Whose turn is it to cook tonight? Changing gender relations in a South African township[1]

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Abstract

This study is set in an urban area, in a township called Khayelitsha in South Africa, where poverty, violence and unemployment are endemic. Since the new democratic order came to power in 1994, there have been two changes in policy that impact on this study. The first is that gender equality has been legislated (with some machinery to enforce this), the second is that an accelerated electrification programme has been implemented so that 75% of the formal houses and shacks in Khayelitsha are electrified. This study uses cooking as the domestic chore that epitomises traditionally gendered domestic relationships to explore the hypothesis that when women have access to modern energy services their daily drudgery is reduced and they are able to improve their own lives. The findings include the resentment felt by some men that they can no longer use force to compel their partners to perform domestic duties to their own satisfaction, and that, backed by strong institutional support for gender equality, access to modern energy services (in this case electricity) can facilitate shifts in gender roles and responsibilities in the domestic sphere.

Keywords

Gender relations, energy, gender violence, domestic tasks, household electrification

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Executive Summary

Introduction and background

This gender and energy study is set in an urban area, in a township called Khayelitsha in South Africa, where poverty, violence and unemployment are endemic. Since the new democratic order came to power in South Africa in 1994, there have been efforts to deliver basic services to such areas, and an extensive electrification programme has seen 75% of the formal houses and shacks in Khayelitsha electrified. All new connections are made on a prepayment meter system. The other important change since 1994 has been the introduction of gender equality legislation with some machinery to enforce this.

This study uses cooking as the domestic chore that epitomises traditional gendered domestic relations to explore the hypothesis that when women have access to modern energy services, and can use these on a sustainable basis, they are freed from some of the daily drudgery associated with being a woman and are able to improve their own lives. The question is, if women's domestic burdens are to be relieved, would it be through access to modern energy services and appliances, which reduce the physical labour involved in meeting women's practical needs, or would it be through sharing the tasks with men - that is through shifting and sharing the gender division of labour in the household? Would changing gender roles necessarily be accompanied by a shift in power relations, thereby addressing what have come to be known as women's strategic needs? Or would this come through financial independence? The key research questions are framed as follows:

- Does improved access to energy contribute to women's empowerment?
- How can energy interventions most effectively contribute to the process of empowering women?

Urban studies are gaining in importance as significant migration from rural to urban areas in developing countries continues to put pressure on the ability of cities to meet the needs of the new and expanding populations. Khayelitsha has the edginess of a young and vibrant urban culture as well as being labelled the most dangerous township in South Africa with a high incidence of rape among other crimes. While women are not safe on the street or in their homes, there have been shifts in the attitudes and actions of some police. Being able to report domestic violence and having the police take the issue seriously has given some women the support they need to refuse to be 'a slave' to their male partner's demands. This has had repercussions among men who believe the new situation is responsible for 'cheeky women' and men losing the power and privileges that they had ten years ago.

Finding a methodology for integrating domestic violence into this gender and energy study has been complicated, especially since it sits uneasily in the framework of increased rights for women. The literature offers reasons for gendered violence such as hurt egos from job losses, the legacy of the brutality of apartheid and the confusion of identities in transition but, in reality, women are the ones with the bruises, and there is

yet to be a satisfactory analysis of the problem discussed in focus groups: why in times of hardship do men turn to violence while women turn to selling fruit and vegetables?

Analytical frameworks for the other components of the study covered gender analysis, including the gendered division of labour; access to and control over resources and benefits; and meeting practical, productive and strategic needs. An additional category of needs is identified and, it is argued, these have to be recognised and fulfilled in order to achieve gender equality. These are emotional needs, and the need for emotional security. The lack of which is most highly visible in gender-based violence and the consequences of which keep women in subordinate positions no matter how readily their other needs are met.

In terms of energy, the impact of national (macro-level) policies on gender equality and electrification are examined as they play themselves out in the politics of household relations.

The study

The study emanated from the findings of two previous urban electrification studies which indicated changes in gendered roles in low-income urban areas with electricity. The CRGGE study offered a welcome opportunity to explore these changes in greater depth. A team of young black researchers was trained in gender relations and energy studies as well as research techniques for collecting and analysing quantitative and qualitative data. A survey of 250 households in Khayelitsha provided numerical trends of household energy preferences, as well as trends in the gendered division of labour, decision-making, income generation, health and safety, and leisure for men and women. This information was supplemented by a short survey of gender relations in sixty high and low income households, and qualitative information gleaned from five in-depth focus groups in Khayelitsha which discussed gender relations and energy use.

Summary of findings

Gender survey

A survey about their perceptions of gender equality among a similar number of men and women, and high and low income earners, provided a basis for the investigation of gender relations and energy use at the low-income household level. The gender survey showed that the majority of both the men and the women in both the high and low income brackets thought that women enjoyed more rights now than they did ten years ago, and that the majority of low-income earners thought that women had gained these rights at men's expense. The majority of the high income group thought that men still earned more than women (for the same work) while the majority of those in the low income group were of the opinion that women got paid the same as men. In both groups women perform the majority of domestic tasks, however most men in both groups helped with domestic chores, and this has changed since 1994. The majority of respondents in both groups knew that gender equality was enshrined in the Constitution. While those in

the high income group thought this was a positive step, many of the respondents in the low-income group recognised that gender equality was legally enforceable but did not agree with the principle. There were a few who were in favour, a few who were ambivalent, but the majority were against gender equality.

Socioeconomic profile

In the survey of 250 electrified households, 72% of the respondents were women and 28% were men. In less than half of the households were people living as man and wife, households were small with on average 3.1 members. Some form of income was reported by 64% of the households, with a further 19% receiving a social grant. Overall, this reflects a better-off section of the Khayelitsha population, as is often the case with electrified households.

Access to energy and gender relations

Electricity was the energy of choice by both men and women for all purposes except space heating when paraffin (kerosene) was preferred because electricity is 'too expensive'. Liquid Petroleum Gas (LPG) is not an option in South Africa because of price, packaging and phobias. Only 14% of households used electricity for all applications: kerosene, batteries and some wood use were in evidence. An unexpectedly wide variety of appliances are owned, even by shack-dwellers. Women buy small appliances, men buy televisions and large appliances, but the decisions are usually joint ones, especially where children are concerned. There were eight more televisions than electric stoves in the sample households, and men admitted that they spend money on televisions and fridges rather than tools for income-generating purposes. However television is a way of keeping children inside and at home, and most women wanted them too.

Gender division of labour

Women manage electricity much as they managed wood: they supply the money, they walk to buy credits (for prepayment meters) and are they heaviest users of electricity for cooking and ironing since they still do most of the chores. However, in most households, men assist in some way or other (though seldom with child care) and there was evidence that men recognised the difference between using the most electricity and benefiting the most – many respondents said that everyone benefited. Having electricity meant better education, television, health and safety as well as increased leisure for men and women.

Income generation

A marginally higher percentage of women than men in the sample reported working, but many of these women earned less than a living wage in the informal sector. Several men said they didn't work because they would need expensive machinery to set up their own businesses and could not afford to buy it, or risked losing their money. The focus groups endorsed these findings and afforded men an opportunity to articulate their dissatisfaction

with current conditions. These included some men's unhappiness that they can no longer use force to compel their partners to perform domestic duties to their satisfaction. If men threaten to use the old ways of resolving differences (i.e. a beating), their wives 'run to the police' and the police are very unsympathetic to men who are abusers, locking them up 'for nothing'. Nevertheless, women are still being threatened and beaten.

Conclusions and recommendations

Make gender equality a priority and provide the resources necessary

The findings record the high potential for violence in certain men, and men's resentment of their loss of power. There is a difference between rights and privileges that is not yet well understood by the once privileged in South Africa, and this needs to be addressed in forums such as the group discussions which were held. These proved a useful platform for airing views and hearing different perspectives. Men insisted on having one meeting where there were no women present, and it was encouraging to see old and young men with progressive perspectives try and persuade 'traditionalists' that times have changed and that the realities of urban working conditions as well as democratic values such as gender equality have to be respected. It would be useful to give these men further training so that they could facilitate further discussions.
The men who were angry blamed the new situation and women's 'cheekiness' for their loss of position and privileges – and not electricity. Indeed many seemed relieved, almost proud, to be able to boil their own water for tea and cook with ease using electricity.

Keep paying attention to women

Women still do most of the chores and they are appreciative of how much easier these are with electricity. A small majority of women said they enjoy cooking or 'cooking is my hobby'. However they would like their efforts to be more appreciated, and some would like more help. Women still bear the brunt of the responsibility for chores, whereas men see helping as a favour which they can withdraw at will. Current urban and media images of masculinity do not present alternative models which might be attractive to low-income men and this requires attention. Traditional stereotypes still hold sway among women too, the majority of whom still lack confidence and competence when it comes to simple tasks such as changing plugs, and more effort should be made by utilities undertaking electrification to address this.

