

**Assessment of the Masisakhe Energy  
Information Centre**



**ENERGY & DEVELOPMENT GROUP**

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CONSULTANTS IN THE FIELD OF ENERGY AND DEVELOPMENT

## FINAL PROJECT REPORT

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AUTHORS : Ilne-Mari Hofmeyr, Glynn Morris, Vuyo Qangule, Fiona Ross  
DATE : April 1994  
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## ABSTRACT

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This report is an assessment of Masizakhe Energy Information Centre, which was established in 1990 by the Department of Mineral and Energy Affairs (formerly the National Energy Council) at the Western Cape Training Centre, Khayelitsha. The goals of Masizakhe were to establish an energy centre through which to inform and educate the community in the efficient and safe use of all energy sources. This report evaluates the present operation of Masizakhe and provides guidelines for its improvement and also for the establishment of other urban energy centres.

The evaluation process indicates that a range of organisations (including energy utilities, health and environmental organisations, civic associations and academic institutions) recognise a great need for energy information dissemination. The kind of information indicated by these organisations as being required has been broken down into eight components: health and safety; general energy information; career counselling; training; appliance sales; fuel sales; energy efficiency; and environmental concerns. The extent to which Masizakhe addresses these is then evaluated.

Masizakhe concentrates mainly on health and safety information dissemination. For the most part this is achieved through an extension work project aimed at school children. Very few adults attend the centre, and the information offered by the centre does not appear to reach either shack dwellers or women in a concerted manner. The only other area identified by the interested parties described above in which Masizakhe does interact is that of environmental concerns, although at present its input in that field is limited.

Two sets of guidelines are included in the report. Firstly, a steering committee comprising energy supply industries, national government representatives, local government agencies, appliance manufacturers and civic association representatives should be established to consider the future of energy information centres, and to explore ways of funding them. Information should be disseminated through a nationally co-ordinated programme which makes use of existing structures (such as the departments of health and of education). Recommendations as to staffing, location, services, goal-setting and target groups are also provided. A second set of recommendations suggest that if Masizakhe is to continue in its present form then a local steering committee needs to be established, with similar composition as above, and other sources of funding sought. Clear guidelines for establishing aims and objectives, targets, and goal-setting practices are provided.

## EXECUTIVE SUMMARY

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Masizakhe Energy Information Centre ('Masizakhe' or 'the centre' for brevity) was established in 1990 by the National Energy Council (now the Chief Directorate: Energy of the Department of Mineral and Energy Affairs) at the Western Cape Training Centre, Khayelitsha. The centre aims to disseminate energy information in order to inform and educate the surrounding community on the efficient and safe use of all energy forms.

The report presented here is an evaluation of the extent to which Masizakhe achieves these goals. It also presents guidelines upon which to base other urban energy centres in South Africa. Discussion of the establishment of Masizakhe and the motivation for assessment are contained in Chapter One of the report.

Chapter Two explores the research techniques used to assess the centre, which was evaluated using three complementary sets of data. These were sought from i) Masizakhe itself, ii) key players in the energy, health, community, environmental and academic spheres, and iii) energy institutions elsewhere in Africa and the world. Only one response was received during the project period from the latter component of the data collection phase.

Discussions with those institutions included under category ii) indicate that there is a high need for energy information dissemination, and a great deal of support for the notion of energy information centres (see Chapter Three). The roles which such centres were envisaged as playing have been categorised as follows: i) health and safety information dissemination; ii) provision of general energy information; iii) career counselling; iv) training; v) sale of appliances; vi) sale of fuels; vii) energy efficiency information provision; and viii) environmental concerns.

Masizakhe's present target population is not clearly defined. A range of target populations for energy information has been identified (see Williams, 1993). Chief among these are women, residents of informal settlements and children.

The evaluation of Masizakhe, contained within Chapter Four of this report, explored the processes by which the centre makes energy information available, and examines the kinds of information disseminated and the audiences which it reaches. The centre is thus evaluated both independently and in terms of the criteria defined as important by other key players in the energy field.

Observations conducted at Masizakhe during the evaluation period indicate that there are two kinds of information dissemination processes in operation at the centre. Demonstrations and lectures are held for visitors to the centre, and information is disseminated to schools through a programme of extension work undertaken by staff of Masizakhe. Contact between Masizakhe and the broader Khayelitsha community during the evaluation process indicates that children are the main beneficiaries of energy information. They comprised approximately 87 percent of contacts between Masizakhe and the community at this time. The remainder of contacts were with adults. Some ten percent of these were with adults undertaking training at the Western Cape Training Centre, and advice comprised the remaining contacts.

Masizakhe's activities put it within the ambit of some schools in Khayelitsha, one environmental organisation, and some of those adults who attend training courses which are conducted at the Western Cape Training Centre, within which Masizakhe is located.

In terms of the criteria defined above, it is clear that Masizakhe's present audience is narrow. It tends to be confined mainly to children. Women comprise only nine percent of the contacts made by Masizakhe during this period. Thirty-four percent of respondents (both adults and children) were recorded as having electricity in their homes. This indicates that Masizakhe does not reach a large proportion of residents of the informal settlements which comprise the majority of Khayelitsha's population.

In part the narrowness of Masizakhe's present range of audiences is due to staffing difficulties and to the lack of a clearly defined set of objectives. There are no goal-setting practices in operation, nor any activities which delimit a target category at which information can be aimed. No job descriptions exist for staff members, and there is no formal process of performance evaluation in operation at Masizakhe. Staff feel there is limited infrastructural and management support for their activities.

Findings of the evaluation are presented in Chapter Five of the report. In Chapter Six, two sets of recommendations are presented. The processes through which future energy information dissemination should be addressed are presented. Firstly, at a national level, a steering committee comprising representatives of all key players in the energy arena (that is, energy supply institutions, health, environmental and education authorities, appliance manufactures, national and local government representatives, and civic organisations) should be established in order to facilitate co-ordinated energy information dissemination, and to reduce overlaps in activities. Funding for energy centres should be sought from the organisations represented on the steering committee. The report also addresses questions of location, staffing, goal-setting and targeting activities which should be implemented at energy centres.

The second part of Chapter Six provides a set of guidelines in the event that it is decided that Masizakhe should remain. A local steering committee, with the same responsibilities as that described above should be established. Recommendations as to staffing requirements, target- and goal-setting activities are included in the report.

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- the staff of Masizakhe;
- the staff at the Western Cape Training Centre;
- the respondents of questionnaires;
- Tony Golding of the Department of Mineral and Energy Affairs; and
- all those individuals and representatives of institutions consulted.

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# Chapter One

## INTRODUCTION

---

The report documents an assessment of the Masizakhe Energy Information Centre in Khayelitsha, Western Cape, which was undertaken for the Department of Mineral and Energy Affairs (DMEA).

### 1.1 Background to the establishment of the centre - aims and objectives

In 1990 the idea of establishing an energy information centre was discussed with a range of interested parties, including other energy centres (Alexelec is a frequently cited case), energy agencies (ESKOM, oil companies etc), appliance manufacturers, and goods retailers<sup>1</sup>. Masizakhe Energy Information Centre (called Masizakhe, or the centre, for brevity) was opened in the Western Cape Training Centre (WCTC) run by the Lingeletu West Town Council (LWTC), in Khayelitsha in December 1990. Masizakhe is presently funded by the Department of Mineral and Energy Affairs.

Masizakhe's original mandate was to disseminate energy-related information to the urban population (see Webber and Whitecross, 1990), much of which is presently reliant on lower-order fuels such as paraffin, gas and wood. Because of the reliance on these fuels it was decided that the centre should provide information relating to all fuel-types, rather than solely electricity.

- The emphasis in the formation of Masizakhe appears to be largely in two areas of the energy environment; in educating people on safety of fuels and appliances, and in providing information relating to the most efficient use of appliances and fuels. The high incidence of air pollution, poisonings and burns caused by these fuels (see von Schirndig *et al*, 1991; Delpont, forthcoming; Yach, 1988 and forthcoming), and the anticipated problems in using these and electricity efficiently promoted the formation of a centre which would disseminate a range of information relating to various energy sources and use.

Thus the primary outputs (aims) of the project as a whole are described by the project co-ordinator (Webber, 1993-94:1) as:

- To establish an energy centre in Khayelitsha; and
- To inform and educate the community in the efficient and safe use of all energy forms.

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<sup>1</sup> At the time the project proposal was submitted, energy research funding was administered through the National Programme for Energy Research of the Foundation for Research Development (FRD). A major focus of the FRD was on human resources development. Current thinking on urban energy issues was patchy and based on affluent middle class concerns. Eskom had only just begun their involvement in "township" electrification (Kidgell: 1994).

## 1.2 Aims and objectives of this assessment

Early on in the process of assessment of Masizakhe, it became apparent that there is disparity between the centre as it was initially envisaged and as it presently operates. As a result, the evaluation covers three broad objectives:

- To assess Masizakhe as it presently operates;
- To determine the extent to which Masizakhe meets the energy service needs of the community within which it is located; and
- To make recommendations relating to its continued existence, and to the creation of other, similar centres elsewhere in South Africa.

Thus, in addition to assessing the centre in terms of the extent to which it has met the aims and objectives originally anticipated, the assessment process also investigates the activities which are presently being undertaken at the centre, and the ways in which these activities fit the needs of the community as defined by a range of interested parties, both within and external to the immediate Khayelitsha community.

## 1.3 Scope and constraints of this report

There are a number of factors which operated to constrain the evaluation process.

### 1.3.1 Time

The evaluation of Masizakhe was commissioned late in February 1994, for completion by 1st April 1994. That deadline date was extended to the 29th April 1994 after discussions between the evaluators, project co-ordinator and Tony Golding of DMEA in order to allow for the inclusion of more data, and a longer period of report compilation.

Initially then, the evaluation was accorded six weeks. Evaluation commenced on the 28th February, and initial analysis was completed on the 30th March. This meant that there was only a two week period in which data could be collected prior to analysis.

### 1.3.2 Access to information

At times information was difficult to access. In part this was owing to the problems of communication with the centre, which was unmanned during the period when community extension work was being undertaken (see sections 1.3.4 and 4.1.3 of the report).

In addition, copies of reports are not kept at Masizakhe itself, and when the project co-ordinator moved from Khayelitsha into Cape Town, some of the material was mislaid.

It was frequently difficult to contact the lecturer based at Masizakhe, and as a result when venues or plans were changed we were uninformed.

### 1.3.3 Personal safety

Another factor which made information difficult to obtain was that Khayelitsha was politically unsettled at the time of assessment, making access to Masizakhe problematic for evaluators.

### 1.3.4 Access to the centre

Violence in Khayelitsha caused the Masizakhe project co-ordinator to leave the area and base himself in Cape Town. As a result the centre is manned only by one staff member. When he is away lecturing, the centre is closed to visitors. On three occasions when the evaluators arrived unannounced the centre was locked and the lecturer away. On two of these occasions there was a note pinned to the door to explain his whereabouts. Both times the note was out-of-date. In the absence of the lecturer there is nobody to answer the phone, and thus arranging appointments is difficult.

### 1.3.5 Energy-use survey

Our proposal for the evaluation suggested that demographic and detailed energy use data be obtained from respondents. After discussion with Tony Golding (DMEA), it was decided to limit this aspect of evaluation. It is therefore not the intention of this report to produce fine analytic data relating to fuel consumption patterns of users of the centre, and, as the sample used is too small to make statistical correlations, the fuel-use patterns are not disaggregated.

### 1.3.6 Materials which were not evaluated

Despite several requests that video materials used in demonstrations at Masizakhe be made available to evaluators, these were not forthcoming until the 18th April 1994. As a result the videos were not analysed in great detail by the evaluators. We do however, include commentary on videos given by Masizakhe staff and responses of children and teachers who saw the videos. These are explored in section 4.3 of the report.

## 1.4 Structure of the report

The report comprises eight components. Chapter Two presents the methodology used to assess Masizakhe. Comprising three parts which reflect the sources of information used in compiling this report, this section explores methodological tools used, and describes the processes by which data was drawn from energy players and health authorities in South Africa, and from energy institutions elsewhere in South Africa and abroad.

Chapter Three describes findings from potential stakeholders and from energy organisations outside of South Africa. This chapter thus describes the needs for energy information dissemination which are perceived as existing by the energy industry. Against this background Masizakhe's information service can be evaluated.

Chapter Four provides an evaluation of Masizakhe itself. The findings and implications of these form the basis of the conclusions in Chapter Five. Chapter Six deals with recommendations resulting from the assessment. This chapter has two components. The first makes recommendations relating to Masizakhe as it presently operates, while the second puts forward some recommendations as to how future energy information dissemination could be undertaken.

The final two components of the report present references used, and Appendices A to G. Appendix A is a list of energy organisations consulted outside of Masizakhe and the energy service organisations addressed in the report. Appendix B presents the appliances which are on display at Masizakhe, while Appendix C contains maps which show the location of

Khayelitsha in relation to Cape Town, and of Masizakhe in relation to Khayelitsha. Appendix D gives tables for the data presented as graphs in the report, and E comprises copies of the questionnaires used in the evaluation process. Appendix F contains copies of Masizakhe's information flyer and pamphlets. Appendix G presents a draft proposal for the establishment of an Energy Safety and Support Initiative.

## Chapter Two

# ASSESSMENT METHODOLOGY

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The assessment programme was divided between three primary researchers, and co-ordinated by Glynn Morris of Energy & Development Group (EDG). Vuyo Qangule was responsible for the main Masizakhe data collection which informs this assessment and for collecting data from the immediate community of Khayelitsha. Ilne Hofmeyr devised the questionnaires, collated and analysed data, and conducted interviews with key players outside of the centre. Fiona Ross sought data relating to other centres, gave feedback to Dean Webber (Masizakhe project co-ordinator), and compiled the report.

A range of resources informed data collection for the assessment of Masizakhe. These were drawn from three main sources:

- Masizakhe and its operations;
- Interviews with representatives of the energy supply sector; and
- Energy information centres elsewhere in the world.

