rate and the extent to which existing environmental services and systems can effectively deal with wastes / wastewater / emissions and thus prevent environmental harm; in Fisantekraal, slaughtering activities, nappy washing at crèches and hairdressing all use clean water and produce contaminated wastewater but at the scale involved this does not lead to problems as every house is connected to the mains sewage / waste water system

5.9 Overall data analysis

This last activity brings together all the processed and available data from the research in such a way that conclusions can be drawn and supported in line with the project objectives. The methodology will be selected once all the information, i.e. statistical, community log, community characteristics and qualitative, has been gathered from all four communities and has been initially processed (as per Section 5.6). The nature of the data collected will not enable extrapolation to even very similar communities as the uniqueness of each and the associated external interventions make this inappropriate. However, the combination of quantitative data and qualitative insight and understanding will enable lessons learned to be extracted for each community and for these to be compared and contrasted between the four research communities with the aim of identifying those which are generic. This can then be used to generate guidance and supporting evidence that will contribute to the improvement of future energy interventions.

Appendix A: Micro enterprise identification sweep questionnaire

<u>Micro Enterprise identification sweep questionnaire – Fisanterkraal</u>			
1. Stand number or business position	<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> [e.g. 5369 plus A,B,C, ... for external street positions and 1,2,3 ... for dwelling / building number]		
2. Micro enterprise	Yes	No	Before but not now
3. Business activity _____			
4. Size of business	<div style="border: 1px solid black; width: 100%; display: flex; justify-content: space-around; padding: 5px;"> Big Medium Small </div>		
Comments: _____			
5. Owner/Manager details: Name: _____			
Address (if different): _____			
Tel: _____			
6. Preferred interview time: Day: _____ Time: _____			
Date: _____		Time: _____	
Researcher: _____		Signature: _____	

[Note: This is designed for an A5 or 2 per A4 page.]

Energy Quantity and cost

Quantity & Cost Type of Energy	Quantity P/mnth	Cost R's P/mnth	Enter R _____ For each
TOTAL			

Connection/Upfront cost:

	R _____
--	---------

Security of supply (any periods without):

	Description
--	-------------

Any constraints to energy access

	Description
--	-------------

Energy:

How important is your business? Tick 4

Importance	1	2	3	4	5	1 – 5

5 = high importance

What positive impacts to your business:

	Description
--	-------------

What negative impacts to your business:

	Description
--	-------------

Employee data:

Number of Employees:

Men		#
Women		#

Income of Employees:

Wage bill per month		Employee cost
Owner drawings per month		Owner income

**Man
hours
Worked:**

Owner hours / m		Is operation seasonal?	No		Owner hrs/mnth
Employee hours / m			Yes		#
					Employee hrs/mnth

If Yes: Please enter % for level of activity

Jan		May		Sept		Yearly activity average _____% #
Feb		June		Oct		
March		July		Nov		
April		Aug		Dec		

Skill factor of
Employees:

Education Standard		Average education Factor
Standard	No. Employed	

Training attended:

	Edit
	(Description)

Market and Customers

Estimated number of customers:

Description of customers:	#
	Description

Internal to community: Estimated % _____

%

External to community: Estimated % _____

%

Reasons:

	Description
--	-------------

Average value of transactions: R _____

R _____

How has your market changed with better energy services: (explore reasons)

	Description

Has the quality of your product/service improved? If so, how and why?

	Description

Is the market for your product/service

Growing	About the same	Declining	G S D

How do you promote your business:

	Description

Who is your competition?:

Description

How strong is your competition and why?:

Reasons:

No competition	Not strong	Very Strong	S A N

Income Types:

	% of turnover
Cash	
Cheque	
In kind	

Do you give credit	Yes	No	Credit Y N

% turnover

Does business have bank account?:

Yes	No

Bank Acc Y N

Do you have a bad debt problem?:

Yes	No

Bad debt %

If yes: Percentage of income: %

Costs:

	Per month	R
Energy		
Labour		
Stock		
Other		

Income:

Turnover	Per month	R

Comments:

Profit/Surplus

Surplus per year

R

Ownership and control of assets

Who owns the business (name/s, family etc.)

Male	
Female	

Community member		M F Operated
Non Community member		C N

Environment impact

What waste or emissions, etc.:

Description

Prospects for enterprise

Does the business have growth potential?

Yes	No	Y N - Judge - Can it?

How vulnerable is the business?

H	M	L

Growth related comments:

Description

Family members

Do you employ family members in the business?

Yes		No		Y	N
-----	--	----	--	---	---

If no, why, or other family comments:

Description

Thank you for your kind assistance.

Will you be available to take part in a group discussion with others from the community?

Yes		No		Y	N
-----	--	----	--	---	---

If no, reasons:

Description

If yes, when would it be convenient:

Date of interview:	Time:
Place:	
Interviewer:	Assistant:
Signature:	Signature:

Appendix C. Qualitative research – examples of generic questions

The qualitative research may be conducted using a number of different techniques. The following potential questions provide examples of issues that may be addressed and have been divided into:

- Group discussions
- One-to-one semi-structured interviews.

1. Group discussions

Within each of the following examples there are also a number of ideas that are more generally useful in setting the scene / orientating the discussion group participants to the overall research aims, the specific question being addressed at the meeting and the community itself.