Health, safety and HIV/AIDS

There is significant anecdotal evidence, from the demand side, of the benefits to health and safety of modern electricity. Indicators should now be sought from units which keep account of shack fires, hospitals which deal with burns and poisoning, and school records of pass rates to quantify benefits. This study was unable to quantify evidence of the advantages of electricity for people living with HIV/AIDS, but everyone agreed that people who are HIV-positive need a warm, dry place to live in. They can easily get sick in conditions where there are no roofs and gaps in the walls large enough to see a person

walking by on the street. The draughts, particularly at night, can be fatal. Warm water is also necessary but there are no boilers. Refrigeration is also necessary, not just to keep food fresh and healthy, but to look after their medication as well. With chest problems or HIV, it is advisable not to stay in the house when kerosene is used for cooking – it amounts to suicide.

Gender equality is a process and, in answer to the question '*how can energy interventions most effectively contribute to the process of empowering women?'* what this case study shows is that, backed by serious institutional support for gender equality, access to modern energy services, in this case electricity, can facilitate shifts in gender roles and responsibilities in the domestic sphere. The reasons for this are two-fold: firstly women know they have legal backing to assert their rights, and men are pushed by the legal system to accept this. Secondly, that electricity makes it easier for men to perform domestic chores because they are not too burdensome or demeaning. However, it is clear that gender equality is not only a matter of meeting material needs and offering equal opportunities, it is also necessary to meet emotional needs in an accepting cultural environment.

1. Introduction

Gender equality is a Millennium Development Goal, but how is it to be achieved and what role does access to modern energy services have to play in this? To date, the social construction of gender relations has granted men greater power - structurally, systemically and at an individual level - than women. A key issue for this study is that men have used this power at the household level to avoid performing domestic tasks, leaving women responsible for most of the chores and childminding. However, women are not without power and, under various pressures, the social construction of gender relations is changing. Rocheleau (cited in Cecelski, 2004) argues that change is wrought by women '[redefining] their identities, and the meaning of gender, through expressions of human agency and collective action emphasising struggle, resistance, [and] cooperation….' The men in this study complained about women's 'cheekiness' and subversive tactics as both women and men grapple with change. The key challenge for this study is one of identification – what conditions facilitate women's individual and collective action towards gender equality at the household level, and is access to modern energy services among these?

This study uses cooking as the domestic chore that epitomises traditional gendered domestic relationships, and because it has been upheld in gender and energy literature as one of the most burdensome of women's tasks (Tinker, 1980; Mensah-Kutin, 1990; Mehretu and Mutambirwa, 1998; Calvo, 2002). The title 'Whose turn is it to cook tonight?' is used ironically because it is almost always women's turn to cook, optimistically for that time in the future when the answer might change, and symbolically to refer to all gendered domestic roles and relations, and in particular those tasks which require energy services for their completion.[2]

This research project examines the hypothesis that if women have access to modern energy services, and can use these on a sustainable basis, that they are freed from some of the daily drudgery associated with being a woman, and are able to improve their own lives. The question is, if women's domestic burdens are to be relieved, will it be through access to modern energy services and appliances which reduce the physical labour involved (meeting women's practical needs), or would it be through sharing the tasks with men[3] - that is through changing gendered roles in the household[4] or even through women's economic independence? Would changing gender roles necessarily be accompanied by a shift in power relations, thereby addressing what have come to be known as women's strategic needs? The key research questions are framed as follows:

- Does improved access to energy contribute to women's empowerment?
- How can energy interventions most effectively contribute to the process of empowering women?

[2] Energy is a necessary but not sufficient condition for everyday living. Insufficient fuel (energy poverty) and its consequences for women's work, stress levels and nutrition in the household has been explored (Clarke, 1977; Brouwer, 1998).

[3] Other women and children already share the tasks to varying degrees.

[4] Households in this study reflect numerous different relationships, but refer to those who generally share a built space (however precarious) for sleeping and eating.

2. Background

2.1. The poverty and gender context

South Africa is rated 111th of the Medium Development countries on the 2003 UNDP Human Development Index.[5] Compared with other countries in this project, South Africa falls behind the Philippines (85th) and Sri Lanka (99th) and ahead of India (127th), Kenya (146th) and Uganda (147th). There are some 45 million people in South Africa and, according to the UNDP (2003), about 45% of the population are poor. Poverty is closely tied to unemployment which can be as high as 28% -55% in different areas. Poverty is also linked to race, with almost all the poor being African. South Africa is ranked as the third most unequal society in the world, so that while 80% of the population are African, only a small percentage (about 13%) of African people earn sufficient to be included in the top income quintile (which is largely composed of whites and Indians).

2.1.1. The national energy context and policy change

Turning to energy supply, South Africa has an abundance of low-grade coal, some of which is used in townships for cooking and heating (with the concomitant health hazards), the rest being exported, or used to generate electricity or to manufacture synthetic fuels including kerosene (known locally as paraffin). Whereas prior to 1990 the focus of the sector had been on strategic fuels and self-sufficiency for industry, from 1994 on the sector has had to acknowledge the right of all citizens to equitable energy services.

The *apartheid* regime left a legacy of inequality and powerful monopoly utilities which had predominantly served whites. Since the early 1990s, these utilities have been used fairly successfully to deliver water and electricity to the poor. About four million households have been connected to the grid, bringing the national electrification coverage to over 70% of households. A policy is that the poor should receive Free Basic Services (60kl 6 kl of water and 50kWh of electricity per household) every month. This, however, is dependent on the local municipality's ability to deliver. Average electricity consumption by the poor in urban areas is 120-180 kWh per month (Annecke, 2005). This year, 2005, has seen growing numbers of protests and violent demonstrations against the slow pace of delivering housing and services, with most poor households still using biomass and paraffin for cooking, even when they are connected to the grid.

2.1.2. Gender equality

Since 1994, the promotion of women's empowerment and gender equality has seen South Africa rise to 7th in the world in terms of the proportion of women Members of Parliament. On the other hand, about 42% of economically active women are unemployed compared with 27% of men, and power dynamics in relationships favour men, and make women more vulnerable to HIV/AIDS (UNDP 2000).

[5] www.undp.org/hdr2003/pdf/hdr03_HDI.pdf accessed 4 August 2005.

Prior to 1994, South African society was highly militarised and patriarchal on both sides of the political divide. 'Heroes' wore uniforms, whether these were of the liberation army, Umkonto we Sizwe, or the South African Defence Force of the *apartheid* regime. From 1990, black women, who had suffered the triple oppression of race, class and gender, drove the national women's movement and drew all women into developing a Women's Charter. When the new Constitution of South Africa was passed in 1995, it enshrined gender equality, and a number of organisations and institutions were established to support the implementation of the gender equality clause. Known as the 'gender machinery', these include the Commission on Gender Equality, the Office on the Status of Women, gender desks in all government departments, and initiatives such as the Women's Budget (Budlender, 1997).

On International Women's Day, 11 March 2005, it was agreed that over the last ten years black women in particular have made significant progress.[6] There are women at the top of almost every profession, of several powerful companies and in key cabinet positions, including the posts of Minister and Deputy Minister of Minerals and Energy, which have been filled by African women since 1998. However these women are in the minority and progress remains uneven (Bentley and Brookes 2005). Legislation such as the Sexual Offences Bill has been before parliament for eight years and has still not been passed.[7] On the other hand, procedures for reporting gendered violence have been introduced and these, as will be seen in the discussion below, have made a difference to the lives of some of the more fortunate women in urban areas, who can now access physical amenities such as shelters, and lay claim to the justice system for protection from violence.

2.1.3. Rapid urbanisation

An understanding of the context would be incomplete without taking the urban environment into account. The rapid rate of urbanisation in developing countries (estimated at 50-60%) has changed population patterns and has had an impact on planning. Demographic projections suggest that, by 2020, 70-75% of the world's population will live in megacities. Most of these (about 60%) will live at or below the poverty level. Currently, sub-Saharan Africa hosts most (about 72%) of the urban population living in slums (UN-Habitat 2003). On the supply side, the urban migration poses considerable challenges to the delivery of sustainable water, sanitation and the energy services required for modern development.