### 2.1 At the centre

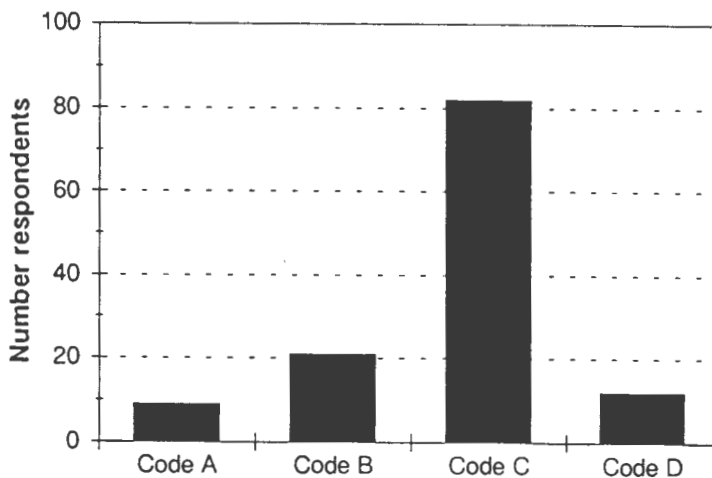
Primary research methods included participant-observation techniques at the centre, interviews with key players, and the administration of questionnaires (Appendix E) to 124 visitors and non-visitors at the centre (refer to Figure 2.1).

Participant-observation at the centre was undertaken over a two-week period in March 1994. Data was collected from a diverse number of sources of users of the centre, reflecting the *ad hoc* nature of energy information dissemination practices at the centre.

In order to determine the extent to which residents in Khayelitsha were aware of Masizakhe, and to pilot questionnaires, interviews were conducted with three categories of people who did not use Masizakhe. While the sample used here is very small ( $n = 31$ ) it provides a useful notion of the extent to which Masizakhe is known. The people interviewed were drawn from two areas in Western Cape Training Centre (WCTC) - from a training organisation [ $n = 12$ ], and casual visitors to WCTC [ $n = 10$ ] - and from commuters [ $n = 9$ ].

The other sources from which data were drawn included:

- Interviews with representatives of the centre;
- Interviews with teachers and questionnaire completion by pupils of schools at which lectures were undertaken;
- Completion of questionnaires by visitors to the centre; and
- Administration of questionnaires to those organisations from WCTC which sent trainees to the centre.



**Figure 2.1:** Categories to which questionnaires were administered

### Key

Code A = Taxi rank. Destination = vicinity of Masizakhe.

Code B = Premises of WCTC

Code C = School children visiting or visited by centre

Code D = Adults at WCTC who visited Masizakhe.

Vuyo Qangule accompanied the Masizakhe lecturer, Vusumzi Majebe, on his field trips to schools and sat in on a range of meetings with community organisations with which Masizakhe has links.

In addition to fieldwork notes, photographs, existing reports, and detailed discussions with the lecturer and co-ordinator of the centre, the above techniques provided the bulk of data on which the assessment of Masizakhe, as it presently exists, is based.

## 2.2 Information obtained from other energy players and health authorities

Furthermore, opinions, impressions and ideas relating to the value and efficacy of energy information centres were sought from a range of potential stakeholders; Eskom, Shell, BP, Engen, The Child Accident Prevention Foundation of South Africa, the Medical Research Council, hospitals, civic leaders, environmental groups, and other interested parties from the Energy for Development Research Centre (EDRC) and the Southern African Labour and Development Research Unit (SALDRU), both based at the University of Cape Town. Their comments are included in chapter three, and were helpful in formulating the guidelines which appear at the end of the report.

## **2.3 Energy information centres elsewhere**

A number of institutions outside of South Africa were contacted in connection with the existence and operation of energy information centres in their countries. Where information was available this is included in chapter three. A list of some organisations which should be consulted for advice on future plans is provided in Appendix A.

## **2.4 Programme of evaluation**

### **2.4.1 Project planning phase**

Data requirements and collection techniques were discussed during the period 15th to 28th February. It was at this point that the programme was divided into the three components described above, and responsibilities for each section allocated.

During the period 23rd to 28th of February, two visits were made to Masizakhe in order to discuss the assessment with Mr. Majebe, and to see the centre. The centre was closed on both occasions.

During the latter period, two sets of questionnaires were compiled by Ilne Hofmeyr. These are included as Appendix E of the report.

### **2.4.2 Participant-observation and questionnaire administration**

These aspects of the evaluation were undertaken by Vuyo Qangule over a three week period from 28th February to the 20th March. Owing to unrest in Khayelitsha information collection from day hospitals in the area was not collected.

### **2.4.3 Data collation and analysis**

Ilne Hofmeyr analysed data obtained from questionnaires during the period 20th to 28th March. In addition, she conducted interviews with potential stakeholders in the energy and health arenas in the preceding week.

### **2.4.4 Report compilation**

The report was compiled by Fiona Ross over the period 28th March to the 20th April. The compilation period also included regular meetings with Dean Webber. Information from other energy institutions elsewhere in the world was sought at this point.

## **2.5 Summary**

The range of methodological tools which have been implemented in this assessment are evidence of a variety of activities which are on-going at the centre, all of which occur on an *ad hoc* basis. Thus the patchy nature of data collection accurately reflects on-the-ground processes. This will become evident in chapters three to five of the report.

## Chapter Three

### GENERAL FINDINGS

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#### 3.1 Masizakhe in relation to other energy information centres in South Africa

There are a range of other energy information centres which operate in South Africa. Some of these were visited prior to establishing Masizakhe (Webber and Whitecross, 1990). One of these, the Eskom-administered Alexelec (in Alexandria, Johannesburg) provided the model on which Masizakhe was based.<sup>2</sup> At the time of this assessment Eskom had a number of similar centres (called Electro-routes) in operation. These are essentially marketing centres provide demonstrations, and cover the educational and health/safety aspects of electricity-use.

In addition, a number of the oil companies have established outlets through which to disseminate energy information. These vary from the dissemination of information through 'routers' (energy transporters) to dissemination through existing health structures. These aspects are discussed in greater detail below.

Other centres operational in South Africa appear to concentrate heavily on remote area power supply (RAPS), or on renewable energy sources. Their focus is largely on demonstration of technologies, rather than dispensing information relating to health and safety to end-users. For example, the Renewable Energy Demonstration Centre in Silverton, has a large demonstration component. The Rural Technology Unit in Transkei and the Wits Rural Facility are service NGO's which offer user advice, maintenance and support in the areas of agro-forestry and water pumping.

There is an increasing awareness of the need for energy information dissemination, and some small organisations and environmental groups have begun to explore ways in which information relating to efficiency and environmental aspects of energy use can be disseminated. Tsoga Environmental Resource Centre in the Western Cape is a case in point (see section 3.5.4). A range of other NGO's offer small-scale support to consumers, but there are very few other energy information centres outside of those established by the Department of Mineral and Energy Affairs (DMEA) and Eskom.

#### 3.2 Current perceptions regarding energy centres

Interviews conducted with key players in the energy, health and community fields indicated overwhelming support for the notion of energy information dissemination. The responses are grouped by sector below, and summarised in Table 3.1.

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<sup>2</sup> The report on the field-trip undertaken prior to the establishment of Masizakhe notes that Alexelec is "the only notable and worthwhile Information Centre" out of those visited.

## Shell

A Shell representative commented on the difficulties of establishing and maintaining standards for fuel sales and appliances, particularly in informal settlements during periods of violence and unrest. For this reason it was felt that this organisation and others would support an institution which could bridge the gap between end-users and distributors, particularly in relation to the dissemination of health and safety information. It was felt that a central administrative point would be essential in this regard, in order to ensure co-operation between various partnerships, and to verify that information was distributed.

The notion of energy centres was strongly supported as a means through which companies could reach the communities which they serve. It was felt that some of the training which is presently offered to fore-court petrol attendants could easily be modified to train other people who are involved in selling fuels to consumers (such as small dealers, etc). Other services which could be offered lie in the area of training personnel located in informal production, especially in areas of safety when using energy sources.

### 3.2.2 Health Organisations

Health representatives from the Child Accident Prevention Foundation of South Africa and the Medical Research Council indicated strong support for the notion of energy centres. Staff at the Khayelitsha hospital were also supportive. Emphasis was laid on practical aspects of energy information, and on the importance of investing in preventative health care related to fuel-use rather than in treating the effects of fuel-related accidents (see Delpont, forthcoming).

#### **The Child Accident Prevention Foundation of South Africa**

This organisation stressed the frequency of fuel-related accidents among children, particularly resulting from paraffin poisoning and burns. The unit is presently operational in some of Cape Town's high density suburbs, and has recently opened a branch in Johannesburg. It plays a crucial role in distributing information to health workers and teachers, and representatives also visit schools. (Note that there is considerable overlap here between the functions of this organisation and that of Masizakhe, but there is presently no co-ordination between the two organisations).

#### **The Medical Research Council (MRC)**

The MRC welcomed any effort directed towards end-user information, but felt that there is a strong need for co-ordinated, practical initiatives. This is particularly the case given that consumer behaviours are not highly flexible, and behavioural change is often short-term, difficult to implement and sustain, and impractical. The MRC also commented on extremely high costs of medical care for fuel-related injuries, and emphasised the need to spend money on appropriate interventions rather than on post-accident care.

#### **Site C hospital, Khayelitsha**

The sister interviewed at the hospital felt that energy centres could play an important role in preventing paraffin burns; either through offering first-aid courses to community members, or providing a first-aid service to the community. Information provided to people would enable them to treat their burns at home, without having to incur the time and expense of visiting the hospital. This would then leave hospital staff free to deal with serious injuries, and thus reduce the work-load of the staff.

### 3.2.1 Energy Supply Institutions

Representatives from: i) Eskom, ii) BP, iii) Engen, and iv) Shell agreed that the role of education in ensuring safe and efficient fuel-use was vital.

#### **Eskom**

Eskom has a range of energy centres, including a customer care unit in Khayelitsha; an organisation called 'Phambile Nombani' (Forward with Electricity). The organisations combine customer service and safety advice with marketing appliances and consumption. The aim is to contribute to development and increase returns on Eskom's investments. Energy centres are considered to be essential, and significantly there is a growing awareness that the centres should concentrate on all fuels, not solely electricity. In addition, Eskom commented on the future need for education relating to energy conservation, which could be addressed through the same channels. Eskom representatives expressed willingness to take part in and contribute information to energy centres which offer a more inclusive range of information about energy carriers<sup>3</sup>.

#### **BP**

BP presently acts through the Child Accident Prevention Foundation (CAPF), and through its sales points to disseminate information relating to the health and safety implications of its liquid fuels. Commenting that the statistics which describe fuel-related accidents indicate terribly high incidences of burns etc., Mr Hendrie, a safety officer, supported the idea of energy centres. Some of the ideas which are being implemented by BP in terms of posters and pictograms should be explored as a matter of priority. A recommendation from BP was that marketing and safety should occur in conjunction, as this has positive benefits for both the company and the end-user, and contributes to development.

#### **Engen**

Engen has a useful database documenting the safety aspects of its products. The extent to which this information is disseminated is however, unclear. Information is technical, rather than aimed at end-users, and while it is given out to distributors, there is no guarantee that the information reaches the end-users. Mr. Hayman, an environmental and safety officer at Engen, believes that now is an opportune time in the history of South Africa to implement the issue of energy information dissemination comprehensively. The process of information dissemination should also allow for regular checks on the quality of products (such as gas cylinders). Mr. Hayman commented that although companies follow the law in ensuring that their products are labelled, there is no guarantee that these are understood by domestic consumers. A strong recommendation is that future dissemination occur through already established institutions, such as the Child Accident Prevention Foundation and the Medical Research Council.

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<sup>3</sup> In August 1993 the Eskom representative on the Masizakhe Steering Committee agreed i) to make funding available for the Centre in 1994 (although no specific amount was mentioned) and ii) that instead of duplicating activities it should be investigated how Eskom's needs could be accommodated within the activities of Masizakhe. However, at the next meeting Eskom announced that it was setting up an electricity marketing centre as part of the Phambile Nombani joint venture company (Kidgell: 1994).

### 3.2.3 Community and academic organisations

#### **Khayelitsha civic association**

The need for information and education relating to energy-use is considered to be great, and adequate information dissemination is felt to be essential. At present the Khayelitsha Civic Association is not involved in the operation of Masizakhe. However, there was a strong commitment to involvement in the processes of community participation by the civic. A role viewed as vital by the civic is in the potential of energy centres to make energy career counselling part of their mandate, and thus to provide information to the community about careers in the energy field<sup>4</sup>.

#### **Other civic associations**

Mr Northrop of the Cape Provincial Administration reports that other civic associations elsewhere in the Eastern Cape are also interested in and see the need for energy centres.

#### **Victor Thamage (Southern African Labour and Development Research Unit, University of Cape Town - SALDRU, UCT)**

Mr Thamage visited Masizakhe as part of a field-trip for research being carried out at the Energy for Development Research Centre, UCT. He comments that the location of the energy information centre is unsuitable, in that it is not located in the community it is trying to serve. As a result he predicted (correctly) that it is not likely to receive many visitors. A more aggressive policy of selling safety as a product would be an effective means to attract people to the centre and thence to market safety and health aspects of energy sources. In addition, 'women's' issues should be considered when establishing the centres, in order to ensure that these are as accessible to the majority of domestic energy users as possible. He viewed the centres as having an important role as an interface between the users and the suppliers, and commented that the centres could also operate as a useful point for end-user data collection.

#### **Steve Thorne (Energy for Development Research Centre, UCT)**

Mr Thorne's comments on Masizakhe point to the value of the displays, appliances and videos at the centre. He commented that the end-use services required by consumers lie in the areas of health and safety, and energy conservation and efficiency within households. Of particular importance here is the dissemination of information relating to insulation. He also commented on the importance of cost-benefit analyses, which is essential in assisting consumers to make appropriate choices within the constraints of their household budgets. In addition, he commented on the needs of policy-makers and suppliers in obtaining information relating to energy-use and needs from the communities involved. If energy centres could operate both as sources of information for communities and also in generating information for the energy utilities and policy-makers, then policies and energy distribution could be matched to the on-the-ground experiences of consumers. A two-way flow of information between end-users, energy utilities and policy-makers is thus viewed by Mr Thorne as essential.