The following questions (from Table provided in Section 5.5) have been developed to provide examples of issues that could be further explored using participatory research interviews / discussion groups:

Question 1	Purpose and value of ME to the community. This discussion will focus on exploring the difference between life in the community with and without the observed level of ME activity. What have been the changes for them as individuals? This will enable key areas of change to be identified and matched to measures linked to attainment of sustainable livelihoods and reduced vulnerability. It should therefore be possible to explore the ranking of the various SL measures from the perspective of both ME owners and non-owners.
Respondent group	Separate discussion groups: <ul style="list-style-type: none"> • Existing enterprise owners – non competitive i.e. different businesses • Community members – non enterprise owners
Techniques and aids	<ul style="list-style-type: none"> • Focus group session • Name badges / sticky labels (for all participants) • Continuous note taking (by at least one project team member) • Flip chart, pens for drawings, stickers / 'post its' • Map of the community (photographs from around the community may also be helpful)
Questions and notes	<p>Setting the scene and orientation</p> <p>Find out some background on individuals / group (maps and diagrams could help for this so that individuals are not required to just talk about themselves in the group – try to get them to work together on the questions and help each other):</p> <p>Number and who is present?, Which part of Fizantekraal (use map)? What type of house, how they use the rooms, any structures outside? Who else lives there? Any employment in the household? How many children? Educational level of all people living there? Who asked them to come to the meeting? How did they get to the meeting? Has anyone not arrived – try to find out from the group if they know why? How well do they know each other – any obvious tension / any one uncomfortable / quiet?</p>

	<p>Once any diagrams / maps etc are on the table or wall, use these if possible as the focus for Qs rather than directly to individual people or group:</p> <p>Try to encourage and make use of any time lines and maps drawn by participants (look out for other ways in which people are expressing themselves and capitalise on this)</p> <p>Explore how the community has developed and changed over time</p> <p>How long have you lived in Fizantekraal? How many small businesses were there when you first lived here?</p> <p>Ask them to draw a map themselves or use a large scale map (but they may not be able to orientate to an overview of the settlement) to show the layout of the settlement and where the businesses were?</p> <p>What was it like to live here then?</p> <p>Explore more about how they obtained different types of services and products that they needed? Where did they go? How difficult was it? Were there some things that they wanted but couldn't get? What difficulties did this cause? How did they overcome these?</p> <p>Where are the houses and businesses now? Use the maps provided or drawn at the beginning – add more sheets of paper etc if community has expanded – don't ask where any specific businesses are, let them tell you so you can get a perception of what they are aware of / what is important to them and why</p> <p>How have things changed for you in terms of getting the goods / services that you need?</p> <p>Now explore individual services and products that have been highlighted by the group as important:</p> <p>How would you obtain X if there was no Y ME in the community? Where, how, what difficulties would this cause you now (or is it relatively easy e.g. job in a bigger town)</p> <p>Areas of interest to us:</p> <ul style="list-style-type: none"> • Food availability, choice and quality (has health improved in the family – this could be due to many other things especially clean water and sanitation but explore the role of food) • Access to credit from small local shops where people are known and are trusted (if they had to travel to an external shop or into town may not get credit and would have to wait to the end of week or month for cash – and this may be spent in shebeen!) • Access to telephones – fixed line and cell phones <p>What do you buy / use that you did not have before? How does this help you?</p> <p>How do you pay for these things? How important is credit to you? Do you pay on time at the end of each week? DO you always pay – WHY? – explore individual perception of being trustworthy, honest, continued access to these services / product locally etc</p>
--	---

Question 2	<p>Identification of the motivators and barriers for the establishment and growth of micro enterprise within the community. The focus of the qualitative research is to try and uncover what have been and are the barriers to firstly setting up a business and secondly to try and grow the businesses. This line of questioning would need to lead into the role that energy did or did not play in establishing businesses in the community. Care needs to be taken that the enabler identification in question 5 is different!</p>
Respondent Group	<ul style="list-style-type: none"> Existing enterprise owners – non competitive i.e. different businesses Community members – non enterprise owners
Techniques and aids	<ul style="list-style-type: none"> Focus group session Data capture Flip chart & pens for drawings
Questions and notes	<p>Introduction and scene setting:</p> <ul style="list-style-type: none"> Why are we doing the research? Understanding the role that energy e.g. electricity plays in the establishment of the micro enterprise, plus what can we deliver with it to get more going ... Confidentiality ... their individual responses will never be used, rather we take out lessons and learning from their responses. How it is going to work ... them talking us questioning, showing of examples etc. How long it will take ... What is a business example/sketch/skit perhaps? Demonstrate a manufacturing, trading and service business ... how??? <p><i>Needs the contextual understanding amongst participants of what is a business entity:</i></p> <ul style="list-style-type: none"> Activity for gain and profit Less than 10 people Some people have others don't have .. <p><i>Why do people set up businesses?</i></p> <ul style="list-style-type: none"> What is the root cause? Why do they choose a particular kind of business? Use examples of business ... spaza, shebeens What makes them different? <p><i>Why do they not set up businesses?</i></p> <ul style="list-style-type: none"> Why do some un-employed not start business? Why do some people in the community not <p><i>Why do some micro enterprise grow?</i></p> <ul style="list-style-type: none"> What has made them grow? <p><i>What can be done to get more businesses going?</i></p>