South Africa fits this pattern, with sprawling townships found on the periphery of all major cities, and an estimated 65% of the population now urbanised. Over a million subsidised houses have been built in the past ten years, but the backlog in Cape Town alone is said to be 250,000 and increasing by 10,000 units a year (SEA, 2003). Each township has its own particular history and distinguishing features, but all share the

[6] Jessie Duarte - ANC representative on The After Eight Debate, a radio talk show, safm 8-9am; March 11, 2005

[7] Ms Duarte gave reasons: the Bill provoked an emotional response from MPs, civil society had not pushed hard enough, and that many people see family quarrels as private affairs rather than public matters to be administered by the state.

characteristics of inadequate facilities, high rates of poverty, unemployment and crime. Khayelitsha, where most of this study took place, is one such township. But townships are more than craters of poverty and pollution. They are fast-moving hubs of diversity, difference and modernity, melting pots of cultures and creativity[8]. Tradition and customs may be put aside either through necessity, opportunism or popular criticism. Almost everything - relationships, ethics, possessions and language - is 'up for grabs'. Access to information and the media play a significant role in determining urban aspirations and consumption patterns with, for example, cell phones playing a significant role in communications.

This is an urban study, and urban life demands modernity. Whereas for millions of poor women, particularly in rural areas, fuel collection, making and tending a fire, preparing the meal, cooking and cleaning up afterwards are all part of the cooking burden; in South Africa wood is seldom used for cooking meals in urban areas - one would not want one's neighbours to see the extent of one's poverty nor one's newness to urban life. The aspiration is for electricity although paraffin is more often the reality.

2.1.4. Gender-based violence

During the fieldwork, a dark side of household relationships was brought to light - gender-based violence, and specifically the threat and/or use of violence to force women to perform their domestic chores to the satisfaction of men. Gender violence is endemic in South Africa, it affects all strata of South African society, cutting through boundaries of class and racial classification. However, partly because townships are so densely populated, poorly resourced and provide cover for criminal activity, statistics on gender-based violence in poor urban areas of South Africa are particularly alarming. While the precise relationship to energy studies has yet to be articulated, Kelkar and Nathan (2003) have this to say about gendered violence:

> *'Women's dignity, self esteem and emotional health are undermined by physical violence inside the home and outside, and also by less overt forms of violence such as forced domestic confinement, restrictions on mobility, bullying threats, humiliation, unrecognised overwork, and other forms of harassment through to verbal abuse…. Violence against women is a development question, it is a question affecting women's agency.'*

Prior to 1994, domestic violence was considered a private issue and the police seldom intervened. The implementation of a gender equality clause has necessitated attention to reporting gendered violence and the retraining of police to take the issue of domestic violence seriously, and follow the legal procedures. This has happened in some areas.

A commitment to gender equality on the one hand and an increase in gendered violence on the other, sit uncomfortably in the country and in this study. The reasons for this anomaly and what is to be done about it, lie largely beyond the scope of this study but are being investigated elsewhere (Bennett, 2005). The very real risk of gender-based violence reduces the mobility of women and girl-children, and prevents women from engaging in

[8] For an analysis of South African urban culture see Clark (2003).

trading in particular areas and moving about when it is dark. Gendered violence thus impacts on women's position in the labour market. The threat of violence at home means that many women (and perhaps men) live in emotional jeopardy, unable to live full and emotionally secure lives on an equal footing with their partners. Here, bringing the impact of violence in urban areas to the attention of the gender and energy experts will have to suffice as a first step.

2.2. Definitions

Apartheid – the ideology and legislated policy of separating - politically, socially and economically – ethnically-defined groups of people; privileging whites and excluding black people. Begun by the British in South Africa in the early 1900s, but theorised, justified and entrenched by the Afrikaans-speaking Nationalist Party which came to power after World War II.

Race - under the *apartheid* regime, race and skin colour became the primary determinants of every facet of life, disallowing those classified as 'black' access to housing, schooling, health, work opportunities, transport, basic and leisure amenities etc. These historical disadvantages are currently being redressed by Affirmative Action and Black Economic Empowerment policies. Thus, it is not surprising that South Africans are obsessed with the notion of race and the opportunities offered or denied to citizens on these grounds. We distinguish between blacks, made up of African (indigenous groups such as isiZulu), coloureds (of mixed heritage, usually European/slave/indigenous), Indians (both indentured labour and the merchant classes came to South Africa) and a small elite group of whites. Tensions exist between all the groups.

Township - the term applied to black urban or peri-urban residential areas which were placed out of sight of white suburbs. In the 1950s and 1960s, several of these consisted of formal dwellings with water and electricity, but from the 1970s onwards the government ceased to supply low cost housing, and instead informal houses – shacks without any basic services – proliferated.

2.3. Gender and energy theories and analytical framework

Women's energy needs are different from men's because their gendered roles (social functions) are different. The study therefore requires a lens through which to examine gendered roles. Gender is relatively well theorised from women's perspective (Friedan, 1973; Jackson and Pearson, 1998; Guy-Sheftall, 2003) and gender roles, including housework have received much attention (Oakley, 1974). Gendered roles are less well theorised from men's perspective, but the past ten years have seen significant strides made in studies of masculinity (Connell, 1995) and, pertinent to this study, several South African perspectives on 'the new man' (Morrell, 1998, 2005). In order to make sense of the findings it is necessary to consider both genders. A conference on Gender, Culture and Rights took place in Johannesburg in 2005, in which both gendered violence and men against violence featured strongly (*Agenda*, 2005). Gendered violence has also been

linked to urban cultures of music (Loots, 2003) and gangsterism, both of which have significant presence in Khayelitsha.

A methodology for considering gendered violence in the energy sector has not been explored although the issue has been simmering among gender and energy experts for several years. Attention has been drawn to the dangers (such as assault and rape) that rural women face when going to collect wood, and Kelkar and Nathan (2003) raised gender violence as an issue in domestic relations and development, but I am not aware of empirical work to connect domestic gendered violence to energy work in urban areas. This case study documents one of the rare occasions in the energy sector in South Africa where gendered violence has been discussed in urban households in the context of domestic roles and responsibilities.

Asymmetrical gender relationships mean that the scales of power are weighted in men's favour although there is no single agreed feminist theory of power (Davis et al., 1991). The perspective of this study is that power is located between people (Delsing, 1991) and is subject to fluctuations of emotional and physical wellbeing as well as in material conditions and the ability to negotiate or bargain. Power relations change over time and under particular conditions. It is through a process of struggle and collaboration that some men and women have succeeded in realigning the power relationships between them more evenly (Kandiyoti, 1998), and this study highlights some of these struggles. Seeing the effect of national level policy at the micro-level can be difficult and is often obscured by the challenges of implementation. This study was conducted at a site where institutional support was offered to women at the household level, and the links between the macro- and the micro- levels thus become more visible.

Molyneux's categorisation of women's needs into practical and strategic needs which was popularised in development literature by Moser (1993) and developed by Kabeer (1994) provides the basic analytical framework for this study, to which I have added women's productive needs which may be met by energy inputs (Clancy et al., 2003) and the notion that emotional needs have also to be met in order to achieve gender equality.[9] Gender equality is unlikely to be achieved in fraught conditions, and a degree of emotional security and cultural acceptance is also necessary. A workshop on gendered violence in Ireland with Traveller women, with specific comparison to conditions in South Africa, has been useful in this regard (Donnelly, 2005).

To summarise, this case study employs the following key tools for assessing the state of gender relations:

- The gendered division of labour (who does what, where and when in the household)
- Access to and control over resources and benefits (to whom do benefits accrue? who makes decisions? who gains leisure?)
- Practical needs- access to basic services, food, health, education, income
- Productive needs – access to modern energy services for increased variety of income (Clancy et al, 2003)

[9] I owe this insight to Audrey Dobbins, a masters' student who contributed to this study.

- Strategic needs - position in society, access to courts, participation in community.
- Emotional needs – the ability to relate on an equal footing without fear of violence or prejudice.

2.4. Prior research

Gender and energy studies have been conducted in urban and rural areas in South Africa since the late 1980s and early 1990s, in a period when the concerns of the liberation struggle influenced all progressive research. This meant that power relations were an important consideration in gender and energy research and the bargaining model of the household was the dominant paradigm (Annecke, 1992; Ross, 1993; James, 1993), Since democracy was introduced, 'normalisation' and the influence of international organisations has been felt, and a much more instrumentalist approach to gender and energy studies is noticeable[10] with the emphasis on addressing women's practical needs (Wentzel, 2000). However, there has also been some reflection on men's roles (Green, 2002; Annecke, 2004).

There have been few studies that have assessed the gendered impact of electrification in urban areas. Those that have been made in rural areas (Ross, 1994; James, 1998; Annecke, 1998) have used decision-making about appliance purchasing as a simplistic indicator of intra-household power relationships, acknowledging the bargaining and negotiations which may have led to the decision, but unable to track these over time, and with little knowledge of the shifts taking place which may affect these negotiations. In international studies, the ESMAP series (2003) has raised the profile of gendered roles and a significant shift in international urban studies was made when DFID commissioned studies such as Borchers and Annecke (2003), and USAID's Women In Development office included a gender expert in the investigation of slum electrification (Smyser and Annecke, 2004).