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<sup>4</sup> The capacity building opportunities of integrated resource centres could be quite considerable, as well as their potential for engendering community participation, group solidarity, improving morale and regaining a sense of identity, ownership and pride to replace the apathy, negativity, hopelessness and learned helplessness associated with the past. In fact these wider aspects may actually be of greater significance than the dissemination of safe and efficient fuel-use practices. (Golding:1994)

**Anthony Williams (Energy for Development Research Centre, UCT)**

Energy information dissemination should be performed in an integrated fashion, so that energy is not isolated from the other aspects of daily life which impact upon households. These aspects include housing, sanitation and water. If energy centres are to be established these should be tri-partite, involving the state, energy utilities and the communities concerned, so that the centres are flexible and responsive to the needs of particular communities, and have full institutional backing. Mr Williams also comments that there is a need for a two-way flow of information from end-users to energy suppliers and policy-makers in addition to vice versa. This will facilitate appropriate policy interventions, and may also contribute to a deepening of longitudinal databases relating to energy. (See also Williams, 1993).

**3.2.4 Environmental organisations<sup>5</sup>****Khayelitsha Environmental Action Group (KEAG)**

An important component in this organisation's objectives is focused on schools, youth and hawkers, particularly in trying to create environmental awareness of refuse disposal and litter. Although aware of the relationships between energy and the environment, at present KEAG does not have much emphasis on energy concerns. However, Mr Majebe of Masizakhe has been invited to represent the energy sector on this committee. His role is in an advisory capacity on matters relating to energy and the environment, and he is expected to play an active role.

**Tsoga Environmental Resource Centre**

There is a clear need for integrated approaches to energy, particularly in the field of energy efficiency and the environment. One way in which this can be achieved is through working to sensitise developers, particularly in house design, to ensure that buildings are energy efficient and environmentally sound. Energy should not be divorced from the contexts within which it is used, and the organisation stresses the need for integrated approaches to a broad understanding of the environment. Part of the policy of Tsoga is to visit schools in order to involve children in environmental concerns, and in this regard energy information dissemination is an important aspect of the operation of this environmental resource centre.

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<sup>5</sup> Closer co-operation with environmental groups, gardening, agro-forestry and nutrition groups is suggested by the DMEA. The centre could provide a location for a waste/food parcel exchange scheme. Jointly presented cooking/energy, gardening/energy or first aid/energy could be explored (Kidgell: 1994).

**Table 3.1** Energy information dissemination and responses to the notion of energy centres

Institution	Disseminate	Arrangement	Support
ESKOM	Yes	Own centres	Yes
BP	Yes	CAPF	Yes
Engen	Yes	Routers	Yes
Shell	Yes	Field Managers	Yes
CAPF	Yes	Teachers/ health workers	Yes
MRC	No	N/A	Yes
Hospital	No	N/A	Yes
Civic	No	N/A	Yes
Environment	Yes	Own structures	Yes
Other	No	N/A	Yes

**Key**

- 1 This column explains whether the institution concerned has an energy information dissemination service.
- 2 This column describes the way in which energy information is disseminated.
- 3 This column illustrates whether or not the notion of energy centres receives support from the institution concerned.

**3.3 Opinions from outside South Africa**

Opinions and ideas relating to energy centres were also sought from organisations from elsewhere in the world. Lists of these are given in Appendix A. At the time of writing only one response had been received, the general trend in advice being that centres should not operate solely to inform on energy matters, but should have an integrated function which takes account of a range of aspects which impact on end-users, such as housing, water availability, sanitation, and so on. This relates closely to opinions of other people interviewed, particularly those from EDRC and from environmental centres.

**3.4 Summary**

A general distinction can be made between the types of energy information centres in operation at present, and those envisaged by organisations consulted. Currently, centres tend to be insular, focusing solely on energy, and have a strong emphasis on technology from a supply-side perspective.

Of the energy utilities consulted, a number have already instituted their own forms of information dissemination. Some have made available packages of information, and several

are presently involved in research into various health and safety-related aspects of fuel-use at a domestic level.

The health organisations are particularly concerned with aspects of energy information dissemination which relate to safety and health. Only the Child Accident Prevention Foundation is actively and consistently involved in attempting to disseminate information relating to energy and health.

In both the academic and environmental sectors, concern was expressed that integrated approaches to energy information dissemination be undertaken. In general, the vision of these organisations tends to emphasise the environment, the communities in which centres should be located, and the interconnections between these at the level of end-users.

The organisations consulted envisage a range of activities in which energy information centres ought to participate, including health and safety information dissemination, environmental concerns, energy efficiency questions. These are summarised in Section 4.4 of the report, which compares expectations of the above organisations with Masizakhe's activities.

It is clear that there is limited or no co-ordination between the various groupings involved in information dissemination, and that in some places the services offered overlap. Thus, while there is some information dissemination, this tends to be patchy and distributors have no real notion as to the extent to which information is available to end-users. This clearly points to a need for targeted, integrated and co-ordinated energy information dissemination.

## Chapter Four

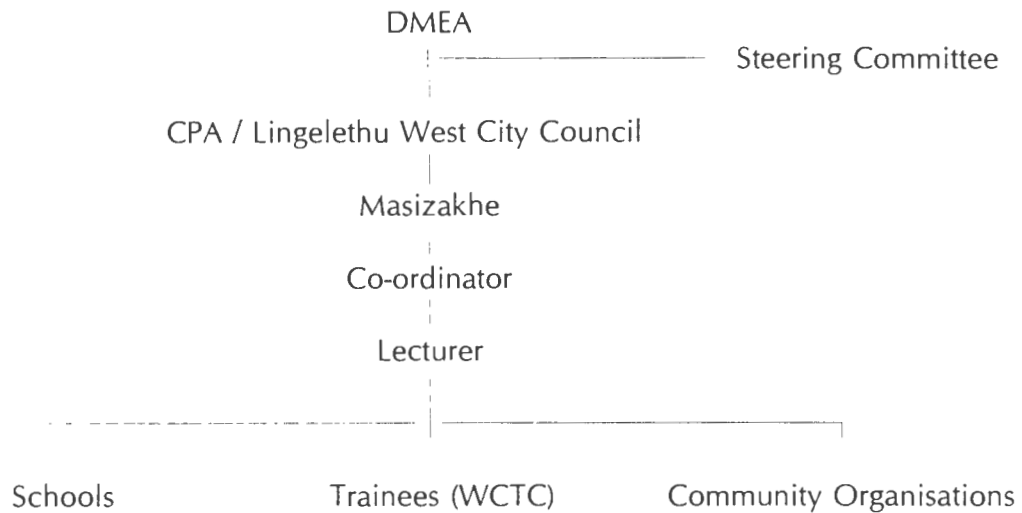
### FINDINGS SPECIFIC TO MASIZAKHE

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#### 4.1 Masizakhe's present operation

##### 4.1.1 Administration

The present structure of Masizakhe Energy Information Centre and the areas of the community which it presently reaches can be summarised diagrammatically.



**Figure 4.1** Structure of Masizakhe in relation to DMEA and Khayelitsha community<sup>6</sup>

##### 4.1.2 Budget and costs of the centre

Masizakhe is presently funded by the DMEA. Funds are administered by the Bellville offices of Lingelethu West Town Council (LWTC). Concern was expressed by the project co-ordinator that this was an inappropriate forum for the administration of funds, particularly in view of the negative associations which LWTC has in Khayelitsha.

No rent is charged for the space which Masizakhe occupies at the WCTC.

As at 8/2/94, expenditure on the centre from 1990 had amounted to R 239 023.85. These costs cover capital outlay, running expenses and salaries. These are summarised overleaf in Table 4.1.

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<sup>6</sup> Finances are channelled from the NEC/DMEA to the Centre via the LWCC but day-to-day administration is the sole responsibility of the co-ordinator. The LWCC will be withdrawing from the project once the current contract lapses (Kidgell:1994).

**Table 4.1** Summary of expenditure on Masizakhe, 1990-1994

90/91	Budget	Expenditure	Bal. avail	Cash avail.
Capital	11583.00	11320.74	262.26	
Running	21686.00	1096.38	20589.62	
Salaries	35985.00	21377.55	14607.45	
Paid NEC	23068.40			
<b>TOTAL</b>	<b>69254.00</b>	<b>33794.67</b>	<b>35459.33</b>	<b>-10726.27</b>
<b>91/92</b>	<b>Budget</b>	<b>Expenditure</b>	<b>Bal. avail</b>	<b>Cash avail.</b>
Capital	18100.00	6220.19	11879.81	
Running	28288.00	19438.14	8849.86	
Salaries	46605.00	46834.29	-229.29	
Paid NEC	96820.94			
<b>TOTAL</b>	<b>92993.00</b>	<b>72492.62</b>	<b>20500.38</b>	<b>13602.05</b>
<b>92/93</b>	<b>Budget</b>	<b>Expenditure</b>	<b>Bal. avail</b>	<b>Cash avail.</b>
Capital	0.00	-3716.57	3716.57	
Running	25091.00	18383.81	6707.19	
Salaries	52100.00	55186.49	-3086.49	
Paid NEC	69766.33			
<b>TOTAL</b>	<b>77191.00</b>	<b>69853.73</b>	<b>7337.27</b>	<b>13514.65</b>
<b>93/94</b>	<b>Budget</b>	<b>Expenditure</b>	<b>Bal. avail</b>	<b>Cash avail.</b>
Capital	0.00	0.00	0.00	
Running	56380.00	8682.36	47697.64	
Salaries	68301.00	54200.47	14100.53	
Paid NEC	65200.00			
<b>TOTAL</b>	<b>124681.00</b>	<b>62882.83</b>	<b>61798.17</b>	<b>15831.82</b>

**Project totals, 1990-1994.**

Total payments	254855.67
Total '90-93 expenses	239023.85

**Balance:** 15831.82

**4.1.3 Staffing arrangements**

Masizakhe currently has two full-time staff members<sup>7</sup>. Dean Webber manages and co-ordinates the project, while Vusumzi Majebe is the lecturer at the centre. The project is administered by Brent Hampton of the Cape Provincial Administration Community Services Branch, and the co-leader is Paul Northrop, of the same division.

Staff do not have formal contracts with any organisation.

<sup>7</sup> Initially Ms Joyce Ngolombane was employed as a marketing assistant. She subsequently took a post with the Department of Education and Training (DET)

All staff see the need for a larger project team, although their ideas for this person are different. Mr Webber would like to appoint another lecturing assistant, and an administrative assistant, while Mr Majebe sees the need for a female secretary to be based at the centre in Khayelitsha. Messrs. Hampton and Northrop identified a need for a larger lecturing staff at Masizakhe, and emphasised that new staff should be women, in order to facilitate access to the female population of Khayelitsha.

Owing to violence in Khayelitsha in April and May 1993, Mr Webber moved to the Cape Town CBD, and is presently operating from the offices of the Cape Provincial Administration.

This raises several problems for the daily operation of the centre, primary among which is the fact that when extension work is underway, Masizakhe has to be closed as there is no-one there to manage it during the lecturer's absence.

Other problems are experienced as a result of this split function. These include:

- Difficulties in communication resulting from the absence of the lecturer when conducting extension work;
- Problems in goal-setting and assessment (as both communication and transport are problematic), and thus;
- A lack of co-ordination between the Khayelitsha and Cape Town offices.

These factors have implications for the ways in which personnel interact and envisage their jobs. In particular:

- There are no clear lines of institutional support for Masizakhe;
- There is no established procedure for planning between the co-ordinator and DMEA; and
- There are no formal job descriptions and performance evaluation processes in operation within Masizakhe.

The effect of these factors is to isolate the project staff from the funding institution, and to limit planning.

#### **4.1.4 Location**

Masizakhe is located within the premises of the Western Cape Training Centre (WCTC). This is a community training organisation administered by the LWTC, and offering infrastructural support to training organisations, of which nine are located in the centre, with a total of 290 students.

The present location of Masizakhe is not conducive to casual visitors. The WCTC is surrounded by a high fence, topped with barbed wire. Access for pedestrians is difficult; located off a side road, the entrance to WCTC requires that people walk considerable distances to gain access to Masizakhe.

The space around the centre has a long history of contestation, as does Lingeletu West City Council, which administers the training centre, and it is likely that these factors act as deterrents to those who may have heard of the centre and who wish to visit.

Perceptions as to the inaccessibility of the centre were shared by the project team, but it is felt that there is no alternative location within which to locate Masizakhe.

The maps (see Appendix C) and photographs below (Figures 4.2 to 4.5) show the location of the centre, and give some idea of its inaccessibility and daunting aspect.

#### 4.1.5 Appearance of the centre

Although the signs advertising Masizakhe are bright, and the logo eye-catching, the information contained on them is incorrect. The signs advertise that lectures are held at the centre every hour on the hour during the day. In fact, lectures are held only when visits are organised. During the evaluation period, there were only two lectures at Masizakhe itself.



Figure 4.2 Western Cape Training Centre complex, within which Masizakhe is located



**Figure 4.3** Entrance to the Western Cape Training Centre (WCTC)

#### **4.1.6 Description of premises**

Masizakhe Energy Information Centre was established at WCTC after substantial remodelling of the interior, undertaken by the LWTC for no payment.

The centre consists of a large demonstration room, with two smaller adjoining rooms, and a separate hall which is used for lectures given to large groups. One of the small rooms is used as an office and the other as a lecture/video room. The demonstration room is equipped with a range of appliances and fuels, which are used as demonstration devices during lectures.

The walls of the centre are decorated with bright posters describing energy sources, safety factors and hints, and pictures of different fuels. Photographs of competitions held at the centre are also on display. Some of these are illustrated in the photographs below. It should be noted that the layout of the materials on display in the centre conforms with notions of an energy ladder, in which wood is at the base and electricity at the pinnacle. The efficacy of the material on display in the centre is addressed later in the report.



Figure 4.4 Masizakhe as seen from the main access road to WCTC

## 4.2 Activities

### 4.2.1 Activities located at the centre

These include competitions, and a demonstration function which comprises a 45 minute discussion. This includes a 20 minute video, a 10 minute lecture, and then a demonstration period, during which questions may be asked.

There is also an advice service, although this appears to be considerably underutilised (see below).

#### Competitions

Competitions are seen by the project team to be an effective way of advertising the centre and attracting visitors. Seven competitions based on questions around energy in which prizes of appliances could be won have been conducted since the centre opened. Photographs of earlier competitions are attractively displayed on the walls as visitors enter the centre, providing a focal point for discussion immediately upon entering (see Figure 4.6).