Question 3	Micro enterprise volume delta measure – what are the correct dimensions and associated indicators? Are these the correct ones from the perspective of enterprise owners? If so which are the strongest? Can they be ranked to get a weighting between dimensions and a understanding of the primary indicators.
Respondent Group	<ul style="list-style-type: none"> Existing enterprise owners – non competitive i.e. different businesses
Techniques and aids	<ul style="list-style-type: none"> Focus group session Data capturers Flip chart & pens for drawings Voting stickers?
Questions and notes	<p>Do they compare their businesses?</p> <ul style="list-style-type: none"> How do they compare them? What do they take in to account? What goes through there minds? <p>How can we ask them about income in there businesses?</p> <ul style="list-style-type: none"> What do we need to do to get them to give the true answers? Why do they feel hesitant to share on these issues? Do they perhaps not know turn over and margins? How do they feel about sharing information on what they take out of the business? <p>Is the number of businesses they own important to them?</p> <p>Is it the size of the business?</p> <ul style="list-style-type: none"> If so is it on turnover, stock, profit/margin? Etc <p>How well do they know expenditure in there businesses?</p> <ul style="list-style-type: none"> Do they track expenditure by category? Do they think about what they spend in the community versus without? <p>Do the ME's employee other people form the community?</p> <ul style="list-style-type: none"> If yes how many, if no why not? What sorts of salaries/wages are paid? Why these levels? What about family members? <p>{Interviews to record key dimensions and related measures on a series of charts}</p> <p>Ask the group to vote by sticking stickers on the ones that mean the most to them ... give three stickers each with about 6 to 8 dimensions?</p>

Question 4	Energy – ownership, access, security and usage
Respondent group	Focus Group: This list of questions is intended for use by owners/operators of micro enterprise.
Techniques and aids	Flip chart, two researchers, some examples of energy in use and structured recording forms. (e.g. column for each respondent)
	<p>Ask each respondent to describe their business briefly. How long established.</p> <p>How many of you use energy in your business? How much do you use?</p> <p>How do each of you use energy in your business?</p> <p>What appliances and energy equipment do you each have in your business?</p> <p>Do you own this equipment? If not, who does? How does this work?</p> <p>How did you get this energy equipment – buy, from a friend etc ?</p> <p>How do you obtain the different energies that you use?</p> <p>Do you have any problems in getting the energy you use? What are these problems?</p> <p>Do you have standby energy arrangements?</p> <p>What other things do you use in your business? Write up list on flip chart? Water, phone, materials, money, labour, energy etc.</p> <p>What do you feel about the cost of the energy you use?</p> <p>How do you view the importance of energy in your business ? 1 to 5 scale 5: Essential 4:Very Important 3: Important 2. Less important 1. Do not need it.</p> <p>Explore reasons behind the above judgements by respondents.</p> <p>What is good about energy and your business? What is bad about energy and your business? How important is energy in relation to the other things you use in your business?</p> <p>Rank things previously elicited under question 9.</p> <p>How could energy help your business to grow more?</p> <p>Which type of energy is most important for your business and why?</p>

Question 5	Identification of other enablers of micro enterprise and their relationship to the provision of modern energy services
Respondent Group	Focus Group: business owners/ operators and non business owners/operators.
Techniques and aids	Two researchers and flip chart
	<p>Start by establishing a common understanding of micro enterprise: A small business with 1 to 10 people, owned by a community member and different types of business: Spaza, Carpenter, Shoe Repairer, Shabeen etc. Discuss and explain the notion of 'business enablers', i.e. what you need to start and grow a small business. Ingredients for a cake.</p> <p>Owners: Why did you start your own business? Non-Owners: Would you like to start your own business?</p> <p>Owners: How did you start your businesses? Non Owners: How would you set about starting your own business?</p> <p>What things do you need for a small business? Write them up on flip chart.</p> <p>Explore groups views on each of items identified? What are they precisely, how do you get them, who supplies them, barriers etc</p> <p><i>Check list is comprehensive and covers all critical enablers, probe for any missing enablers, including:</i></p> <ul style="list-style-type: none"> • <i>Money Capital and cash flow; Skills and Training: In actual business plus business/marketing skills; Mentorship; Premises; Energy; Water; Phone; Equipment; Raw materials; Products: Stock; Access to market: internal to community / external to community; Transport; Business/Entrepreneurial Skills; Contacts/Patronage/Family Support</i> <p>How important are these various things? Get each person to rank them with a number (1 importantn). Note major reasons for each ranking.</p> <p><i>Do a cross addition and calculate average ranking for the focus group.</i></p> <p>Do you think these different things are more important at different times: Explore importance at start up phase and then to grow business. What are 'absolute' and/or 'incremental' enablers'.</p> <p>What do you think the effect would be if you did not have: (Flip chart). Could start/run business / Could not</p> <p><i>Business skills/knowledge; Water; Telephone; Electricity; Capital; Transport; LP Gas</i></p> <p><i>List others from respondents</i></p> <p>Owners: What are the top three things you need to grow your business?</p>

2. One-to-one semi-structured interviews

Semi-structured interviewing is a technique that has value for exploring issues that are identified during the quantitative surveys but which are not appropriate for group discussion due to their sensitivity or the need to obtain independent views from a number of different sources / individuals. The following example focuses on understanding the impact of micro enterprise activity in the household and community from a gender perspective.

Objective: To use a series of open questions and real time feedback to explore the impact of micro enterprise activity from a gender perspective

Care and sensitivity will be needed in the approach to the questioning and in the questions themselves; take advice from the community and use insight gained from the quantitative surveys to decide who should undertake these interviews (it may be more appropriate for a woman to be interviewed by a female member of the project team, by a local person or possibly even someone from the community – training and detailed briefing may therefore also be required prior to the interviews).