2.5. HIV/AIDS

Investigating the impact of HIV/AIDs on the study proved problematic. South Africa has one of the highest infection rates in the world. The Department of Health estimates that between 5.8 and 6.3 million people are HIV-positive, and UNDP (2000) notes that life expectancy has dropped to less than 48 years, and so that all social research, planning and policymaking should take the pandemic and its effects into account. It is known that in South Africa more women are infected than men, and that women do a disproportionate share of caring for people with AIDS. The group discussions indicated personal experiences with HIV/AIDS but, because of the stigma attached to the disease, no-one admitted to caring for someone with AIDS, let alone being infected themselves. Ultimately, very little was learnt directly about the energy needs of those living with HIV/AIDS.

[10] For a concise account of why gender is included in project planning see Skutsch (1998).

3. The study

3.1. Study site

Most of this study was conducted in Khayelitsha, a township some 25 kms from Cape Town city. No-one knows exactly how many people live here, guesstimates put the number at around 800 000. The old parts of Khayelitsha consist of formal houses and some of these have had electricity for more than 20 years. While electricity payments were boycotted during the final years of apartheid, a consistent electrification programme using prepayment meters has been in place since 1996 and has connected some 60 000 formal and informal houses (Annecke, 2005).

It is estimated that 4000 people a month come to Cape Town. Many of these new arrivals build themselves a shack wherever they can find a space. New areas of Khayelitsha are being carved out of the bush and moulded around sand dunes stretching kilometres from the original hub. These new areas have no water, sanitation or electricity, but the Cape Town Municipality has a moratorium on forced removals. If it becomes clear that the people are going to be there for more than three years, if the land is public land, and if the area is not at risk (from flooding, by being situated under high voltage lines or alongside the railway), residents become eligible for 'maypole'-type electricity connections with individual prepaid meters and standpipes for water (although there has been no sanitation in some areas for many years). Electricity connections are heavily subsidised through the National Electrification Fund with a low connection fee that can be paid off over time. Thus 70-80% of the houses, including many informal houses, are electrified. Despite this, most households still use paraffin for cooking. Newcomers have been seen to use the bush they have cleared for cooking outside their shelters in the manner of the rural areas, but they are mocked for doing so.

It is estimated that 53% of the population of Khayelitsha are unemployed and live below the poverty line. Khayelitsha is reputedly the most dangerous township in South Africa, with rape, burglary, muggings, abductions and shootings daily occurrences.

This site was chosen for this research because of the work already done on electrification in the area (Mehlwana and Qase, 1996; Cowan and Mohlakoana, 2004; Annecke, 2005). In particular, it developed out of two earlier urban energy studies which provided evidence of changes in both energy use and gender relations and thus spurred the researcher's curiosity. The first (Borchers and Annecke, 2003) was a study conducted for DFID which required the development of a quantitative methodology for assessing the links between gender, energy and poverty in urban areas. The core research question was: *Does electricity improve women's lives with respect to cooking*? The findings showed that gender relations in townships were seen to be changing, and that to label cooking as a burden on women was an oversimplification of the problem. The second study (USAID, 2004) was an international review of electrification programmes in low-income (shack or slum) areas in Ahmedabad in India, Manila in the Philippines, Cape Town in South Africa and Salvador in Brazil. Two refrains, common to both studies, heard from

women in all countries were *'men are useless'* and '*things* [gender relations] *are changing'*. These phrases were heard too often to ignore, and begged further exploration.

3.2. Scope and limitations

The DFID/KaR project has provided an ideal opportunity to gain a better understanding of the changing environment. It is an exploratory study which I have used to re-visit the meaning of *gender*, *gender equality*, *gender roles* and *burdens* in relation to urban household energy use. Also there is a sense in which poverty and low-income households are over-researched and the interesting (albeit reputedly shrinking) phenomenon of the middle classes is neglected. Although it was not the main focus, this DFID/KaR study has opened a small window on changing gender relationships in the middle class through which it may be possible to measure what can be achieved through education and a relatively secure environment.

Operating as an independent researcher, but with the cooperation of Electricité de Francé, their subsidiary PNES and the Khayelitsha Development Forum, and with help from masters' students from the Energy Research Centre at the University of Cape Town (where I teach) and members of the community who were trained as fieldworkers, this somewhat over-ambitious project got underway. Much of my own time was given voluntarily, partly because I wanted to go beyond low-income groups and get a measure of changes in the middle classes, partly because I wanted to spread the work as widely as possible and partly because the training took longer than expected.

3.2.1. Capacity building

The team originally foreseen to work on the project did not materialise, and considerably more capacity building was required that originally anticipated and planned for. This proved to be rewarding but added to the complexity of the study. Nine young black researchers, four men and five women, were involved in learning more about energy services, and understanding gender issues. Two (one man and one woman) had masters' degrees in Energy Studies, one woman had extensive experience in energy and housing, group work and translation, two (one man and one woman) were trained as secondary facilitators for the groups, and the remaining four (two men and two women) were from the community and conducted the household surveys. The team assisted in the development and testing of questionnaires, and four learned to do coding and data capture. Two more learned about project management and budgeting, and commented on the first draft of the report.

The most interesting part was training two young men to conduct focus groups with men about gender. These were emotional meetings requiring cool heads and skills to handle the arguments. To their credit, the two facilitators were asked by the men to facilitate further meetings. The part of the training which they found most useful was making a distinction between rights (which everybody has in terms of the Constitution) and privileges which some South Africans have had to give up. A welcome bonus was that

the focus groups built the capacity of participants, and in particular initiated the formation of a men's group whose purpose has still to be negotiated and formalised.

3.3. Methodology and approach of the study

The hypothesis to be tested was that access to modern energy services may be an agent for change with regard to gender relations (in particular the division of labour and decision-making) and may thus directly or indirectly contribute to the alleviation of poverty and the enhancement of wellbeing. The questions were adjusted after the pilot study to read as follows:

1. What do ordinary men and women know and think about gender equality and the Constitution?
2. How do poor urban men and women perceive their gendered position in the household/ community/ society and has this changed since 1994?
3. Who does most of the chores in the household? Are they burdensome?
4. What energy services are used and preferred in fulfilling these tasks? Do they reduce the burden?
5. Is cooking particularly burdensome to women?
6. Does access to modern energy services facilitate gender equality?
7. Does access to modern energy services facilitate income generation for men and women alike? What are the constraints?
8. What are the conditions affecting decision-making regarding appliance purchase within the household?
9. Do men and women provide equally the money needed to buy modern energy services and share the tasks related to having these services (usually electricity)?
10. Does the provision of modern energy services ease the burden of caring for those with HIV/AIDS?

3.4. Methodology

Quantitative and qualitative methods were used to obtain a measure of the extent of the changes occurring and a deeper understanding of the complexities of household relationships. For the numerical study, this project was able to piggy-back on work being done for the EdF-ACCESS programme in Khayelitsha. The above-mentioned household survey addressed questions 4-7 above. This was followed by interviews with 60 people (30 middle class and 30 low-income women and men) to determine general knowledge about the gender equality clause in the Constitution and attitudes to domestic gender relations. This survey addressed questions 1-3 above. The third component was a series of group discussions with men, and with men and women, about gender and energy, with a focus on the changes brought about by access to electricity. These discussions provided the bridge between the survey and the everyday experiences of the men and women concerned. The methodology of each of these approaches is further described below. The primary challenges to the study were the capacity building that was required, the physical dangers of working in Khayelitsha and the difficulty in getting access to the middle class. The data was collected between September 2004 and February 2005.

3.4.1. The quantitative surveys

Two different questionnaires were administered. The socioeconomic context for the quantitative study was taken from the EdF-ACCESS programme. A structured questionnaire was administered to 250 respondents about: trends in gendered domestic responsibilities (cooking, cleaning etc.), energy services used and preferred, appliance ownership, decision-making processes, aspirations, assistance with domestic tasks, leisure etc. These interviews were conducted between 18 October and 5 November 2004 in formal and informal areas of Khayelitsha which had been electrified for between one and twenty years. Most of the changes brought about by access to electricity appear to occur within 1-5 years of receiving a connection, and the sample is skewed towards households that have been electrified for between three and four years (i.e. were electrified in 2001/2).

Because of the dangerous conditions in Khayelitsha, especially for women, fieldworkers worked in pairs along grid blocks on and behind the main roads, and approached only those houses with open doors, or where someone was in the yard. The study team had been cautioned against knocking on closed doors or entering yards where no-one was visible. In South Africa, early quantitative studies of low-income household electrification and energy use (e.g. Theron, 1992) were criticised for surveying primarily men as heads of the household rather than women who are the known managers of household energy use (Annecke, 1992). Since then, methodologies, patterns of employment/unemployment and gender relations have changed, and HIV/AIDS has taken its toll on family structures. This survey was conducted during the day and answered by 180 (72%) women and 70 (28%) men. Only households with access to electricity were included.