Initially prizes for the competitions were donated by Defy and Bonnita, but concern was expressed by representatives of DMEA that the repeated use of particular organisations in providing prizes would be seen as favouritism. As a result, later prizes were purchased with funds allocated within the budget. R300 was allocated monthly for the purchase of a hot plate, a gas cooker and a double plate paraffin stove as prizes.



**Figure 4.5** The entrance to Masizakhe

Attracting customers to the competitions has been difficult. In the past, competitions were advertised at shops and pedestrian areas, and posters and leaflets were distributed. However, few people attended ceremonies. For example, in January 1992, 1200 entries for the competition were received but only 20 people arrived for the draw and prize-giving (Webber, *pers. comm.*).

At the time of evaluation, the competitions were advertised only to tenants and trainees at the WCTC.

The competition scheduled for the assessment period was cancelled as the co-ordinator could not be present owing to political unrest in Khayelitsha.

### **Videos**

Videos which are shown as part of the demonstrations have a heavy emphasis on safety and dangers associated with various fuels. As is described below, this appears to be the most salient aspect of the demonstrations, at least to children.

Attitudes towards the videos by members of staff at Masizakhe are mixed; there is a feeling that the videos are appreciated, but that some of them are inappropriate for the audience at which they are aimed. The most popular of the videos is one which has been locally produced, and is narrated in Xhosa.

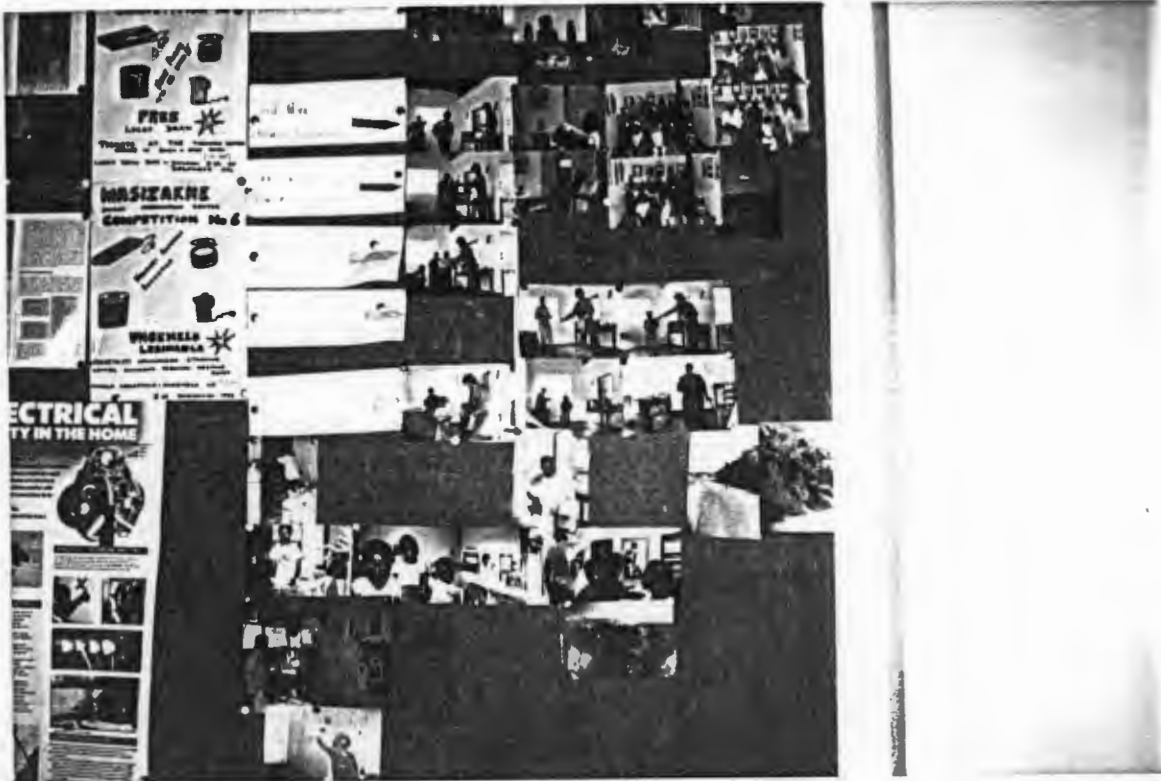


Figure 4.6 The entrance wall at Masizakhe, showing photographs of the competitions

Five videos are shown at Masizakhe. These are:

- 'One careless moment' - a video produced and disseminated by BP and the Child Accident Prevention Foundation of South Africa;
- Masizakhe promotional video;
- 'Electricity gives you the power', produced by Conlog; and
- 'Maak die lewe 'n bietjie makliker'; and
- 'Wenza ubomi bakho bubelula'.

The latter two videos are both produced by Eskom.

### Lectures

Lectures are considered to be effective, in that they involve the use of a range of different media (speech, videos, and, if the lecture occurs in Masizakhe itself, demonstrations). This has the effect of reinforcing information given. The lectures are standard in information, but are appropriately pitched.

### Demonstration materials

A range of appliances and fuels are on display in the centre, for use during demonstrations. These were purchased with funds from DMEA. Many of the appliances are electrical, reflecting both the wider array of electrical appliances available to the consumer, and possibly also a bias in the information service of the energy centre. A complete list of appliances on display in Masizakhe is presented in Appendix B of this report.



Figure 4.7 Electrical appliances on display in Masizakhe

### Visual Materials

Posters describing the energy sources displayed, their health and safety aspects, and giving hints as to how best to maximise their use, are effective. They are bright and eye-catching. Some however, are heavily reliant on the literacy of visitors to get their message across. This means that a number of people who may visit the centre, especially women and residents in informal settlements (both categories of which are severely educationally disadvantaged), will be unable to read the posters and assimilate the information given on them.

### 4.2.2 Extension work

Extension activities undertaken by Masizakhe energy centre include visiting schools, distributing pamphlets, and advertising the centre through the media. While the outreach programme is commendable, it seems that there needs to be considerably more attention focused on precisely who the target populations are intended to be.

### Schools

Children are the main target through which information is disseminated, and school children accounted for the bulk of visits to and from the centre (87%) during the assessment period. At the time of assessment the children seen were mainly in standard five, although Mr Majebe does lecture to older children also.

A range of questions as to the appropriateness of this target population can be raised, particularly in view of the fact that many of the visits recorded for 1993 were with children



**Figure 4.8** Paraffin, candle and LPG displays at Masizakhe

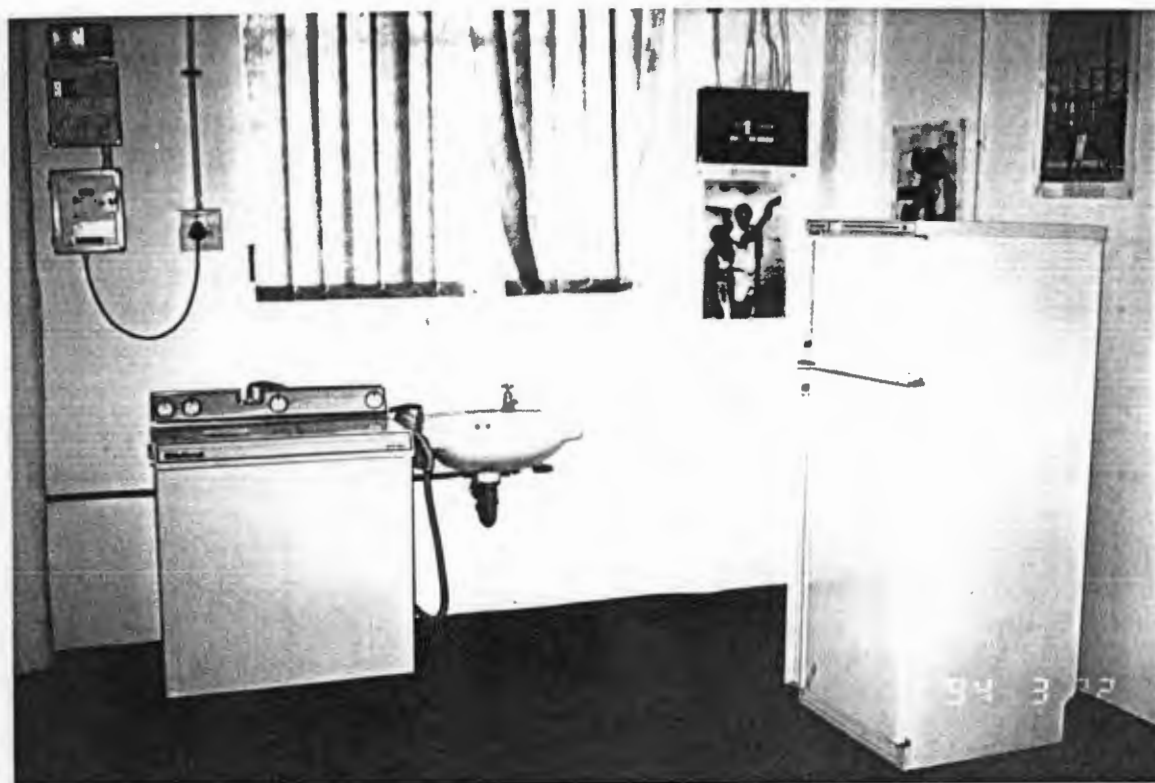
from primary schools. For example, demonstrations given in July 1993 indicate that seven primary school classes attended demonstrations given by Masizakhe.

The outreach programme in 1994 targeted children in Standard Five at various schools. This is likely to be a more appropriate target category, as children in this age bracket (approximately 12 years old) more likely to recall details, and to discuss them with household members. In addition, it is these children who are likely to perform energy-related activities.<sup>8</sup>

There are a range of problems in gaining access to schools. This is evidenced by the fact that during the assessment period seven schools were scheduled to be contacted by Masizakhe, but only three were reached. The reasons for failure to give demonstrations to the remaining four were:

- Problems experienced with obtaining transport;
- Overlapping school functions,
- The meeting of the environmental task group (see below).
- Unexplained

<sup>8</sup> A circular distributed by Eskom during the fieldwork period requested adults not to send children to purchase electricity. This indicates that in fact children are frequently active in energy-related activities. (See also, Ross, 1993)



**Figure 4.9** Large electrical appliances, pre-payment meter and household distribution board at Masizakhe

These difficulties point to a range of influencing factors.

- The violence which has been endemic in South Africa, and which is manifest in Khayelitsha, including at schools, cannot be discounted as a factor which exerts a negative impact in the running of any energy programme, particularly one which is as heavily reliant on extension work as Masizakhe.
- The technologies required to transmit information to school children - television and video - require private transport, as they cannot be carried the long distances to schools, and it is considered unsafe to transport them in public transport.
- There is limited co-ordination between schools and the centre prior to extension activities being carried out. There is thus a need for a more comprehensive and planned extension programme than that which is presently being carried out.
- More staff are required at Masizakhe during the day so that the centre does not have to be closed when alternative meetings are attended.
- This in turn points to the need for carefully devised job-descriptions, and an accurate process of goal-setting and achievement analysis (see section 4.1.3).

#### **Pamphlets**

Updated pamphlets and flyers designed by Mr Webber and describing Masizakhe are being printed and will be circulated to informal businesses, particularly those which sell fuels.

To date there is no record of an increase in visitors as a result of previous information dissemination practices, which included placing posters and flyers in shops. Copies of the pamphlet and flyer appear in the report as Appendix F.

### **Radio**

Three open-air discussions on Radio Xhosa have been undertaken since the inception of Masizakhe. The staff considered discussions to be interesting and useful, and future radio interaction is presently being considered.

### **Print media**

The Cape Times and Argus papers previously ran an article on Masizakhe, but the reporter approached by the centre felt that there was nothing to warrant another story at present. This points to a need for activities which could be used to promote the centre in the print media.

The Defy in-house magazine published an article on Masizakhe after a Defy prize had been won in a competition.

The Khayelitsha newsletter, which had carried an article about Masizakhe is no longer in print.

## **4.3 Assessment data**

### **4.3.1 People who use Masizakhe**

There are three categories of people who appear to use the energy information centre. These are:

- School children and teachers;
- Trainees at WCTC; and
- Casual callers.

#### **School children and teachers**

Given the heavy reliance of the centre on extension work (see Table 4.2 below), the majority of people who benefit from the centre are school children. During the three week data collection period they accounted for 66% of questionnaires completed, and 122 of 141 recorded contacts (87%). Contact was made with only three classes of the seven scheduled during the assessment period (as discussed earlier), of which two were conducted through extension work and one was a class which attended the centre.

The children responded positively to the experience, stating that they had learned about the danger and safety aspects of fuel. Several commented that they would tell other people about what they had learned, indicating that educating children may be an effective means of accessing a larger community population. Children's responses are analysed in greater detail below. The commentary of teachers is also important in this regard, and most seemed to agree that the health and safety advice given in the lectures was the most important contribution.

There is a general sentiment from teachers that the material which is provided at demonstrations is useful and appropriate. Their emphasis lies particularly on the value of teaching children first-aid remedies for burns and other fuel-related injuries. Thus one

teacher commented "What was interesting that they [the children] learnt ... is to know that when you get burnt you must use running water" (Teacher, Emithini school, Jan. 1994). Another commented on the fact that children would now be in a position to remedy their parents' "carelessness and indifference", and "ignorance" in causing fuel-related accidents (Science teacher, Ijongo school, 21/1/94).

### **Trainees at WCTC**

Although there is an agreement between Masizakhe and the administrators of WCTC that all trainees at WCTC will attend a demonstration at Masizakhe, this does not appear to happen regularly, save for through the Self Employment Institute. Thus during the research period only 12 trainees attended the centre (accounting for approximately nine percent of the contacts made by Masizakhe during the research period), despite the fact that there was a new influx of trainees to WCTC during research.

Their response to the centre was favourable. Many respondents commented on the dangers which are prevalent in allowing children to perform fuel-related tasks, or to play near energy sources. Comments included:

"I learnt that it's dangerous to leave children next to the fire or a burning stove with boiling water" (Mr Sizani).

"I have learned that we must not leave the children [near] open flames and we must keep the poisons out of reach of children" (Ms Ntsabo).

"I had an opportunity to learn about child protection" (Ms Nolitha).