Any discussion of roles and responsibilities and how these have changed, the vulnerability of women, 'control' systems which may exist etc may be viewed as encouraging changes to the cultural norms; in some cultures / areas this may put women in difficult or dangerous positions. There may have been changes in the recent past in the gender roles but these may have been associated with tension / conflict situations in individual households or even in the community. Particular care will be needed if you are interviewing a women in the presence of her husband, a relative or another member of the community. The interviewer must remain alert at all times for indications of unease in the interviewee or those accompanying them.

When conducting interviews with either men or women it will be necessary to cross check statements to ensure that they are not just providing the answers that they think you want to hear or which they believe they should give (particular care should be exercised when men comment on women's roles or where a women interviewee appears to be giving 'standard' answers; explore further / confirm by questioning from several angles)

Begin by explaining the aims of the project and any relevant findings to date. The support of community leaders etc for the research and the total confidentiality of the information provided should be stressed; take all the time necessary to ensure that the interviewee is comfortable with answering the questions. It may be appropriate to briefly run through the overall theme of the questions and ask if they are willing to continue with the interview.

Exploring the following with the interviewee:

Roles, duties and responsibilities of men and women in the household?

Gender split of productive activity (employed work, ME, kitchen garden, labouring on land, processing of produce etc)?

- Draw up a list of all tasks undertaken by the household (diagram draw by them using the house as a focus, add place of employment, garden etc)
- Who does what tasks? When, Where?

How are these task divided in other households that they are in contact with?

Explore access to services, people, information:

Who do you see each day (explore their networks of contacts, is there any lack of access to other people, explore whether the women are not allowed to go to certain places or meet particular people, any overall control involved? – need to be very sensitive here and take a lead from the answers given)

Explore access to assets that enable them to fulfil their roles:

How do you do your duties each day? How difficult is this? Try to identify if there are items, services, help that is missing and why? (Access to essential assets – physical, financial, social, human (skills, education, help etc)

Particularly for women, explore whether the ME places an additional burden on them:

How do you cope with undertaking your duties in the home and with running your business – explore the amount of help provided by other members of the household – or do they take over some of the household duties (can speculate that this is unlikely)? How often do you see your relatives, has this changed since you started your business?

How does it make you feel now that you have a business of your own? Explore positive and negative taking a lead how the answers given – may have more money in the household but have less time / be more isolated

Explore what the additional income is spent on – talk about how things have changed in terms of expenditure (what are the key new items / services that are now available to them). Also explore whether some or all of this income is taken by another member of the household or any external people?

Appendix D. Focus Group Approach

Design

The use of focus groups must be to explore defined project research focus areas. A list of key questions or exploration topics should be drawn up, customised to the particular community under investigation and the specific further in depth research needs that arise from the earlier phases of research, particularly the quantitative techniques. Care must be exercised in the design and composition of community groups and must be related to the nature of the research topics.

Focus Group Research Technique

In the context of this research project, focus groups are used with specific groups of different types of participants, such as, business owners, non-business owners from the community, women, men and so forth. Thus each group is focused in terms of composition and being a representative group of a wider sub set of the overall community population. It is also focused in terms of the range of subject matter or questions to be discussed.

There is however another critical aspect to the deployment of this research technique. A focus group is also a method to enable researchers to focus specifically and objectively, without value judgement, on the way the community members themselves view things, what their perceptions are about the matters under discussion and how they judge such matters. The focus group technique must therefore, firstly elicit these 'participants issues, views and opinions'; and, then focus on how they interrelate in the minds of the group members. Focus groups should therefore aim to enable external researchers to enter the world of the respondents and then to review topics in the context of the participants world and ethos.

Essential Skills

There are a number of essential skills required by facilitators (project team and community assistants) in order to conduct effective focus group research, as defined in this context. These are:

- Listening and communication skills. The ability to focus on the reality of the respondent and to attentively listen and understand responses. This should be without value judgement or reinforcement. Clear your mind and relax.
- Probing ability. The ability to gently probe to seek further explanation and to share understanding.
- Empathy (i.e. get out of your own shoes and into those of the respondents) whilst still maintaining focus on the selected areas for questioning.
- Ensure the whole group is involved. Avoid a few dominating.
- Observant throughout.
- Cross questioning – issues raised and answers given by certain respondents can be verified and clarified with the rest of the group (use of triangulation).
- Facilitation and keeping the group together.
- Recording and exploring issues systematically. Note issues and matters of importance and return to them when it is appropriate to do so. [Use at least 2 researchers / group in order to effectively facilitate and record all aspects of the session]

Focus Group Research Methods

Depending on the nature of participants, language, culture and the questions being investigated there are various methods that can be deployed when working with focus groups to facilitate effective mutual understanding between researcher and respondents, and vice versa; and, to aid objective and relevant information gathering. These include:

- Straight forward open ended questions and then further open ended probing questions
- Demonstrations of actual equipment or procedures. e.g. kettle for appliance, LP Gas bottle when talking about bottled gas or other actual products and physical things
- Flip charts for researcher and respondents to draw pictures and other visual aids to understanding
- Role playing such as asking respondents to enact matters of importance
- Maps (actual) or diagrams drawn by the participants

Focus Group: Initiation

Welcome everyone and explain purpose, confidentiality, generic information and not specific to any individual or business, what is going to happen (role of other researcher, flip charts or other external persons/equipment) and the anticipated finishing time. Check that this is acceptable to everyone. Any questions. Put the respondents at ease.