The data from these surveys was stored using Excel and elementary correlations performed. Since the sample is not a scientifically random one, no statistical analysis has been performed on the data. However the results of the survey indicate strong trends which are likely to be reliable and are endorsed by the focus groups and similar studies (Borchers and Annecke, 2003; Cowan and Mohlakoana, 2004).

3.4.2. The 'quick picture' gender survey

Although it was not in the terms of reference, it seemed important to acquire an overview of the general population's understanding of the gender equality clause in the Constitution and what has changed over the past ten years of democracy. Accordingly, a 'quick scan' survey was conducted among men and women, half of whom were classified as high income earners and half as low-income earners. Income was used as a proxy for education. The hypothesis was that better educated women and men would be better informed and have more progressive attitudes towards gender equality. Ten simple questions were developed.

After due discussion and training, two women fieldworkers set out to conduct the survey among high income earners. The surprise for the research team was how difficult it was

to approach middle class people, who are protected in South Africa not only by barbed wire, electric fences and air-conditioned cars, but also by a plethora of invisible guardians of their consumer power, who do not allow the shopping and leisure time of their customers to be interrupted. Despite the difficulties, 30 high-income group surveys were completed and the results were then compared with the 30 low-income group surveys which were conducted at a taxi rank, the train station and shops in Khayelitsha.

3.4.3. The focus groups

Focus group discussions were held to obtain insights into perceptions of gender relations, the use of electricity and domestic roles and responsibilities. Continuity was ensured in the focus groups through the services of one facilitator who participated in all the data collection and then commented on the draft report. Capacity was increased by training a second facilitator for each focus group. The facilitators transcribed and translated the discussions. Five focus groups were held altogether, the first two were conducted for the EdF-ACCESS study, and examined the question: *What difference has electricity made to your quality of life?* The three focus groups conducted specifically for this case study focused on understanding attitudes to gender equality and the changing roles and responsibilities within the household. At the request of some of the participants, one of these was attended by men only, the other two were mixed. Researchers were concerned about the plausibility of creating a link between gender and energy in the groups. However the facilitator reported the 'natural' connection.

> *'The first part of the discussion focused on gender and gender equality as we perceived that the general interest on this issue would start the ball rolling. It did indeed. But when men and women started talking about roles and responsibilities the connection with energy was emphasised right from the beginning.'*

The most important issue that came to light in these focus groups was that of gender-based violence and its relation to domestic tasks and energy use in the home. Violence creates instability in households, disrupts education and the ability to concentrate and inhibits efforts to generate income, acting as a deterrent to development and gender equality.

3.4.4. Language

Each interview was conducted in the interviewee's mother tongue. The quantitative survey was developed in English and the data capture done in English. Similarly, the focus group ideas were developed and prepared in English but conducted in isiXhosa and translated afterwards. A skilled translator was employed, and the training included attention to translation, words to be used and information to be disseminated. The fieldworkers were all used to conversing in several languages, and took their task in their stride and were not fazed by its complexities.

4. Summary of findings

This section provides a summary of the integrated results from the three instruments used to collect data. The findings are discussed in terms of the questions posed and the categories derived from the responses.

4.1. Gender equality and gendered violence

In the 'quick picture' survey, respondents were asked ten mainly gender-related questions. These included their ages, income category, status of relationship, several questions about domestic tasks and the gendered division of labour at the household level, whether they knew if gender equality was enshrined in the South African Constitution and what they thought about gender equality.

Altogether 60 people answered the questionnaire, 29 men and 31 women, and all were South African citizens. The majority were married, they ranged in age from 24 to 55 years, and earned from nothing to well over R12 000 per month (~$2 500). Thirty of the respondents were classified as high-income earners, and 30 as low-income earners . The high-income earners were of all races, the low-income earners were all black which reflects the poverty profile of South Africa. The age groups included were appropriate in terms of when the new Constitutional was introduced and the respondents were in a good position to remember and be affected by the changing constructions in gender roles and responsibilities.

High income group profile
In the high-income group there were 11 male and 19 female respondents. Incomes ranged from one student with no earned income (but substantial funding) to 17 respondents who earned more than R12 000 a month (at least six-times that of the majority of the low-income respondents), most were married and over the age of 45.

Low income group profile
In the low-income group there were 18 male and 12 female respondents, most of whom were married and between 35 and 45 years of age. Incomes varied from five not-well-off students to the majority who earned over R2 000 per month. Thus the low-income sample fell largely into the category of the urban employed and are likely to have had access to some of the forms of media and channels of information that are available in urban areas, thus constituting a suitable comparative group with the high-income earners.

What they said
Rights: The overwhelming majority in both groups thought that women enjoyed more rights now than they did ten years ago. A difference occurred in the opinions about men's rights: the majority of the middle-class people (i.e. the high earners) thought men had the much the same rights as they did ten years ago, but more when it came to things like child care. Several recognised their own privileged positions. In the low-income group, the majority thought that women had gained rights at men's expense and that men had fewer rights than they had enjoyed ten years ago.

Income parity: The majority of the high-income group thought that men still earned more than women (for the same work); while the majority of those on low incomes were of the opinion that women get paid the same as men.

Domestic tasks: In both groups, the women perform the majority of domestic tasks. However the majority of the men in both groups help with domestic chores. The chores that high-income men mostly do are household maintenance, cooking and washing up. Low-income men in comparison tend to do cooking, cleaning and grocery shopping. A slight majority saw these chores as *not* burdensome. It is notable that neither group assisted much with childcare. The group discussions clarified that although a few men did help with domestic chores prior to 1994, most men have been pushed into helping in the past ten years.

Gender equality: The majority of respondents in both groups knew that gender equality was enshrined in the Constitution; in the high income group 80% knew and in the low income group 63%. The majority of the high income group were positive about gender equality saying it was an essential component of a society's progress, and several expressed the view that 'there is still a long way to go' and that although the Constitution 'lays down the structure for gender equality, there are too many loopholes and many test cases still have to be brought before the Constitutional Court'.

Many of the respondents in the low-income group recognised that gender equality was legally enforceable but did not agree with the principle. There were three distinct categories of responses:

- *those who were in favour;*
- *those who were ambivalent and*
- *those who were against.*

Such attitudes lie at the heart of domestic roles and power relationships and are worth looking at more closely, especially since the focus groups concurred. There were two men (11%) in the survey and a few in the focus groups who were unreservedly in favour of gender equality and argued for it:

> *'I am all for gender equality - I think it is a great thing in these liberated times in South Africa.'*

In the focus groups, one of the respondents pointed out how women have fought for their rights and deserve some credit. He recalled that when the women went to Beijing 'they returned with a lot of rights'. Another said that 'unlike most of the men I know, women are much more reliable in the tasks they are required to perform'.

There were four men (22%) in the survey who were ambivalent about gender equality, they understood what it means (such as addressing imbalances) and thought it was a good thing *but* were concerned that women were 'taking advantage' of their rights. This was a typical response:

'It is a good thing, except that most women tend to abuse these rights and treat their men very badly – threatening to have them arrested and lose their property and children. There must be a law to protect men from abuse as well.'

Twelve of the 18 (66%) male respondents understood what gender equality meant but did not think it was good in principle and/or regretted the changes it had brought about. They said things like:

'Gender equality is when both men and women are equal - at work, at home, in social life.'

'No-one is above the other. But I wish things could go back to the old ways of the man being the head of everything.'

'I don't feel good about it because women tend to be unruly when they have more powers.'

In the focus groups, men complained about losing their positions as heads of households, losing dignity and respect, and about not being able to settle domestic differences to their satisfaction according to 'the old ways':

'...traditionally resolving these squabbles would often necessitate the use of force – beating up your partner or child. Today you can't even raise your voice to your partner, let alone a hand. She will simply run to the police station and within minutes you are inside the cells. And you are painted as an abuser. What happened to our traditional ways of resolving disputes of this nature? Our wives no longer run to one of the older members of the family, but to the police. And the court rulings or orders are often impossible in practice. For instance, a line of demarcation would be drawn and you are required not to cross a certain line – in your own house! This only creates more problems…'

There were further complaints from men about their treatment at the hands of the police who were said to mock men who complained of being abused by their wives. A very interesting reference was made to the loss of power by men. Women tactfully did not claim power, but they did assert their rights. They argued that things have changed and that in urban areas women have to go work and cannot be expected to perform the duties they did in the 'olden times' in rural areas. They said:

'Women go to the police because they are tired of what is happening and they feel that they do not have the same rights as men. They go to the police after they have tried all possible solutions to the situations they find themselves in. It must be remembered that women are also human and they can stand only the pain up to a certain point.'