"I shall tell all those who had children to keep dangerous things away from children" (Ms Tontsi).

The value to adults attending the centre, then, appears to lie in what they are able to learn about child protection. Given the high rate of fuel-related injuries in South Africa, this aspect of Masizakhe's functioning is extremely important.

All of the respondents in this section stated that they would tell other people about the centre. The people whom they would tell ranged from immediate kin to friends and people in the streets. Word-of-mouth seems to be a useful means of advertising the centre, and also of information dissemination.

### **Casual callers**

Seven people voluntarily visited the centre during the research period. This accounts for approximately five percent of the contacts made by Masizakhe in the research period. Two people came in order to ask about appliance purchase, while the other five had questions related to their electricity supply.

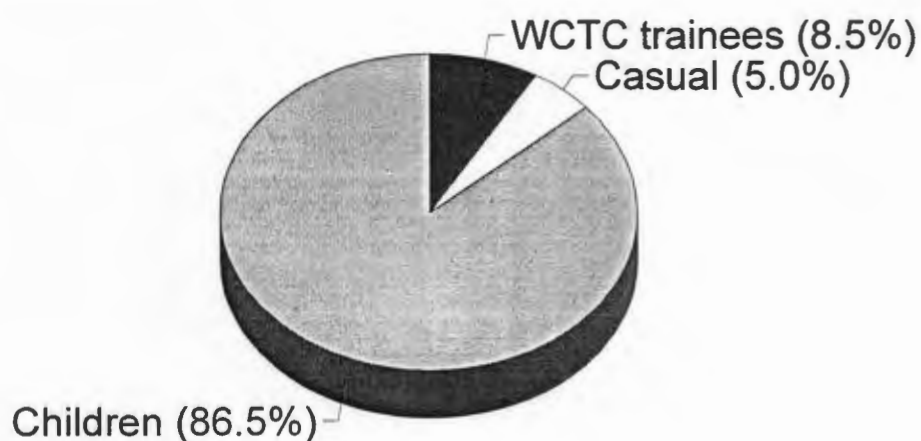
Part of the reason for limited unscheduled visitors lies in the staffing constraints which forces Masizakhe to close when the lecturer is away.

Another important reason for the limited casual visiting lies in the inaccessibility of the centre, and in the difficulty of attracting advertising and exposure.

**Table 4.2** Contact with Masizakhe during the assessment period

Institution	Number	% Total Contacts	Type of Contact
School	39	28	Extension
School	40	28	Extension
School	43	30	Attend centre
WCTC	12	8	Attend centre
Causal	7	5	Attend centre
Total	151	99 <sup>9</sup>	

Figure 4.10 indicates the proportion of people who visit Masizakhe by category.

**Figure 4.10** Proportion of contact with Masizakhe by visiting category

#### 4.3.2 People who do not use Masizakhe

Of the 30 people who completed questionnaires (see section 2.1 of this report), 28 (93%) had never heard of Masizakhe, despite the fact that 70% of respondents were located at WCTC at the time of interviewing. Two people (6%) had heard of the centre, but only one (3%) had visited it.

<sup>9</sup> Does not add up to 100% because of rounding errors

### **Training organisations**

Despite the agreement between Masizakhe and WCTC that all trainees at WCTC will visit Masizakhe, only one training institution - the Self Employment Institute - appears to send its trainees regularly to the energy information centre.

This was verified through informal discussion and by administering questionnaires to a group of 11 people (10 women and one man) attending courses run by the Baptist Training Institute in the building opposite Masizakhe's entrance, none of whom had visited the centre. Thus although they had seen the energy information centre and its staff, they did not know anything about its function, role and objectives.

Many of them stated that the reason they did not know about the centre was because they were illiterate; a fact which points to the need for verbal and pictorial advertising of the centre through as many diverse media as possible.

### **Casual visitors to WCTC**

Some of these visitors were hawkers, and were therefore present at the centre every day. None of them knew of Masizakhe or its objectives.

### **Commuters**

Of the commuters interviewed, only one person had heard of Masizakhe, as she had attended a course at WCTC some time previously and had been taken to the centre.

The comments that emerged from general discussion among commuters with regard to energy indicate a strong community sense of the need for information and education relating to health and safety. One man was quoted as saying that advice should be provided "about how to reduce paraffin accidents, and educating women about paraffin safety".

### **4.3.3 Findings**

This section of the report analyses the responses recorded from both those who used the centre and those who did not. The main energy sources used by all the respondents are presented, giving an idea of the energy service needs of both people who have attended the centre and those whom the centre does not yet reach. The reactions of those who were reached by the centre to the facilities it offers are also examined.

### **Energy sources**

Table 4.3 illustrates the breakdown of fuels and the uses to which they are put in all 124 households represented in the questionnaires. It should be noted that reliance on paraffin is high; 67% of households relied on paraffin, of which 33% used paraffin and another fuel in conjunction. Thirty-four percent of respondents had access to electricity. Figure 4.11 illustrates these data.

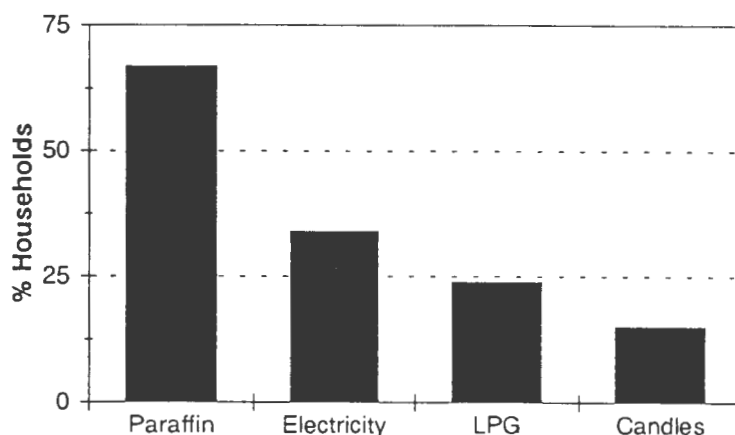


Figure 4.11 Percentage of households reliant on each fuel type

Table 4.3 Energy sources and end-uses

Fuel	% Respondents			
	End-use			
	Cook	Light	H/Water	H/Space
Paraffin	59	39	51	74
LPG	26	12	22	7
Electricity	22	34	27	15
Wood	1	0	4	1
Not Clear	0	8	1	1
Candles	-	15	-	-

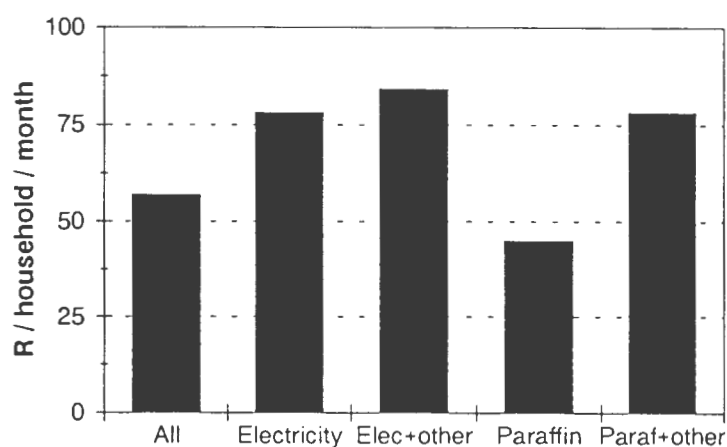
Table 4.3 indicates a heavy reliance on paraffin for most household tasks, followed in importance by electricity and then LPG. Interestingly, 25% of households were recorded as using more than one fuel for a single end-use. Of those households with access to electricity, 25% used it in conjunction with other fuels, which were used particularly for cooking or space heating. Eight percent of electrified households used other fuels for lighting.

The reliance on paraffin in particular, and the complexities of multiple fuel-use indicate that simple, single fuel, consumer education is not sufficient to the needs of this sample.

Expenditures on energy calculated for the 30 people who had not visited Masizakhe reveal an interesting trend in the effect of electricity on household energy budgets. While the sample is very small, the trend is important to note as it indicates that consumer education relating to the most effective and efficient ways to use mixed fuels may be necessary.

Figure 4.12 shows the average energy costs of fuel combinations used (refer to appendix D for the tables which related to this data).

Of particular importance in relation to electricity use in the sample is that those households reliant to some extent on electricity received substantially higher per capita incomes than those reliant mainly on paraffin. In the former case, per capita income was R 515, while in the latter it was R 217. This indicates a large difference in the income which can be allocated to domestic energy budgets.



**Figure 4.12** Average cost per household according to fuels used

Figure 4.12 also illustrates the differences in energy expenditure between households reliant on a range of different fuels. The average energy expenditure for the sample as a whole was R57/month. In households which were reliant on electricity alone the expenditure on energy rises to R78/month, with the highest costs being experienced by those households using a combination of electricity and other fuels. This points to a need for energy information to cover a spectrum of fuels, and validates the decision to fund an *energy* rather than an electricity centre.

### Responses to Masizakhe by those whom it reaches

#### Childrens' responses to Masizakhe

Children who were contacted by Masizakhe responded positively to the experience, particularly to the video material. Their responses are tabulated in Table 4.4.

**Table 4.4** Childrens' response to the material

Type of material	% Respondents
Videos	64
Talks	2
All	16
Unanswered	18

It is clear that the videos shown during demonstrations are popular. A significant proportion of children (64%) responded particularly well to the video material, and of those 34 pupils (41%) who gave reasons for their enjoyment, 37% found the material interesting, while a further 29% enjoyed the pictures, videos and stories. The majority of children stated that they had learned primarily about safety and danger. Table 4.5 reveals their perceptions of health and danger.

**Table 4.5** What children learned

What learned	No. Respondents	% Respondents
Safety	40	52
Danger	22	29
Neutral data	14	18
More than one	8	11
Nothing	5	7
Total	89	117 <sup>10</sup>

Children's responses to the questions "Will you tell anyone about what you have learned today, and if so, who?" elicited the data tabulated below (Note that the percentage figures exceed 100% because some children stated that they would tell more than one category of person):

<sup>10</sup> Does not add up to 100% because some children responded in more than one way

**Table 4.6** Children's responses to information dissemination

Who would tell	No. Respondents	% Respondents
Family	21	30
Friends	20	28
Parents	24	34
Someone	6	8
Other	4	6

It is clear that the emphasis on danger has paramount importance for those children who said that they would tell someone about what they had learned (93% of child respondents), and who had completed data relating to what they would tell. These data are tabulated below.

**Table 4.7** What children would tell about what they had learned

What they would tell	No. Respondents	% Respondents
Safety	1	6
Danger	11	69
Help	3	19
Neutral Response	3	19
Total	18	113 <sup>11</sup>

### Adult responses to Masizakhe

The data below explore the responses of 12 adults attending training at the Self Employment Institute, who visited Masizakhe in accordance with the agreement between Masizakhe and WCTC.

Again, it seems that videos are the most popular way of disseminating information. 50% of respondents stated that the most interesting material was that shown on the video. Part of the reason given for this is that people are able to relate the visual material to their own experiences of fuel-use, particularly where material has a local flavour.

Among the adult population there was more emphasis on both health and safety, in conjunction with one another. Adults' responses differ considerably from those of children, who tend to focus on either health or safety.

<sup>11</sup> Does not add up to 100% because some children responded in more than one way

The majority of adults who mentioned the dangers of fuel spoke of paraffin poisoning and of fires.

Of the 11 respondents who stated that they would tell someone of the centre, 50% would tell kin, and 50% would tell neighbours and community members. This indicates that if people actually do tell others of the centre, word-of-mouth could be an effective means of information dissemination. Masizakhe does not presently assess the extent to which such dissemination occurs.

#### **4.4 Energy service needs**

Interviews conducted with a range of interested parties (see section 3.2 of this report) pointed to a need for an interface between energy utilities and consumers. In some instances the interfaces are provided by health centres (such as the Child Accident Prevention Foundation), but for the most part there appears to be a significant gap between the utilities and the end-users whom they serve.

A range of end-user energy service needs were indicated during the interviews described in section 3.2. Most notable among these was the need for information relating to health and safety aspects of energy sources, energy efficiency, appliances and their uses.

In addition, some respondents called attention to the lack of information dissemination at a more general level, particularly in the absence of formally constituted energy information dissemination services.

Other areas which were pinpointed as potentially important in the evaluation lay in career counselling (civic members), and training (Shell), and in environmental concerns (Williams, Thorne, Thamage, KEAG, Tsoga Environmental Resource Centre).

Areas of importance previously indicated were in appliance and fuel sales (see Webber and Whitecross, 1990).

Each of these is explored in brief below, with commentary relating to the extent to which Masizakhe fills each of these energy service functions.

##### **4.4.1 Health and safety**

The safety and health aspect of Masizakhe's function has grown considerably in importance between when Masizakhe was first established and the present, especially as it has become increasingly apparent that even with the enhanced electrification drive implemented by ESKOM, large numbers of people will continue to be reliant on energy sources other than electricity for some considerable time to come.

This echoes sentiments expressed by a range of people and institutions, including both energy- and health-related organisations. It also echoes commentary given by some of the teachers who completed Masizakhe's evaluation forms, many of which commented on the educational value of health and preventative information. As one teacher stated:

"They [the children] said that the part which is so important and they didn't know it [is] that when you [get] burnt you must use running water from the tap, not things like Vaseline, margarine, ointment and other things" (N. Mbeki, 26/1/94).

Lectures and videos given by Masizakhe emphasise the safety factor involved in fuel use. All the adults who attended the centre (n = 12), and many of those children who filled in evaluation forms for the assessment (n = 82) commented on the value of information they had received relating to safety aspects of energy-use. Thus, Masizakhe does address some of the need for information relating to safety.

The question of health does not receive as much attention, particularly where health is related to indoor and outdoor pollution levels.

It should be noted that at the time of the assessment, Masizakhe had no contact with any of the health centres in Khayelitsha.

#### **4.4.2 General energy information**

Masizakhe does provide some energy information other than that based on health and safety, but for the most part the centre concentrates on the latter aspects, and on providing information relating to appliances.

General energy information (such as how energy is derived from various sources, the processes through which it reaches the end-user, the legal aspects of energy price control, and so on) are important issues and mechanisms for communities (and particularly their leaders) in their attempts to ensure safe and cheap energy sources.