At this point make it easy for anyone who is uncomfortable or wishes to leave to do so.

Explain the point the research project is at, progress made and co-operation from the community.

Researchers to introduce themselves with a little personal background.

Invite each respondent to introduce themselves; WRITE OUT NAME TAGS (first names)

Researcher then introduces the topic to be discussed. Pictorial, physical examples (kettle) and other visual aids can be used to illustrate what the subject matter is going to be. Ensure that these are relevant to the group and the context (no 'western' photographs).

Write up some key words on the flip chart to describe the topic. For this example they might include:

Energy wood, coal, electricity, bottled gas, paraffin

Appliances fridge, braai, cooker, electric kettle

Business Spaza, hairdresser, carpenter, baker

Explore the groups understanding of the topic and ask for questions. Move on to the discussion phase of the focus group session.

Appendix E. Community focus groups – reports from Fisantekraal field test

Focus Group 1

Group: Small business owners from Fisanterkraal

Purpose(s):

- To explore the motivations of the group members for starting their business.
- To understand how they evaluate business success and identify the key measures that they use for this purpose.

Discussion Leader for the first two questions: Paul Harris, IES

Observer: Chris Hazard, IES

Interpreter: Rose

Members of Group:

Monica: Creche (F)
Vaswi: Baker and cake maker (F)
Nosmele: Spaza (F)
Norwezi: Soft Drinks Wholesaler and Spaza (2) (F)
Nomlehiluli: Hairdresser (F)
Nohombili: Sewing business (F)
?????: Carpenter (M)

Group members were all small business owners from the community and the main language spoken and understood was Xhosa. The discussion session was carried out in English with the aid of an interpreter. It was clear however that many of the group did understand English and responded in English. There was a single male in the group, the carpenter.

Question One: Identification of the motivators for and barriers to the establishment and growth of micro enterprise within the community

Paul opened the session explaining different types of business: Trading, Service and Manufacturing with a simple flip chart diagram. The distinction between being employed and working for oneself was an important distinguishing feature. This was understood by everyone and led into a series of open ended questions, namely:

Why are you business owners?

Many spoke about because we do not have jobs or work and need to earn money to support themselves and their children. Also mentioned that they do not do crime. Another reason, although of less importance, was to support the community.

So why did you all start your own particular businesses?

Monica responded that she started the crèche because she liked working with children and there was a need for this in Fisantekraal.

Norwezi explained that her business was not just a Spaza but a wholesaler of soft drinks. She pointed out that it costs too much money for residents to travel to the nearest shops outside Fisanterkraal to buy cool drinks and other groceries so there is a need for her business. In setting up her business she looked around and observed others doing business

and realized she too had the necessary skills so started her business. If others can do it, so can I.

The Hairdresser said that she was making a career of her business and had some training in hairdressing. She also saw an opportunity for this service in Fisantekraal providing a range of hairdressing from cutting and styling.

Nohombili, the lady with the sewing business said it was lack of employment that had led her to start sewing with a single electric sewing machine so that she could survive together with her children.

The Carpenter started this business because he had previous training and learned to be a carpenter.

The cake baker started her business through the Learn to Earn Charity who taught her to bake and provided a low cost electric cooker with oven and hotplate.

Why don't your friends who do not have a business, start one?

The immediate response from several of the group members was that it was because they did not have money to start a business. Other reasons included because they did not want to, did not know what to do or have skills to do so.

Most of the small business owners in the group started their business in a small way and had built them up over time.

Do you want your businesses to grow?

The unanimous response was, yes.

What is stopping your businesses from growing?

The sewing lady mentioned no money for more raw materials, sewing machines and to pay salaries to employ more people to sew. The Carpenter also mentioned not enough money to buy materials and machinery and that much of his money goes towards simple living costs of food, rent and energy.

So how could you get more business going to expand your businesses?

After some reflection group members said that Fisantekraal is too small, that the local market place is therefore too restricted. Also that costs of personal living are too high, water, food, and energy – all too expensive.

What external markets do you have?

The sewing, carpentry and hairdressing businesses all had some custom from outside Fisantekraal, mainly from adjoining rural settlements. Sewing and carpentry products were sold to a broader area but even so on a spasmodic manner. The Creche, Soft Drinks, Spaza and Bakers were all dependent on the immediate Fisantekraal market.

Can you just start a business or do you need permission from the community or anyone?

You do not need permission, you can just start a business.

OBSERVATIONS:

1. This was the first interactive session and the group members were still rather hesitant as they became more relaxed later as the session proceeded.
2. Clear enablers for small business in Fisanterkraal with this group were:
 - Start up money
 - Equipment/appliances
 - A skill or knowledge such as baking, hairdressing or trading
 - Self confidence
 - Identification of a community need and market
3. The motivation for many of these small businesses was economic necessity, no alternative means of earning an income.
4. Limiters to small business growth were:
 - Lack of working and capital to buy more equipment/appliances
 - Restrictive local market place
 - Access to external markets
 - Business skills

Following a brief break for some refreshments, the discussion continued with the same group. The next topic was:

Question Two: How group members themselves judge business success. How do you judge success in your business ... what makes one business in Fisanterkraal better than another how do you compare your businesses ?

Various factors were mentioned by several member of the group that included:

- How many customers come to my shop
- Stock turnover
- Selling to competitors
- Low prices
- Plenty of stock
- Cleanliness of the shop and staff
- Appearance of our premises

How do you judge your own business ?