Thus violence was brought up in the course of the conversation about domestic chores. Men blamed the government as well as women 'for destroying our culture, rendering it unworkable, so that men are no longer proud of our manhood and being heads of the household'. Men and women appeared to have emotional needs which were unfulfilled and inhibiting progress towards gender equality.

As nominal beneficiaries of the gender equality clause, 8 of the 12 (67%) women in the low-income group were very positive about the principle and the changes that are beginning to take place:

> *'It's good that men are now also required to respect women and not abuse and ill-treat them. I'm happy to see the police do their job in respect of taking no nonsense from men who abuse their wives. If a man decides to leave his wife he is required to continue supporting her, which is a good thing.'*

Four women remained unconvinced that anything or enough had changed:

> *'Gender equality exists only in theory. Men still dominate at work places and at home. Women are pillars but still not recognised by men. We are never given credit for tasks we do.'*

Table 1: Summary of gender survey findings

Responses	High Income Frequency (n=30)	Low income Frequency (n=30)
Sex		
Men	11	18
Women	19	12
Marital Status		
Single	9	11
Married	13	16
Co-habiting	4	3
Divorced	4	-
Income group		
Student	1	5
Under R1000	0	5
R1-R2000	0	7
Over R2000	0	13
R3-5000	1	0
R5-8000	4	0
R8-12000	7	0
Over R12000	17	0
Views on changing rights of men and women		
Women have more rights than 10 years ago	27	23
Women have less rights than 10 years ago	1	2
Women have the same rights	2	5
Men have less rights than 10 years ago	8	2
Men have less rights than 10 years ago	6	22
Men have the same rights as 10 years ago	16	6
Views on income parity over the past ten years		
Women get paid more than men	2	2
Women get paid less than men	22	10
Women get paid same as men	6	16
Person who does most of the domestic chores household		
Men	3	1
Women	20	25
Children or equal	7	4
Do men do domestic chores?		
Yes	25	23
No	5	5
Sometimes	-	2
Tasks in which men assist		
Cooking	19	20
Cleaning	10	16
Washing-up	18	8
Groceries	10	16
Childcare	7	5
Ironing	4	11
House maintenance	21	10
Knowledge of the Constitutional clause on gender equality		
Yes	24	19
No	1	6
Don't know	5	5

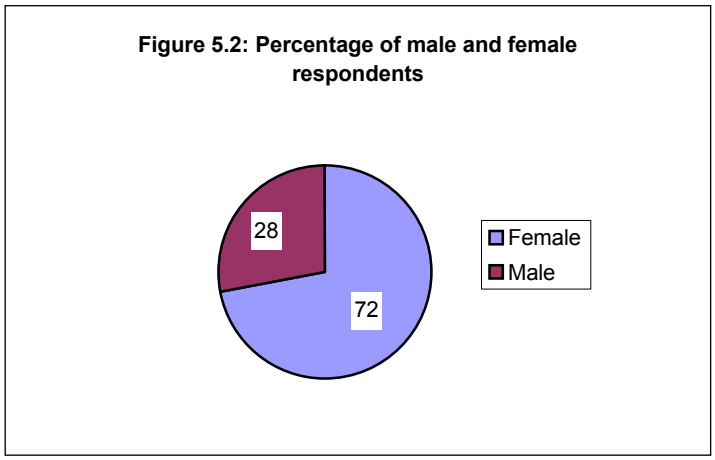
Source: gender survey

4.2. Access to energy and gender relations

This section provides a brief overview of the socioeconomic profiles of the 250 households involved[11]: the energy services and appliances used and preferred by men and women for lighting, heating the house, cooking, watching television; who decides what appliances to buy; domestic roles and responsibilities; who manages electricity; whether electricity saves money; income generation and leisure. The survey findings are elaborated by extracts from the focus groups.

Socioeconomic profile:
Fieldworkers interviewed 250 households. The majority of respondents – 180 (72%) were women, while 70 (28%) of the respondents were men.

Figure 1: Percentage of male and female respondents



The total population in the sample was 812 people, of which 539 were adults over the age of 18, and 245 were children under the age of 18. Less than half (45%) of the 250 households reported a man and a woman living together as partners with their own or someone else's children, and there were 28 (11%) single-person households. The average number of people per household was 3.1.

Income
Income was obtained from formal or informal work and/or social grants. Of the 539 adults, 470 (87%) were between the ages of 19 and 60 and thus eligible for work, of these 303 (i.e. 64% of the 470) recorded some income, either formal or informal. The remaining 167 (36%) said they had no income but 160 of them received child support grants (112), disability grants (18) or pensions (30). Thus there was some form of income coming into most households in this sample. Unemployment rates in Khayelitsha are as high as 53%, which suggests that the sample is heavily skewed in favour of the better-off (this is frequently a characteristic of those connected to the grid).

[11] Full results of the EdF-ACCESS quantitative survey are available (Annecke, 2005).

Table 2: Summary of sample population and income

Summary	Frequency	%
Sample size	812	100
Number of adults (over 19)	539	66
Number of children (0-18)	245	30
Number of adults eligible for work (19-60 years)	470	87
Number of adults recording some income	303	64
Number of men recording some income	150	50
Number of women recording some income	153	50
Number receiving social grants in sample	160	20

Overall, more women in the sample (153) claimed to be working than men (150). There were more women than men who answered the survey, there were more adult men than women in the sample There were more men (123 men as opposed to 109 women) working in the formal sector where wages are better than in the informal sector where women predominate. The sample showed that formal sector wages are low with only 57% of those employed receiving a living wage. Of the 71 people working in the informal sector, 62% were women, and only 18% overall earned a living wage.[12]

Table 3: Summary of formal and informal incomes

FORMAL		INFORMAL	
Formal wage earners	232	Informal income	71
Earning more than R3000	69	Earning more than R3000	6
Between R2000 & R3000	62	Between R2000 & R3000	7
Between R1000 & R2000	89	Between R1000 & R2000	19
Less than R1000	12	Less than R1000	39
Men in formal work	123	Men with informal income	27
Women in formal work	109	Women with informal income	44
Average Formal Wage	R 2326	Average Informal Income	R 1169
Median Formal Wage	R 2000	Median Informal Income	R 800
Male Average Formal Wage	R 2497	Male Average Informal Income	R 1521
Male Median Formal Wage	R 2000	Male Median Informal Income	R 1350
	R 2396		
Female Average Formal Wage	R 2113	Female Average Informal Income	R 953
Female Median Formal Wage	R 1800	Female Median Informal Income	R 800

Source: Annecke, 2005

[12] In the absence of an official poverty threshold, a living wage is estimated at R2200 by the major trade union, Cosatu.

Men in the focus groups complained that when it comes to money, women controlled everything in the household, and she could not be beaten to give it up.

> *'In situations where both partners are working, you find that all the money goes to the wife. She keeps the man's bank card and she only gives the man R20, which will cause a fight because the man may have debts that the woman does not know about. If a man uses physical power to try and get his card back, the woman may go to the police station and claim abuse. In the olden days the man would take the bigger share of the money, now things are not the same, women take all the money.'*

Men also pointed out that women are very good at managing on even small amounts of money: 'whilst it is common for a woman to ask her neighbour, a friend or relative to help out …this is embarrassing for men.'

Access to services and monthly expenditure

All households surveyed had electricity connections and water either on the plot or within walking distance. Most households reported a school and a clinic within walking distance, more than two-thirds had street lighting but fewer had sanitation.

Food and energy were the only categories in which all households reported expenditure, highlighting the significance of both for daily living. The average expenditure on energy was R130 per month, and the average expenditure on food per household was R416, which may be converted into an average expenditure on food per capita of R139 per month. This is very little, and questions around what people ate provided evidence of severe poverty. Some households ate bread and sugar water for breakfast, no lunch, and supper of a staple and some sort of flavoured, water-based sauce. Despite this, some of the poorest households had televisions and/or cell phones, evidence of the premium urban people put on communications.

The difference that access to electricity has made to people's lives

Respondents were unanimous that electricity makes a significant difference to their lives. One woman told of her experience as a child in a rural area where they had to go and collect wood and cow dung almost every day after school and on Saturdays, she said:

> *'The trouble started when I visited Cape Town for the first time in 1989 and stayed in Samora – an area that was electrified. The experience was fascinating. Things were done in a flash here – heating water, ironing, cooking. This changed my life for good. I never ever wanted to use wood or dung in my life again. I hated cooking back home. I became lazy. I am spoilt. In Kuyasa I have saved enough to buy all the electric appliances I have ever dreamed of. All this makes life fast, good and easy. If my husband arrives late at night, I don't have to wake up and prepare food for him anymore, he can always do it himself. It's easy.'*

The question is do women and men have equal access to electricity and benefit equally from it? Electricity was the service of choice for women and men for all applications except space heating where paraffin was preferred because electricity is 'too expensive'. Relatively few, only 35 households (14%) in the sample, used only electricity for all their energy requirements. The majority, 215 (86%) used paraffin in addition to electricity, and the most common reason given was 'to save electricity'. A further 20 households (8%) used Liquid Petroleum Gas (LPG) and 57 (23%) used wood 'sometimes'. There is still

widespread use of batteries for radios etc. The average amount spent on electricity was R90 and on paraffin R45 per household per month.