#### **4.4.3 Career counselling sector**

Masizakhe does not offer information relating to careers in the energy field. In the event that it were to do so, this aspect of its role is not anticipated to be large.

It may be appropriate for the centre to act as a facilitator in providing information as to where further information can be sought, or in arranging discussions and lectures from visiting experts and recruitment agencies.

#### **4.4.4 Training**

Several organisations have commented on the need to train people involved in fuel sales in health and safety.

Masizakhe does not at present perform any such function.

#### **4.4.5 Appliance sales**

In the original pilot plans for Masizakhe it was suggested that appliance manufacturers be approached to display and sell their appliances from Masizakhe. Lion Manufacturers expressed interest in this idea. However, the plan was not implemented because it was felt

that the centre could not afford to be seen as partisan in promoting appliances (Webber, *pers. comm.*).<sup>12</sup>

No appliances are sold from the centre.

#### 4.4.6 Fuel sales

Masizakhe does not sell fuels. The questions of security, insurance and safety would need to be addressed before fuel could be sold.

It should be noted that the centre acts largely as an information outlet - when it is open. There is thus little immediate incentive to the managers of household budgets, mostly women, to attend the centre.

#### 4.4.7 Energy efficiency

Although this was a specific objective of the project, Masizakhe does not presently address questions of energy efficiency as these relates to appliances.

#### 4.4.8 Environmental Concerns

Mr Majebe sits on the committee of KEAG.

When the committee met during the evaluation process however, there was no discussion within the committee relating to energy and the environment.

### 4.5 Summary

For the most part, Masizakhe appears to rely on extension work to disseminate energy information to the public. The audience which thus has greatest access to Masizakhe comprises teachers and pupils.

To a substantially lesser extent, trainees at the WCTC have access to Masizakhe.

There is very little casual visiting of the centre.

These observations are largely a consequence of the location of the centre and the inherent difficulties caused by poor communication media and a general lack of transport.

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<sup>12</sup> The main reasons for excluding the marketing function from the activities of the centre were the increased size of operation required and the higher levels of risk (and hence security and insurance). In the event of the centre fulfilling a marketing function, all companies would have been offered equal access and opportunities. (Kidgell: 1994)

## Chapter Five

### SUMMARY AND CONCLUSIONS

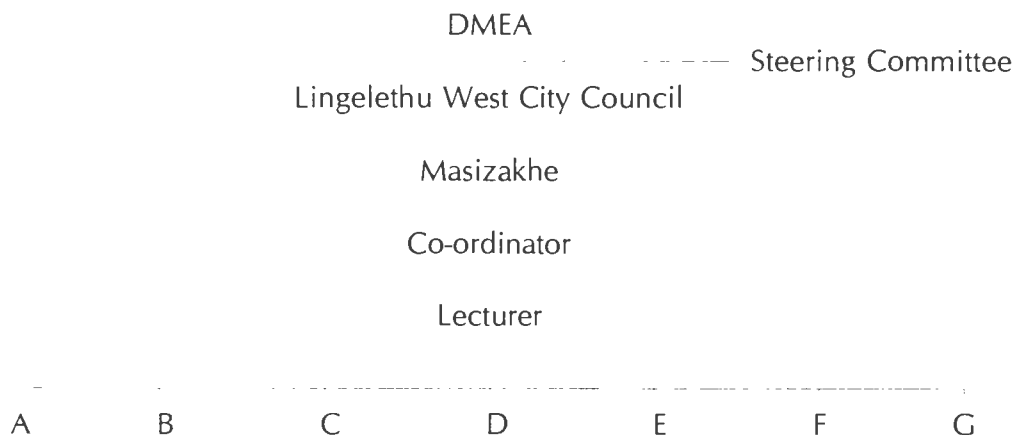
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#### 5.1 Positive attributes of Masizakhe Energy Information Centre

##### 5.1.1 Extension work

The outreach programme which is presently focused on children at schools in Khayelitsha is promising but it is too narrow in scope - covering schools, community NGO's and trainees - and excludes a wide variety of organisations and categories within Khayelitsha's community.

The range of the population presently reached by Masizakhe, and that which could be accessed within its present structure and constraints is summarised in Figure 5.1 below.



#### Key

- A: Education (schools, literacy programmes, etc.)
- B: Community NGO's (Child Accident Prevention Unit, etc.)
- C: Trainees (WCTC, etc.)
- D: Health (hospitals, clinics, primary health care, etc.)
- E: Trade unions, job creation organisations and employment agencies
- F: Civics
- G: Environmental NGO's (KEAG etc.)

Figure 5.1 Masizakhe's present and potential target audiences

### 5.1.2 Media

The use of Radio Xhosa as a medium through which to advertise Masizakhe is an effective advertising strategy.

Opportunities for coverage in the print media should be extended.

### 5.1.3 Pamphlet distribution

The distribution of pamphlets and flyers describing Masizakhe and what it offers is useful.

Targets for these resources need to be more clearly defined.

### 5.1.4 Environmental activities

The relationship between environmental degradation (particularly due to pollution) and energy sources is well-established.

Masizakhe is presently involved in some environmental activities.

## 5.2 Negative attributes of Masizakhe

### 5.2.1 Structure and staffing arrangements

These are clearly inadequate in their present form.

#### Structure

No concise project mandate which defines clear and specific goals of Masizakhe exists.

The present structure of Masizakhe is such that there are no institutional support mechanisms through which management decisions can be ratified.

This means that decisions cannot be assessed prior to implementation nor are they formally evaluated after implementation.

In addition, the division of the centre between Khayelitsha and the Cape Town CBD means that Masizakhe is unable to offer extension activities at the same time as an in-house demonstration and advisory service.

#### Staffing arrangements

There is limited institutional support for the centre.

The staffing arrangements of Masizakhe are such that staff skills are not being adequately utilised.

There are no formal employment contracts between staff and the employers.

There are no job descriptions, performance evaluations, nor grievance procedures in operation at Masizakhe. As a result, a high degree of insecurity exists among the permanent staff members.

### 5.2.2 Goal setting

The centre does not appear to have a specific set of objectives, nor any process of goal-setting to direct its activities.

Planning appears to be *ad hoc*. This is particularly true of its failure to define target groups.

### 5.2.3 Definition of Target Groups

It is not clear what constitutes Masizakhe's target group.

Webber (*pers. comm.*) commented that given the complexities and violence of Khayelitsha, target groups were being defined as any organisation which had a ready-made audience. This then would include churches, unions, hospitals, etc.

In fact interaction is mainly concerned with children.

Adult visitors to the centre come mainly from WCTC training institutions, but their attendance is not regular in all cases.

The centre is located close to an informal settlement. During the assessment period it became apparent that the centre does not cater in any formal manner to the energy service needs of the informal settlement dwellers.

Health care centres (such as clinics and day hospitals), union and other worker associations, adult literacy classes and other sources of adult education, and lower levels of community-based structures such as street committees are not included in the activities of Masizakhe.

Above all, the centre does not appear to cater to women. As it is women who are the primary users of domestic fuel (see Annecke, 1993; Ross, 1993; Williams, 1993), providing energy information to them should constitute the first goal of any energy policy, and of any institution which is established with the goal of information dissemination.

## 5.3 Summary

As can be seen from the analysis above, Masizakhe does perform some useful functions.

However, the range of its activities is not sufficiently great to ensure that the wider community is reached. In part this is related to violence in the area. Nevertheless, a significant part of the problems in accessing the wider community appear to derive from:

- The absence of a clear project mandate;
- The lack of specific, verifiable goals at the centre;
- A limited and inappropriate definition of the target groups at which energy information dissemination is aimed; and
- Problems with staffing arrangements.

## 5.4 Conclusions

It is clear that in its present form Masizakhe Energy Information Centre is not reaching a large proportion of the population of Khayelitsha. Physical access to the centre is awkward and the centre has not been effective in engaging with the community in an spontaneous manner.

It is also clear from discussions with a range of interested parties (including community members) that there is a tremendous need for the wide dissemination of energy information.

Information which needs to be disseminated does not only relate to health and safety, but also to questions of environment, appliance and fuel efficiency, and integrated energy-use.

Masizakhe does not disseminate a wide range of information. Most information available from lectures and demonstrations has to do with safety and health aspects of fuel.

In addition, the lack of goal-setting and performance evaluation procedures make it extremely difficult to determine the extent to which information is disseminated through secondary sources (e.g. the extent to which people who have visited the centre tell others of the centre cannot be assessed).

In the following chapter we present two scenarios. The first proposes guidelines in the event that Masizakhe continues operating as an independent energy information centre, while the second explores some guidelines for future energy information dissemination.

## Chapter Six

### RECOMMENDATIONS

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In this chapter two scenarios are presented. Firstly, guidelines for future energy information dissemination on a national basis are proposed and secondly, recommendations in the event that Masizakhe continues to operate as an independent energy information centre.

In both cases the overriding principles are that interventions should, firstly, reflect the needs of end-users and, secondly, be integrated within broad-based development programmes encompassing housing, water supply, sanitation, employment, literacy, etc. as a complementary resource.

#### **6.1 Guidelines for future energy information dissemination<sup>13</sup>**

##### **6.1.1 Structure**

Energy information dissemination should be undertaken on a national, centralised basis.

Policies decided at a national level can be implemented through local governmental structures through a system in which energy information dissemination processes are designed for specific areas.

Functions of specific programmes could include energy information dissemination, training and extension work.

A national steering committee should be established to decide on the scope and nature of energy information dissemination, and to decide upon a minimum level of services to be offered.

Participants should include energy supply industry personnel, national government representatives, local government agencies (such as the department of health, education, and energy), appliance manufacturers, and representatives from civic organisations.

The initiative should thus be broad-based and nationally co-ordinated.

Materials for dissemination should be prepared at a central point and disseminated through sectors represented upon the steering committee. In this way much of the present duplication of function and material can be limited, and a wider range of the population reached. A nationally co-ordinated programme which makes use of existent structures can also overcome some of the difficulties of local extension work (e.g. by making energy education part of the education curriculum for school children, or by disseminating energy information through hospitals and day-care centres).

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<sup>13</sup> A draft proposal for an Energy Safety and Support Services Initiative, prepared by Ilne-Mari Hofmeyr, is included as a discussion document in Appendix G.

Dual processes of information flow should be encouraged, so that information flows from end-users to policy makers and energy utilities, in addition to the other way around. In this way energy information dissemination can be made both flexible and appropriate to the communities in which it is located.

### **6.1.2 Funding**

Funding for energy information dissemination should be sought from participants in the steering committee.

Depending on the functions and services provided in each area (see Section 6.1.5), centres could apply for funds from the steering committee.

### **6.1.3 Staffing**

Regular working hours should be maintained at all centres. This means that the minimum staffing requirements for each centre would be two; one person to perform extension functions and other community initiatives, and another to run the centre.

Staff should have broad-based knowledge which extends beyond energy-related matters. Health, education and environmental issues should be included in their knowledge, and staff should be encouraged to make and maintain formal contacts with others in these sectors. This should be achieved through staff development.

### **6.1.4 Location**

Energy centres should be located in areas of high pedestrian traffic. The centres should be fixed, as this promotes effective use of demonstration material, and enables cohesion in administrative functions.

### **6.1.5 Services**

Services should be appropriate to the area in which centres and information dissemination are located.

Services are envisaged as ranging from those presently in operation at Masizakhe (i.e. demonstration and extension) to offering appliance safety checks, fuel and appliance marketing, information relating to efficient use of appliances and energy conservation, and providing training and advice in energy-related fields.

### **6.1.6 Goal setting**

Mechanisms for establishing energy information dissemination processes should be formalised and standardised.

Specific goals should be set, and regular assessments held to determine the extent to which these are being met.

Formal goal-setting and assessment processes, which are linked to performance evaluations should be implemented.

### **6.1.7 Target groups**

Part of the goal-setting exercise should clearly identify target groups.

These groups should represent categories of end-user who are seen to be in particular need of information in a given area (e.g. informal settlement dwellers in urban areas, women and older children as primary domestic energy-users, etc).

Categories defined in this way should be regularly updated in accordance with changes in the energy-use patterns of an area (as for example, will occur when an area is electrified).

## **6.2 Recommendations in the event that Masizakhe continues in its present form**

### **6.2.1 Structure**

The structures suggested above should be implemented to administer Masizakhe.

Clearer lines of responsibility between Masizakhe and the funding agencies should be formally established.

### **6.2.2 Funding**

It is recommended that other sources of funding be sought in addition to DMEA. See section 6.1.2.

### **6.2.3 Staffing**

While it is clear that there are a number of problems in staffing arrangements, no recommendations relating to staffing are made in this report as it is felt to be premature given the political climate.

It is critical that the question of women's interests, as principal end-users, are addressed through appropriate staffing policies.

### **6.2.4 Location**

Until such time as a steering committee is established and clear mandate, objectives and targets generated, it is felt that Masizakhe should remain in its present location.

In this case it is clear that closer links with community organisations through the centre should be made, so that the centre becomes integral to community development plans.

At a later stage it may become advisable to relocate the centre.

### **6.2.5 Mandate, aims and objectives**

A clear mandate, which states specific aims and objectives is required prior to further development of Masizakhe.

The mandate should set out clear guidelines for the activity of the centre.

### 6.2.6 Goal setting

A process of goal-setting, with specific objectives and time allocations should be implemented, along with formal means of appraisal in order to ensure that goals are met, or that alternatives can be implemented.

### 6.2.7 Target Groups

It is suggested here that a more specific programme of targeting an audience is required, with formal goal-setting and assessment procedures to be implemented (see figure 5.1).

Target groups should be identified and defined.

Formal processes for identification of 'at risk' populations (such as shack-dwellers) should be implemented. Future energy information dissemination should prioritise women as a matter of some urgency. A strategy for reaching women would be to combine the centre's activities with those through which women are likely to be involved, such as at clinics, creches, nutrition and primary health care programmes and fuel purchasing.

### 6.2.8 Extension Programme

The outreach programme/extension work was identified as being the single most important function of the centre as it presently operates.

In the event that Masizakhe continues as an independent energy information centre, it is recommended that this function be formalised, prioritised and extended in accordance with points 6.1.1, 6.1.2 and 6.1.3 above.

## Schools

### Information dissemination

A system of checks is required in order to establish the extent to which information given to children during the demonstrations is spread throughout the households.