There was initially some reluctance to answer this question. Then after further probing the lady baking cakes said that she adds up her costs and her income and does not like to make a loss. Others said that they must sell their stock for more than it cost them. Then there was general agreement that they like to make a surplus ... or profit, and this is important.

Lets consider the various things on which you judge your business

A number of indicators or measures were mentioned by the group, that were then written onto a piece of paper and stuck on the wall. These included:

- Customers
- Profit
- Turnover or business income
- Stock turnover, purchased per month
- Low prices
- Cleanliness/neatness – visual attraction
- Multiple businesses
- Stock volume held and diversity

After exhausting possible measures that the group members themselves would use, Each group member was provided with a number of coloured stickers and asked to affix the sticker to the measure they used and considered most important.

The results of the colour sticker exercise:

Indicator area	Score
Customers	5
Profit	1
Turnover or business income	5
Stock turnover, purchased per month	0
Low prices	2
Cleanliness/neatness – visual attraction	6
Multiple businesses	0
Stock volume held and diversity	3

How do we find out about income?

Paul then re explained the purpose of the project and the notion of before and after micro enterprise measurement and our need to measure the income of the different businesses. He emphasised that it is the total income before and after that we need and perhaps total income by class or group of businesses.

Norwezi (soft drink wholesaler) said it was too difficult for her to talk about such things. It was also difficult for her to talk about such things in a group.

There was further explanation, that this information would only be requested on an individual one to one basis and that the information would remain confidential.

The lady baking cakes said we should ask to see the business records because the owners keep records. Again, Norwezi said that she had a major problem.

The hairdresser said she would have no problem with giving this type of information.

The lady baking cakes said she would provide this information.

How many people do you employ in your business?

The crèche employs one other and the soft drink wholesaler has another Spaza with a person running it. The baker employs a few part time people but the rest do not employ others because they are very small businesses.

OBSERVATIONS

1. Essential to fully explain the purpose and confidentiality of the project.
2. Disclosing profit, turnover and other financial information is a problem for certain business types such as soft drinks wholesalers. It is for competitive and special supply terms that they are reluctant. To obtain this data will require a deductive approach using other measures such as sales, stock turn, prices etc.
3. Small business owners have a very clear idea of how they measure their success and that of others in business in their community. Reluctance to share this information should not be interpreted to mean they do not know.
4. With some kinds of business, such as trading, there appears to be a hierarchy of suppliers, with large wholesalers supplying a number of smaller sellers operating within the community. An important measure for these business operators is therefore how many other outlets they supply.
5. The importance of looking after your customers and having competitive advantage with better and more stock, better prices and service were also important measures that they used.
6. Other issues and questions were raised and dealt with during the discussion that had to do with process and therefore omitted from the above record. They included:
 - why certain business people were selected and others were not
 - the purpose of the project
 - how they will benefit from taking part in the project

Discussion Leader for the second two questions: Chris Hazard, IES

Observer: Paul Harris, IES

Question three: The role of energy in their businesses.

Note:

- At this point two members of the group left due to the time commitments. (carpenter and the spaza owner).
- Further all the remaining members felt severely time constrained and as such the remaining two questions were rushed and shortened.

Do all use electricity in their businesses?

Yes all use electricity and electricity was the only fuel used. One respondent indicated they also use water ... in formed this lay out side the scope of the interview.

Flip chart exercise to determine what the electricity is used for?

Business	Users of electricity
Baker	Oven, cooking plates, fridge, lights
Spaza/cooldrink wholesaler	Cold room, fridges, stove, music, lights
Hair dresser	Kettle (for hot washing water), hairdryer, hair cutters, curling tongs, music, lights
Sewing business	Electric sewing machine, steam iron, lights

What do you feel about energy in your business?

- Expensive
- Electricity is needed to grow
- Electricity outage causes sever problems
 - No haircutting
 - No baking possible
 - Spaza can survive with cold room space for a day
- Spaza owner had a much smaller business before electricity.
- Sewing business and hairdresser only started after the arrival of electricity.

How did you obtain the appliances/equipment?

- Baker – subsidised /2nd hand stove, assisted with the original working capital for the ingredients.
- Cooldrink Wholsaler – Sponsored fridges form Coca Cola, purchased the oven, more fridges would be available form Coca Cola but premise space is needed first.
- Hairdresser Geyser is needed. Purchased her equipment up front.
- Sewing lady – purchase her own appliance.

Question Four: Enablers to micro enterprise establishment.

The question – “what do you need for the establishment of a micro enterprise?” - was simply asked and written up on a flip chart then priorities via a 1st, 2nd, 3rd choice from each respondent:

Enabler	Scores
Money – start up capital	1,1,1,3
Equipment/machines	1
Training – knowledge	2
Skills	
Premises	2,2,2,3
Customers and a market	3,3
Profit	
Idea	
Entrepreneurial drive	
Transport	
Permission or licence	

The meeting was then closed by thanking the attendees and giving each person a calculator as a gift of thanks for their time.