Appliance ownership

A very wide variety of appliances was found among the samples households, twenty-one of these are listed below, but not all are electric. Many poor households owned more appliances than might be expected of households with low incomes. This finding was endorsed by other studies in the area (Cowan and Mohlakoana, 2004; Denise Oakley, personal communication 2004). Such appliances are known as 'cargo' – or the somewhat stealthy redistribution of wealth.

There were eight more televisions than stoves in the sample households, confirming the view that televisions are bought more often than stoves, albeit for a variety of reasons including affordability and safety.

Table 4: Frequency of appliances found in survey sample

	What appliances do you have?	Frequency	%
1	Electric lights	248	99
2	Electric iron	231	92
3	Electric kettle	225	90
4	Television	224	90
5	Electric stove or hotplate	216	86
6	Paraffin stove	170	68
7	Fridge	156	62
8	Paraffin lamps	156	62
9	Radio	139	56
10	Cell phone	132	53
11	Music system	119	48
12	Paraffin heater	112	22
13	Video/ DVD	62	25
14	Electric heater	50	20
15	Microwave	48	19
16.	Geyser – hot water	28	11
17.	Coal – for heating	27	11
16	Washing machine	19	8
17	Gas stove	19	8
18	Fan	10	4
19	Gas heater	1	0

Source: Annecke, 2005

In order to asses the gender bias in appliance acquisition, respondents were asked which two appliances they would still like to get and which two appliances other members of the household would still most like. Again a wide variety of responses were obtained. For the majority of women their first choice was a washing machine and a microwave with

49 votes each. Thereafter fridges, phones, hot water geysers, videos and stoves were wanted – in that order. The aspirations of other members of the family were related to age (e.g. teenagers wanted dvd players) and occupation (students wanted computers), with cell phones, videos and dvds being highest on the overall wish list, followed by washing machines and microwaves.

Table 5: Household appliances most frequently aspired to

What other appliances would you still like to get?	Women Frequency	%	Others Frequency	%
Washing machine	49	11	31	10
Microwave	49	11	31	10
Fridge	42	10		
Cell phone /telephone	38	9	37	12
Geyser- hot water heater	36	8	16	
Video	34	8	33	11
Electric Stove	28	6	2	
Music system	27	6	17	
DVD	18	4	32	11
TV	17	4	14	

The focus groups agreed that women make decisions about small appliances whereas men buy hi-fis, televisions and videos. In many cases, men give their partners money for groceries and argue that 'you can find a kettle or iron among the grocery items, or some of the money has been used as a deposit to buy a second-hand fridge or stove'. Buying new and expensive appliances is usually a joint decision especially where the children are involved.

Responsibility for electricity

Respondents were asked who made the decisions, provided the money, bought the electricity credits[13] and did any maintenance work. It was clear that although the fuel has changed from wood to electricity that women are still the managers of domestic energy. In most cases women supplied the money, women went to the vender to buy electricity and women punched the number into the meter. Only in the age categories of under 12 and over 45 years were males in the majority in terms of going to the vendor and this is likely to be linked to safety: girl children and older women are more vulnerable to attacks.

[13] Prepayment meters operate much like a prepaid cellular phone: credits are bought from a vendor and a code punched into the meter.

Table 6: Who manages the electricity

	Who supplies the money	Who charges the meter	Who goes to the vendor
Female	129	148	140
Male	111	96	104
PNE (Household is a vendor)	1	0	0
No answer	9	6	6
TOTAL	**250**	**250**	**250**

However, when it comes to maintenance and repair work, traditional roles re-emerge with men and boys fixing plugs and doing the wiring.

Table 7: Who does electric work in the household

Male	111
Female	41
PNE (utility)	78
Neighbour	14
No response	6
TOTAL	**250**

In accordance with the hypothesis that modern energy services other than electricity might serve women equally well, respondents were asked about their attitude to LPG.

Table 8: Respondents' attitude to LPG

What do you think about gas?	**Frequency**	**%**
It is dangerous	150	61
It is neat/clean/quick	43	18
I like gas	20	8
It smells/pollutes	9	4
Use at own risk	9	4
It is affordable/cheap	6	2
Don't know	7	3
Not healthy	1	0

Who does most of the chores at home and are these burdensome?

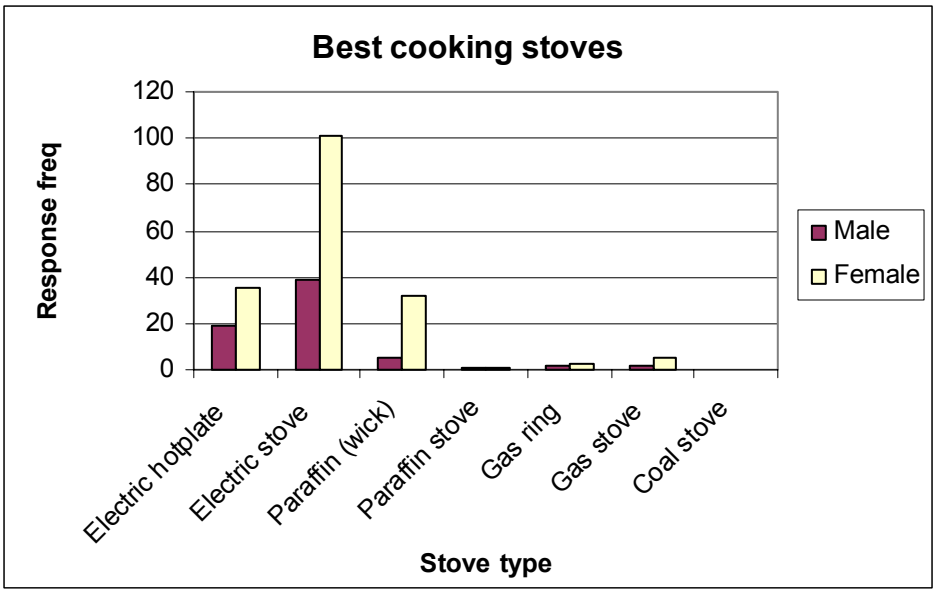
Domestic tasks are the nub of the gender division of labour at the household level. Men and women in the group agreed that women do most domestic chores, with men only helping here and there. This is seen as the 'natural division of labour and that there is no fairness or unfairness about it.' There was heated discussion about whether chores were burdensome, with men arguing that:

'These chores are no longer burdensome to women. This is because men are always there to help, and if you don't help you are accused of being abusive – and we don't want to be called that. But we are just helping out; we can't be forced to perform these tasks. They remain women's chores.'

Cooking and stoves

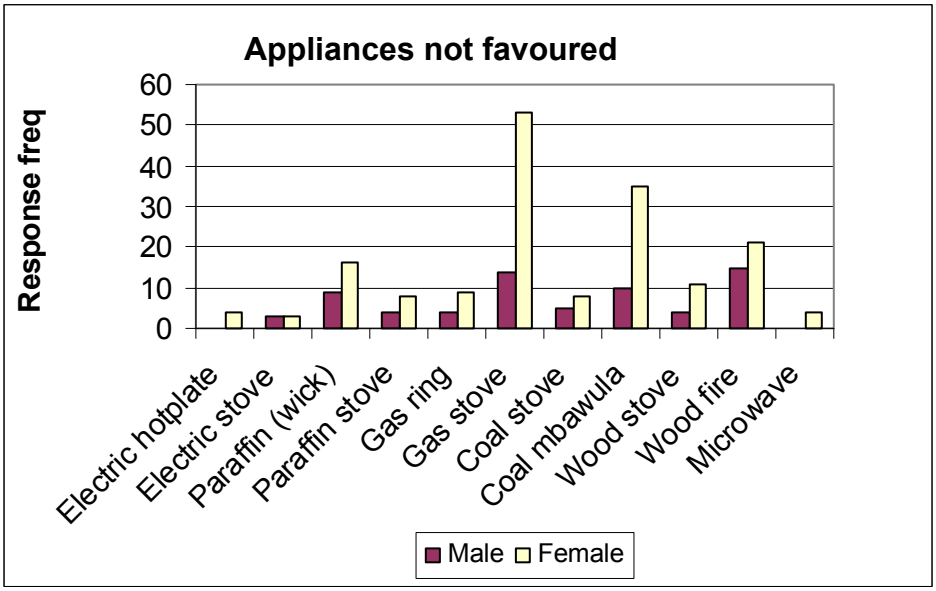
Is cooking a primary burden in poor urban women's lives and are they able to use the energy service and appliance of their choice to facilitate this task? Altogether 182 (73%) of the respondents use electricity for cooking 'most of the time', less than half of the respondents (46%) use a full stove (hotplates and an oven) every day, although most respondents would like to. More men would be satisfied with just using electric hotplates every day than women who also wanted to use an oven. There were a few stalwarts who claimed to use paraffin by choice, and the women showed a more marked aversion to LPG than the men. Just ten (4%) households would use gas by choice.