Information which is made available to different age groups should appropriate to each age grouping.

### Co-ordination between Masizakhe and schools

Considerable improvement in co-ordination between the centre and the schools is required.

For this reason we have proposed that energy information be disseminated through schools using the education departments as a base for dissemination (see section 6.1.1).

### Overcoming difficulties in access to schools

Some of the difficulties in accessing schools may be overcome if:

- transport is made available to staff at Masizakhe, and
- the staffing situation at the centre is improved so that the centre does not have to close each time there is an extension project.

**Media**

Regular media interaction.

Investigate the possibility of establishing a regular slot on radio where listeners can ask questions on air.

The possibility of reaching the public through other radio stations, particularly Radio Metro, which has a wide coverage, and future community radio stations should also be explored.

**Print media**

Other media possibilities, such as television and newspapers, should be explored.

Inserts into local newspapers may be an effective means of reaching a wide, dispersed population.

However, due attention to questions of literacy and of access to newspapers is required.

**Pamphlets**

Defining the audience to receive pamphlets.

Verify that pamphlets distributed are reaching the defined audience.

**Literacy in pamphlets**

Investigate the possibility of generating pamphlets which are less heavily reliant on literacy for distribution in informal settlement areas.

**Environment**

It is suggested that environmental affairs becomes a specific portfolio and activities associated with it extended.

Contact should be made with other environmental organisations, such as Tsoga Environmental Resource Centre, Earthlife Africa, etc.

**6.3 Recommendations for follow-up to this report**

Certain immediate actions are recommended to follow-up the process, findings and recommendations of this report. These include:

- Feedback to the staff and management of Masizakhe and the local community
- Presentation of the essential findings and recommendations to national energy fora such as the National Electrification Forum
- Feedback to other fuel suppliers, appliance manufacturers and marketers
- Presentation to national and local health authorities

These follow-up activities are considered important in making the report and its findings accessible to key players. They could be implemented in the form of individual presentations or co-ordinated workshops.

It is therefore recommended that budgets and resources are allocated to enable this process to be implemented.

#### **6.4 Overall recommendations**

In essence, what is recommended here is that a centrally co-ordinated, flexible and formalised set of organisations be established with the aim of disseminating energy information through a range of already existent mechanisms.

A central steering committee would be responsible for fund-raising and fund-allocation, while regional energy centres would be custom-designed to fit the energy information requirements of their areas in collaboration with other institutions (such as schools and hospitals) which are not necessarily energy-oriented.

In the interim Masizakhe should continue to operate, but with the understanding that radical restructuring is required and will be undertaken in the immediate future.

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1991. 'Environmental determinants of acute respiratory symptoms and diarrhoea in young coloured children living in urban and peri-urban areas of South Africa'. South African Medical Journal, Vol 79, pp. 457-461.
- Webber, D. and C. Whitecross.  
1990. 'An investigation into the establishment of an energy or electricity information centre'. Report prepared for Khayelitsha Electricity Marketing Project.
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- Williams, A.  
1993. 'Energy supply options for low-income urban households'. Draft paper no. 11, Energy Policy Research and Training Project, Energy for Development Research Centre, University of Cape Town.
- Yach, D.  
1988. 'Urbanisation in South Africa; consequences for health'. South African Medical Journal, Vol 79, pp. 479-480.
- Forthcoming. 'Paraffin poisoning: Partnership, the key to prevention'. South African Medical Journal.

## Appendix A

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### Energy Institutions Consulted

Renewable Energy Demonstration Centre  
141 Crossmed Road  
Silverton  
Pretoria

Mr W. Cawood  
Solar Engineering Services  
Durban

Mr Nteta  
B.T.C.  
P. Bag 0082  
Gaborone  
Botswana

Centre for Agricultural Mechanisation and Rural Technology  
P.O. Box 764  
Arusha  
Tanzania.

Dr. R. Pachauri  
TATU  
India

Mr. Brew-Hammond  
Solar Energy Laboratories  
Dept. Mechanical Engineering  
University of Science and Technology  
Kumasi  
Ghana.

Mr. D. Hancock.  
Pvt Bag 7746  
Harare  
Zimbabwe

## Appendix B

Appliances on display at Masizakhe

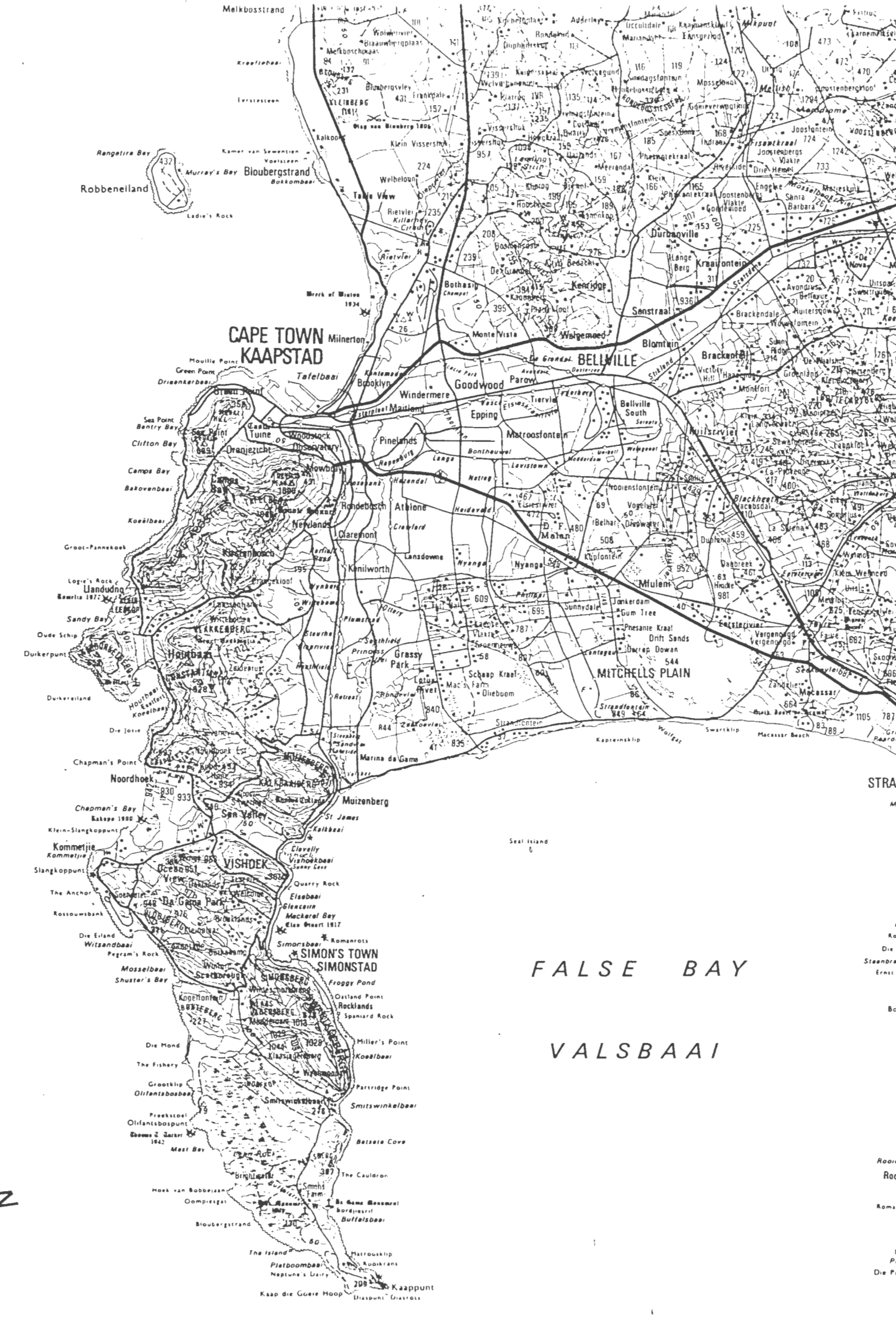
<b>Description</b>	<b>Owned</b>	<b>Loan</b>
1 Solar Panel		Solar Strike
1 National Washing Machine	DMEA	
1 Television	DMEA	
1 Video recorder	DMEA	
1 Kelvinator stove	DMEA	
1 Spot-On cooker stove	DMEA	
1 Defy stove		Defy
1 toaster	DMEA	
1 Auto jug kettle	DMEA	
1 Gas bottle	DMEA	
1 double paraffin cooker	DMEA	
1 single paraffin cooker	DMEA	
1 rediboard		
1 2-bar electric heater	DMEA	
1 remote TV/video	DMEA	
1 fridge	DMEA	

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## Appendix C

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- 1 Map showing the location of Khayelitsha in relation to Cape Town
- 2 Location of Masizakhe Energy Information Centre in relation to Khayelitsha



CAPE TOWN  
KAAPSTAD

BELLVILLE

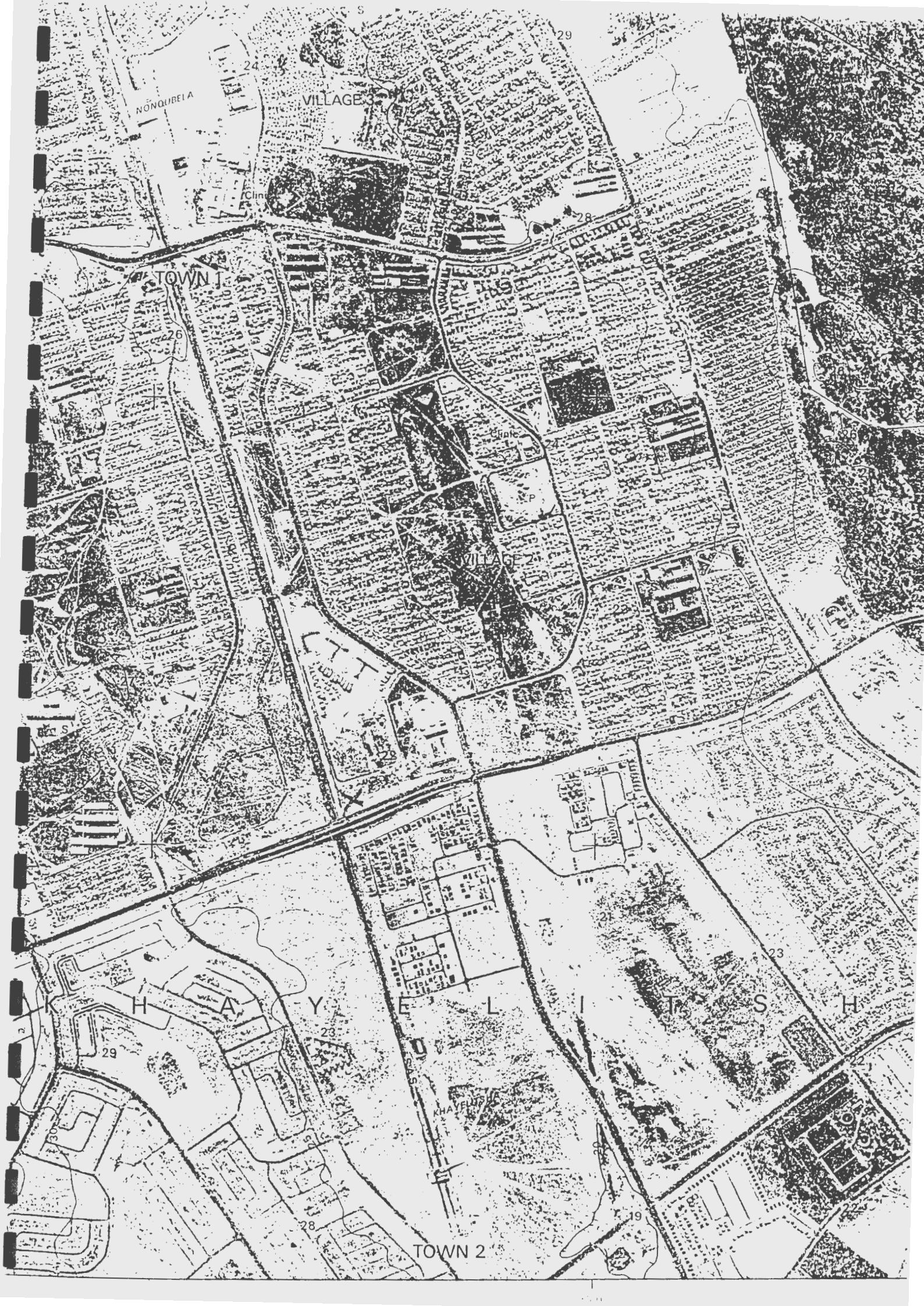
MITCHELLS PLAIN

SIMON'S TOWN  
SIMONSTAD

FALSE BAY

VALSBAAI

Kaap die Goere Hoop



NONQUEBEA

VILLAGE 3

TOWN 1

VILLAGE 2

VILLAGE 1

K H A Y E L T S H

TOWN 2



## Appendix D

Tables for data presented in report.

Table numbers correspond with figure numbers in the report.

Table 2.1\*vT Number of respondents in categories to which questionnaires were administered

	Number
A	9
B	21A
C	82
D	12
Total	124

Table 4.12 Proportion of contact with Masizakhe by visitcategory.

Category of visitor	% contacts during evaluation period
Children	87
Trainees from WCTC	9
Casual callers	5
Total	101

Adds up to more than 100% because of rounding errors.

Table 4.13 Percentage of households reliant on each fuel type

Fuel	Percentage
Paraffin	67
Electricity	34
Gas	24
Candles	15

Table 4.14 Average cost per household according to fuel used

Fuel/s used	No. Households	Av. cost R/hh/m
All fuels		3057
Electricity		678
Electricity and other		584
Paraffin		1545
Paraffin and other		678

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## Appendix E

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Questionnaires used in evaluation process.