Focus Group 2

Group: Community members (in theory non-ME owners)

Purpose(s):

- To explore how micro enterprise activity has impacted on the community and how the 'assets' of the various groups within the community have been affected
- To explore whether the non-ME owners have considered establishing a business and to identify the motivators / barriers to the establishment and growth of small businesses in Fisantekraal

Discussion Leader for the questions: Denise Oakley, AEA Technology

Observer: Louis -----, IES

Interpreter: Eugina (also participating as a customer of the small businesses in Fisantekraal)

Members of Group:

- Mildred (f), ex Transkei, Umsata, has lived in Fisantekraal since June 2002, address: Erf No 976 (Saldonic Street)
- Gloria (f), ex Transkei, has lived in Fisantekraal for 7 years, address: Erf No 467, next to clinic, had worked in Kids Kingdom for 2 days / week for a year and had also previously worked as a char and taxi driver, currently has a small spaza
- Alson (m), ex Transkei, has lived in Fisantekraal for 2 years, address: Erf No 1279 (5th Avenue), has a small shop and also works as a mechanic (car engines) and undertaker
- Nompumello (f), ex Transkei, has lived in Fisantekraal for 10 years, address: Erf No 795, started a sewing business in 1997, has been using 'Learn to Earn' machines since Oct 2002 (3 Rands / day)
- Veronica (f), ex Transkei, 1 year in Fisantekraal, address: 444, has a small shop started in Nov 2002

The plan had been that group members should not be owners of small businesses however, this proved difficult in practice. There appeared to have been some confusion regarding the invitations that were issued to potential members of this group – some additional owners attended and asked why they had not been interviewed during the quantitative survey, they were interested in participating in the group and were invited to stay; others had been invited but the criteria of 'not being ME owners' had not been emphasised by those requesting their participation. The main language spoken and understood was Xhosa, several participants preferred Afrikaans and English was understood and spoken well by all participants (indeed much of the discussion was in English with only limited translation at a few points during the meeting). There was a single male in the group, the mechanic / undertaker.

Introductions

As each person arrived they were asked to write their first name on a badge. Denise Oakley gave the introduction and explained the aims of the research project and the focus group meeting. Our key interest was to explore what impact small businesses have in the community and on them as customers, and whether this ME activity brings advantages and / or disadvantages. Those present were asked if they were comfortable to stay and participate in the discussion. Denise and Louis introduced themselves and their background, and then Denise asked each person to introduce him / herself (focusing on

how long they had been in Fisantekraal and where they lived previously, their employment / business and where their house was in the community).

In order to understand where each person lived in Fisantekraal and identify the businesses that they use, each person was asked to place a sticker on their house using the schematic plan of the community. They were then asked 'Which businesses are in their vicinity and where do they do most of their business i.e. where do they buy things from and what about other services such as taxis, electricity pre-paid cards, etc'. Stickers were placed on the map for spazas, taxi rank, clinic, electricity vendor, community meeting room.

Lessons learned

Using the map was a useful 'ice breaker' exercise to put the group at ease and very valuable in orientating all the participants to the community and to the location of the businesses known to them. However, sufficient time must be allowed for this and it must be facilitated to ensure that it does not take an excessive amount of time. A key problem identified during this activity was the difficulty encountered in orientating house location and numbers on the 2 dimensional view of the community. It is also very important that the map that is used in the focus group is available to be kept by the team for later review, and this will also enable it to be written or have marker stuck onto it (the map actually used was borrowed – it was handled carefully and all the stickers attached during the meeting were removed resulting in loss of valuable information)

The next issue to be explored was how the arrival energy (primarily electricity) had changed the community. The key issue mentioned was that it was dark but also unrelated issues were that taxis were very scarce and that the community itself was much smaller then (\pm 500 houses, \sim 7 years ago).

	<u>Phase 1</u>	<u>Phase 2</u>	<u>Phase 3</u>
Date	1999	2000	2002
Houses built	500	500	500 + flats (300 not built yet)

The group then discussed the date when electricity arrived - there was some degree of debate about this and the recollection of historical dates appeared to cause some difficulties. Their view was that electricity began to be supplied in 2000.

'What businesses were here 2 years ago?' The group thought that there were 4 spazas (few but very busy) and maybe 6 shabeens.

Lessons learned

Difficulties encountered with recalling timescales, both dates and periods of time over which events happened. Constant facilitation is required to encourage some of the participants to be forthcoming with answers / their views and to counter the dominant participants. It was necessary to lead the respondent on from their answer / view to obtain further detailed information or reach an agreement / consensus (often the recollection of historical facts by individuals was different).

'What businesses and services do you need which are not available in the community?'

Materials etc for sewing business – travels to Cape Town by train

Petrol / punctures – need to go to Durbanville

No police station in Fisantekraal- need to get in touch with Kraifontaine (\sim 19 km away)

Clinic is only open 2 days / week – the alternative is in Durbanville but that is only open Mon-Fri. Nearest hospital is Kreipetal.

The quantitative survey had identified that the availability of credit within the community appeared to be a very important service that was provided through a number of the small businesses, particularly the spazas. This was further explored with the focus group using questions such as 'Why do you need credit and who do you obtain this from?' and 'Why would someone give you credit?' This revealed that the credit system is used for 'bigger' items from the shops in Durbanville and Bellville. In order to better understand how the service offered by MEs in Fisantekraal, the discussion was facilitated and we learnt that many people get paid from their external employment at the end of the week / month and are then able to pay the shops for their purchases made during the week / month. The general feeling was that the participants (who comprised both customers and a spaza owner) believed that businesses 'don't take care of us if you don't give us credit'. We pursued this further and confirmed that the credit system was widespread and necessary in Fisantekraal – it provided a regular means by which people could buy everyday staples and other necessities without having to pay cash at the time of purchase. Employment in organisations outside the community provides many residents with a cash income which in turn is spent in the small businesses and is the source of the cash flow necessary to support these enterprises (and the households that are dependent on these). The question of paying on time was also explored and the consensus (from customers and owners) was that the majority of customers pay their agreed balances on time. This was universally considered to be important in terms of maintaining trust and continued access to this service. *[the quantitative survey had, however, revealed that businesses did not necessarily stop serving customers who did not pay on time, even those that had large outstanding debts continued to be considered as valuable customers]*

The questioning now moved to focus on exploring the motivators and barriers to establishing and growing small businesses (in theory aimed at those who did not already own a business).

Have you thought about setting up a business?
What stops you setting up a business?

The reasons given were:

- Need money for initial stock
- House is too small
- Not patient enough
- Just not keen on this idea, just wants to be employed to earn money

Those that were small business owners were asked what they needed to grow their business:

- Need to have a separate space at home or have a container
- Need more or different tools (a second hand industrial sewing machine @ 2000 Rands, an overlocker @ 1500 Rands – need cash / credit for this; some people thought they could borrow necessary tools from friends or other owners if they did not have the cash to buy them)
- Must be competitive
- Must provide good customer service (including providing credit if required)

What new businesses do you think are needed in Fisantekraal and how would you choose what business to start?

- Spaza owner – expand into meat and more cold drinks
- Furniture shop
- Pharmacy
- Petrol station
- LPG sales
- Clothes shops
- Some co-operatives

An overall conclusion from the group was that there would be no ME activity without electricity. Most people were aware that the cost for a 60 Amp supply was 1000 Rands and that this type of supply would be very beneficial for larger shops / shabeens. The electricity was considered to be 'weak' (i.e. it goes off especially when it rains).

The discussion then moved on to other enablers that the group considered to be important (generally as well as for ME activity). The key issue raised by the group was communications. No-one had heard of the Internet and there was only a very low awareness of computers as a means of communications (no knowledge of e mail). The group thought that there maybe a computer and fax machine at the school. Mobile phone use was the norm, and fixed lines appear to be limited to a small number of Telekom public phone boxes and a Telekom vendor (in a container unit; Telekom phone book available). Cell phone air time is considered to be expensive and there was some awareness of text messaging.

Do you think that there are sufficient customers for all the spaza shops?

- 'Many people need many things'. Opinion was that people go to the shops where they are treated well (*facilitators comment – this also includes the trustworthy relationship that results in the availability of credit*) and where there is an environment of 'people who like each other'.
- Speaking of the same language was an important consideration (Fisantekraal has a number of language groups).
- Fresh produce
- Customer care is also important.
- Has anyone received any training that might be useful for establishing a business?
- One person (Alson - m) had received some **business skills training** in Johannesburg.

The group was asked what kind of training they would like to have if this could be made available within the community. Only Alson answered with any degree of certainty and identified **computer skills**.

We then wanted to explore the source of the cash economy that had been identified during the quantitative survey (i.e. although credit was widely available, people almost always settled their debts weekly / monthly when they got paid). Although pensions were mentioned during the survey, it was also evident that there was a wide range of employment opportunities in the local vicinity and in the neighbouring suburbs of Cape Town. The group were first asked 'How many people were employed within the enterprises in the community?

- Approx. 7 people employed in the micro enterprises (possibly at the crèche, spaza and shabeens)
- 4 teachers
- 5 staff at the clinic
- Approx. 10 as taxi drivers

‘How and where are people from Fisantekraal employed?’

This identified that there are a large number of people employed in Durbanville and Cape Town particularly in restaurants, shops, cleaning, maids, etc. The group thought that in the surrounding factories (chicken processing, vegetable processing, animal feeds etc) there was a lot of employment but some of it was seasonal. Work in the many vineyards in the area is also very seasonal. The ability to earn money from outside the community was considered by all to be very important.

We then attempted to build a scenario of what might change in the community if there was a major reduction in or no external employment. This created some alarm within the group as they rapidly began to think that this maybe about to happen. We then explained that this was purely hypothetical and a way for us to better understand the impact that the availability of external employment has on the community and the ME activity.

Lessons learned

Care must be taken not to build scenarios, i.e. ‘what if’ proposals, which will potentially create alarm for individuals or the group as a whole – a number of possible generic scenarios should be carefully prepared for use in the focus group sessions once the issues to be explored have been extracted from the quantitative survey findings.

An important finding was that although in the quantitative surveys, the majority of enterprise owners interviewed did not indicate that their business was seasonal, the owners that attended the focus group (particularly spaza and seamstress) said that they noticed the difference in trading conditions when a proportion of the employment in the local area stopped e.g. the main period of employment in the vineyards is between September and March.

Lessons learned

Add the following question to the quantitative survey form at the same point as the % level of activity per month: Do you notice any seasonal change in your business income?

Finally the group were asked ‘Do you like living in Fisantekraal? A positive response was received and we then asked Why?

- Work is close e.g. in the factories
- Clean surroundings
- No squatter camp nearby (a number of local places with a large number of shacks were named as not being as good)
- Generally safe

General lessons learned

The importance of rapid and clearly understood translation cannot be over emphasised – the interpreters must be briefed to ensure that all conversation in the focus group is constantly observed and where difficulties are evident, immediate translation is provided (into which

ever language is appropriate to improve the level of understanding of the issue in question, the question or the answers being provided)

If focus groups are to be planned with non-ME owners, there needs to be early engagement with relevant people to ensure that potential participants are fully aware of the projects and the role they may be asked to play. This is particularly important if the level of micro enterprise activity at the pre-energisation stage is very limited leading to a very low level of visibility of the researchers / project within the community.