Demographic profile of outsider to the centre and their household

Name: address / phone	Relationship to head of HH	Sex	Age	Level of education	Occupation	Employment	Household income source/s	Amounts
William Ngwenkuni	H/se hold Head	M	47	-	Public Works	Full Time	R 800,00	} R 1100,00
Colomi Street	-				P/Bosch			
Village 1 361-6273							R 300,00 (wife) ? No. of hrs. Char P/Inc	
Other (at home - list)	Relationship to head of HH	Sex	Age	Level of education	Occupation	Employment	Contribution to hh Income	Amount
4 -	} children						/	/
Victoria		F	17	Std 8	} Scholars	} N/A		
<del>Phantlaka</del>		m	10	Std 3				
Siseko		m	5	Sub A				
Thimba	m	14/20th	N/A					
Other (away - list)	Relationship to head of HH	Sex	Age	Level of education	Occupation	Employment	Contribution to hh Income	Amount

22

space  
↓

A

2

House electrified: 4 yes: House wiring a Ready-board.  
 Billing / prepayment.

Energy - use profile of visitor/outsider household

Fuels used	Cooking / Appliance	Lighting	Heating (water)	Heating (space)
Electricity	✓ (stove)	✓ (amps)	✓ gylser	X
Gas				
Paraffin				
Coal				
Fuelwood				
Other				
	Appliance used	Appliance used	Appliance used	Appliance used
Electricity	✓	✓	✓	X
LPG				
Paraffin				
Coal				
Fuelwood				
Other				
	Fuel cost / month	Transport costs	Appliance HP costs	
Electricity	R(50 - 70) depends	Walk or (send to child)	TV R120/mth for 2yrs.	
LPG				
Paraffin				
Coal				
Fuelwood				
Other				
Preference	Cooking	Lighting	Heating (water)	Heating (space)
1	Electricity	Electricity	Electricity	
2				
3				
Preference: Why? 'found the house e' electricity.				
Dislikes	Cooking	Lighting	Heating (water)	Heating (space)
None.				
1				
2				
3				
Dislikes: Why?				

Use of Masizahke

Have you heard about the Masizakhe energy <i>No</i>	Have you visited the centre <i>✓</i> <i>No</i>	If yes fill in below / If no, why not <i>'Never heard of anyone</i>
		<i>could be, I am illiterate</i>
		<i>'never been to school</i>
First visit (yes/no) If no, how often	Why (now)	<i>i.e. I cannot read.</i> Why (before)
Visits by other HH members Yes/no - if yes who?	How often	Why
How did you hear about the centre	How long ago	
How did you travel to the centre	How long did it take/travel time	How much did it cost
How long did you spend at the centre		
Visit to centre only reason for journey	If no, what other	
Usefulness of centre Services used	Helpful?	Improvements?

*tell ab  
it.*

SING (B)

Name INDRANIL SARDAR

Address 12/100/1000 THAMBANI VILLAGE KHAJOLISHA 773

Phone 3271007

What fuel do you use to (list fuel):

Cook STONE ELECTRICITY

Light ELECTRICITY

Heat - water ELECTRICITY CATTLE

Heat - room ELECTRICITY HEATER

Had you heard of the centre before today

What was part of the presentation (tick)

Display/pictures

Videos

Talks

Which was the most interesting and why

Display/pictures VIDEOS WAS INTERESTING

Videos

Talks

What did you learn

I LEARNE HOW TO PROTECT MY SELF

Will you tell anyone about the centre YES

If yes, who MY MOM AND DAD

17/03/94

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## Appendix F

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Copies of Masizakhe information flyer and pamphlet

## Common electrical faults

Most common electrical faults can easily be repaired at home, without the services of an electrician. This will save you time and money. Always remember that electricity is dangerous. You must always take the necessary safety precautions before you try to make any repairs.

*Never try to do electrical repairs unless you are very sure that you know how to do them safely.*



*Always remember to switch off the electricity supply before doing any repairs.*

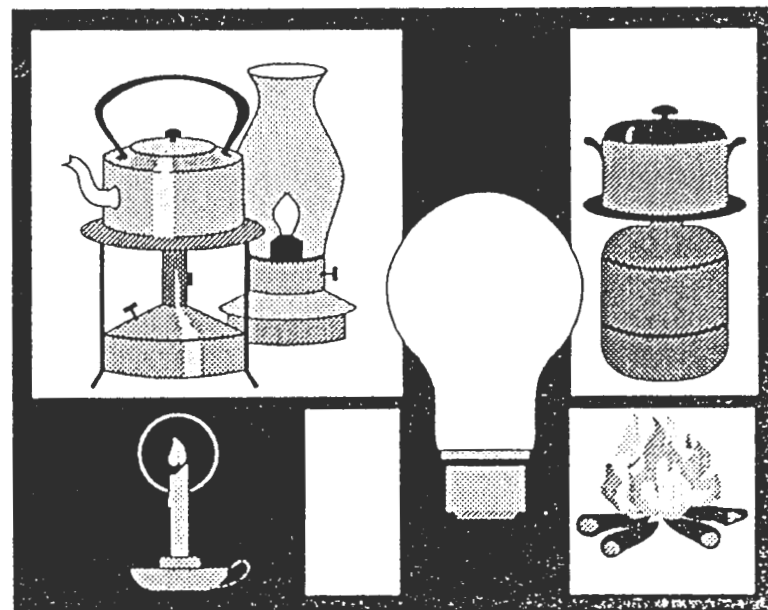
*If your appliance is not working, carry out the following checks:*

1. Is the appliance plugged in at the power point?
2. Has the power point been switched on?
3. Have any of the circuit breakers 'tripped' on the main board? If the appliance makes the circuit breaker trip again, then the appliance has a serious fault, and you should not use it until it has been repaired.
4. Have your units for your pre-payment meter been used up, and you now have got no power supply?
5. Is there a power failure?
6. Check the appliance's fuse to see that it has not 'blown'. This is normally a sign that the appliance has got a serious fault, and it should be repaired before you use it again.
7. Check the connections in the plug top, and make sure that they have not been damaged or worked themselves loose.
8. Check the lead to your appliance to make sure that it has not been damaged. If it has been damaged, replace it with a lead of the same current-carrying capacity.

*If you have tried all of the tests mentioned above, and your appliance still does not work, see your Energy Information Centre for more free advice.*

# MASIZAKHE

## ENERGY INFORMATION CENTRE



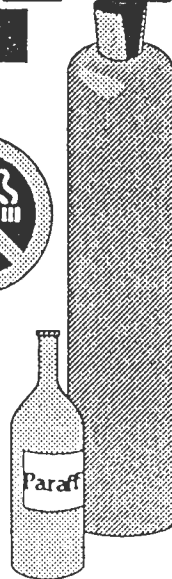
TRAINING CENTRE:  
Corner of Bonga & Spine Roads, Khayelitsha  
Telephone: 361 2322

HOURS:  
Tuesday - Friday: 9am - 3pm Saturday: 9am - 1pm

## GAS

### Safety

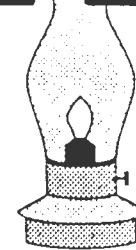
- Keep gas containers in a safe place, where children cannot reach them, and away from flames and heat. Do not put a gas cylinder on a stove plate.
- Do not smoke near gas bottles.
- Check seals and hoses on your gas containers regularly, and replace them when they start looking worn or damaged.
- Always check that all valves are closed after use.
- If you smell gas: put out any naked flames - like fires, candles and cigarettes, and do not light matches; open all the windows and move the gas bottle outside.
- Do not allow children to play with gas bottles, or even near them.
- Use soapy water to check for leaks on gas pipes. If there is a leak, bubbles will come from the place where there is a leak.



## PARAFFIN

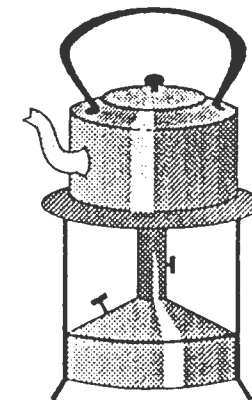
### Safety

- Keep paraffin containers out of the reach of children. Paraffin is very poisonous. If a child drinks paraffin by mistake, take the child to a doctor immediately.
- Put labels on all containers with paraffin. This will help to make sure that a child will not think it is a bottle of cooldrink.
- Paraffin appliances should also be kept where children cannot reach them.
- Paraffin fumes are bad for your health. So only use paraffin appliances in a room that is well-ventilated.
- Make sure that your paraffin appliances are well away from things that can easily catch fire — curtains, gas bottles, and so on.
- Keep your paraffin appliance in good working condition. A faulty appliance is dangerous and inefficient. A faulty appliance will leak or have flames appearing on the surface.
- Do not leave your paraffin appliance unattended while it is being used.
- Do not smoke near paraffin appliances or near paraffin storage containers — paraffin is very flammable.



### Efficiency

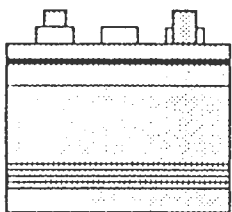
- Make sure that your paraffin appliances are in good working order and that they are cleaned regularly.
- Use the correct flame setting. The bigger the flame, the more paraffin you will use and the more money you will spend.



## CAR BATTERIES

### Safety

- Be careful not to touch the liquid in a battery. It contains a very strong corrosive acid which can damage clothes and skin. If acid gets on to your skin, wash the area thoroughly with water and go to a doctor immediately.
- When charging your battery, do not allow naked flames near - the fumes given off while charging are highly flammable.
- Always charge a battery in a place that is well ventilated.



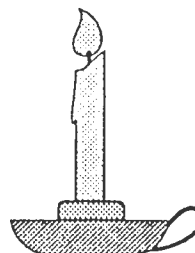
### Efficiency

- Keep the battery free of corrosion and topped up with distilled water.
- A battery will last longer if it is always being charged and discharged: Do not store a battery for a long time without using it.

## CANDLES

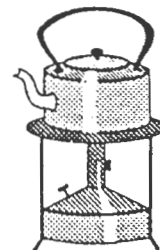
### Safety

- Do not burn candles close to things which could catch fire easily - such as bedding, curtains, newspapers. These flammable items may be set alight, and cause bad injuries or damage property.
- Do not leave a candle burning without someone nearby.
- The candle should always be put in a holder which will keep it secure.



# MASIZAKHE ENERGY INFORMATION CENTRE

Electrification in Khayelitsha is taking place at a rapid rate. But most households in the community will continue to use other fuels as well for some time – like wood, gas, paraffin and candles. All of these can be dangerous if they are not properly used – and so can electricity. Every year children are poisoned by paraffin; many people are made sick or get burnt, and many houses and shacks are burnt down in fires, because people do not use these fuels safely.



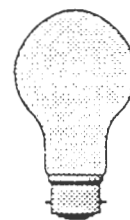
Energy is also very expensive – so it is important that people know how to use it efficiently and not waste it.



The aim of the Masizakhe Energy Information Centre is to inform and educate members of the community about the best ways to use all kinds of energy

## ● LECTURES:

Masizakhe Centre gives free lectures, and shows videos about how to use energy safely and efficiency. The lecture lasts about one hour. The Centre can hold thirty people at a time, for these lectures. But you can arrange with the Centre for a free lecture at other places in Khayelitsha – at schools or churches, for example.



## ● PAMPHLETS:

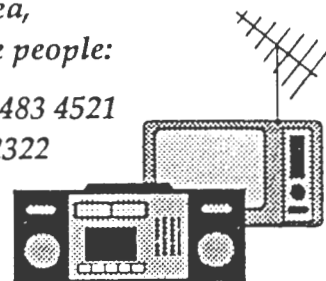
The Centre also has pamphlets you can ask for, which tell about the safe and efficient use of energy. If you need any pamphlets, please contact the project co-ordinator to arrange delivery.

## ● COMPETITIONS:

Competitions are held on a regular basis, with various appliances as prizes. Entry for the competitions is free.

*For more information, or if you want pamphlets,  
or if you want to have a lecture in your area,  
please come to the Centre or contact one of these people:*

*Dean Webber (Project Co-ordinator), Telephone 483 4521  
Vusumzi Majebe (Lecturer), Telephone 361 2322*



MASIZAKHE ENERGY INFORMATION CENTRE  
Corner of Bonga & Spine Roads, Khayelitsha  
Telephone: 361 2322



## HOURS:

Tuesday-Friday: 9am - 3pm Saturday: 9am - 1pm

Organisations that have received the Masizakhe information pamphlet:

1. Communicape Communication Services C.C.
2. Stellenbosch Resource Centre
3. Idasa
4. Health Care Trust
5. Education Resource and Information Project
6. Childrens Resource Centre
7. Child Care Information Centre
8. Cape Town Trade Union Library
9. Department of Education and Training
10. Enviromental Health Branch
11. Early Learning Resource Unit
12. Trees for Africa
13. SHAWCO
14. SANTA
15. SACLA Health Project
16. S.A. Red Cross Society
17. Good Hope College

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## Appendix G

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A draft proposal for an Energy Safety and Support Services initiative : Ilne-Mari Hofmeyr

## AN ENERGY SAFETY AND SUPPORT SERVICES INITIATIVE

There is a clear recognition that something needs to, and can be done to encourage the safe and efficient use of energy.

There are a number of ways to proceed:

- the development of educational materials and dissemination of information through health, education and energy supply sectors.
- as above with the addition of training *energy extension officers*
- as above with the establishments of *energy centres*

These approaches could be considered stages in a process.

There is currently no clear idea of what the community would perceive as the way to tackle the problems relating to fuel use safety and education. It is important that this initiative is driven by its intended beneficiaries.

In terms of energy centres for example: decisions as to how energy specific or more broadly resource/service related energy centres should be, whether to include training or commercial activities such as fuel supply, sale and repair of appliances etc., need to be made by the communities that will be served by the centre.

It is proposed that a *centralised core steering committee* is formed with representation from the energy, health and education sectors. The steering committee would secure funding for the research activities and have the mandate to ensure that policies and strategies developed are implemented.

The composition of the steering committee and the sources of finance for this initiative needs to reflect:

- the social responsibility of the energy supply sector and the fact that in spite of access to electricity, multiple fuel use is common and is likely to remain so
- the cost to the health sector of treating injuries caused by accidents related to the use of paraffin, gas, wood and coal, and the need to invest in promoting the safe use of these fuels
- the role of the education sector in an education initiative

The steering committee will fund the establishment of a *project team*, comprising of researchers from the health, education and energy sectors.

Initial tasks will include:

- investigation of intervention methods for energy safety, both through literature survey and with the communities, eg. educational materials, communication strategies; technology advancements, energy centres etc.
- investigation (and piloting) 'energy centres' in Khayelitsha

These would all require:

- proposal development
- undertaking research
- pilot implementation
- projects