Figure 2: Stoves preferred by gender



Source: Annecke 2005

Figure 3: Stoves disliked by gender



Source: Annecke, 2005

Cooked meals

According to the survey as shown in Table 10 below, 127 (51%) of the households cook something for breakfast, 121 (48%) cook at lunchtime and 184 (74%) have a cooked meal in the evening. It takes an average of 30 minutes to prepare and cook breakfast, and on average of over an hour to prepare and cook lunch and over an hour and a half to prepare and cook supper. These times reflect the preparation and cooking time when the activity occurs, and does not take into account days when meals are not prepared.

Table 10: Meals cooked

MEALS:	Is this a cooked meal?			How long does it take to prepare?	What food is most often prepared?
Breakfast	Y 127	N 59	Some-times 63	Average 30 mins	Porridge Eggs and bread Tea
Lunch	Y 121	N 78	Some-times 50	66 mins	Bread and tea African salad (spinach and sour milk)
Supper	Y 184	N 16	Some-times 47	105 mins	Samp (maize staple) and beans Meat/chicken stew

Source: Annecke, 2005

Women still do the cooking and some perform this task more willingly than others. Over half the respondents, 168 (67%), said that the woman preparing and cooking the meals 'liked' doing so, while 44 (18%) said they 'did not like' doing so. When the 70 male respondents were asked whether the cook (usually the woman) liked doing the cooking,

several said they had never asked the woman in question, 8 (3%) said they did not know, while 28 (11%) said it was 'OK'.

When the women who did the cooking were asked whether they would like to give it up, the responses were divided roughly into thirds – the largest proportion, 98 (39%) of respondents said they did not need help with the cooking, while 77 (31%) said they received enough help from members of the household and 61 (24%) said they did not get enough help. Just under half of the respondents (123 - 49%) did not want to hand over the primary responsibility for cooking; while 80 women (32%) said they would like to hand it over but were not sure to whom or how. For many the idea was startling; the idea took them by surprise and they needed to think about it, and nearly 18% of respondents did not answer this question.

The matrix below was developed from responses to questions about whether the woman preparing meals enjoys doing so, the reasons that she doesn't get sufficient help with preparation and cooking, and the reasons that men and boys do not help much with domestic tasks. In about half the households there is some satisfaction gained from cooking or some reciprocity in terms of male behaviour: in return for doing the cooking 'he does other things' or there is no reason for dissatisfaction (the woman lives alone or with children too young to help). In the other half of the households there is some dissatisfaction, some discontent about being the one who carries most of the domestic burdens.

Table 11: Domestic tasks, responsibilities and reasons for behaviour

Comment	The person responsible for preparing the meals likes it Frequency	The person preparing the meal does not get enough help Frequency	Men and boys not helping with household tasks Frequency
I like cooking/ it is my hobby / I don't want help	92	3	1
Have no choice/ live alone	46	18	3
Its my job/duty/ I am a girl/ woman/he fixes things	28	1	19
Family likes me to cook/likes my cooking	14	2	7
Not the main cook 3rd person/ not sure/ no complaint	9	0	0
Too tired/ too busy	8	4	8
Boyfriend forces me	2	1	0
Cannot sleep without eating	1	1	0
I am too old	3	0	2
Children too young	4	3	9
No one wants to help	3	4	1
Time - not enough/ comes in late	3	0	0

Others not good cooks	0	2	1
I am a good mother	3	0	0
Others are lazy	2	1	8

Source: Annecke 2005

Asked specifically whether men or boys helped with the cooking or other household tasks, in 107 (43%) households they did, and in 91 (36%) households they did not. There were 28 single-occupant households and several others without male members, and so the question did not apply to this group. The tasks most frequently performed by men and boys were cleaning the house (52 or 21%), followed by 34 (14%) who did the washing up.

Table 12: Help with domestic tasks by men and boys

Tasks with which men and boys assist	Frequency	%
Cleaning house	52	21
Do dishes / clean up after meal	34	14
Cooks	21	8
Buying groceries/provisions/electricity	15	6
Peeling vegetables / preparing food	7	3
Other: ironing, looking after baby etc.	8	3

Source: Annecke, 2005

Respondents were also asked who uses electricity the most in the household and who benefits most. The majority of respondents, 76%, said that women use the most electricity, and 45% said this was because they do the cooking, while 15% said it was because women were always at home and 5% said it was because women were always watching television. When asked who benefits most from electricity, 59% of the respondents said women did, and 17% of these said it was because women cooked the food. This was despite the fact that electricity is not used for cooking every day.

Table 13: Who uses most electricity and who benefits most

	Most Use		Benefits	
	Frequency	%	Frequency	%
Male	53	22	59	24
Female	185	76	143	59
All	7	3	40	17
Total	**245**	**100**	**242**	**100**

Source: Annecke, 2005

In the group discussions, women agreed that having electricity has benefited them and contributed a lot to their lives, especially if they are able to use electric stoves since these are quicker than paraffin stoves. Men said that electricity has helped them in that they do

not have to wake up so early in the morning to heat water as they have electric kettles, also 'as men, electricity has helped us because we have to 'clean our faces' (shave), the shaving machines using electricity are quick so it no longer takes a long time.'

Making a difference to people's lives: electricity saves money

Calculations from the household survey showed that some households saved money through using electricity, but the introduction of free basic electricity (FBE) skews the calculation. Some said that FBE means they are able to do things such as reading and watching television for longer. The focus groups thought that electricity saved money.

> *'You can now prepare your food in one go using your four-plate stove. You can pre-cook and just warm it up later. You save by buying in bulk and storing in your fridge. This helps you budget better, and saves money and food. We don't throw food away anymore because it's decayed. Refrigerators keep food fresh.'*

Electricity, education and television

All respondents make the point that electricity has afforded them or their children more time to study or do homework and watch television. Television has advantages and disadvantages. For parents living in dangerous areas (which most slums are), television is a necessity to keep children at home, but they worry about what children see and learn from it.

Electricity, health and safety

Men and women thought that electricity has had a positive effect on health and safety and changed lives for the better. One woman had used paraffin for several chores and she always had asthma. She was worried that when she moved to Kuyasa that her condition might worsen because Kuyasa is close to the sea but since she stopped using paraffin her health has been '100% good'. Others reported similar improvements in their children's breathing and no more itchy eyes from the fumes. Men and women said that since the installation of electricity there have been few incidents of fire and children drinking paraffin.

Electricity, leisure and community participation

This is what was said about men and women's leisure:

> '*Electricity has given us leisure, especially for women. Lighting is easy. For those lucky enough to afford cooking with electricity it's a huge relief – less time is now spent cooking, and there's no more scrubbing of pots. … One used to take hours and hours doing the ironing using paraffin or wood, but with electricity it's just a few minutes and everyone, including the children, are willing to help. Some people have washing machines and they can finish their washing in no time. Others have microwaves and within minutes your food is ready. All have contributed enormously to the availability of this free time. Women can now visit their friends and relatives and spend the whole day with them without worrying about cooking or doing washing.'*

And community activity:

'Having electricity has made it easy to participate as one does not have to worry about being home early to cook or for the safety of your family. There are always community meetings on Sunday afternoons, and more women attend these meetings now. In fact there are more women than men attending these meetings.'

Electricity and income generation

There was general agreement that electricity makes it easier to start a business, but there are other conditions which make income generation difficult. The focus groups expressed a desire for a multi-purpose community centre, where they could learn things such as sewing, baking and computer skills. But they realised that this would mean nothing if they did not have a market to sell their things. It was suggested that the shopping centres around Khayelitsha could play an important role in creating a market place. Local people could be employed to produce or manufacture goods for these shops. The group argued that it would be no use having skills and training if you could not be placed. One woman mentioned that she has a lot of certificates at home but they were of no use because she still could not find a job.

In the household survey, thirty-three businesses were run from homes. Most of these involved food and drink in some form: there were four spazas in the sample who sold groceries and/or meat; there were four shebeens (bars) which sold beer and some also food, two different enterprises mentioned selling chicken and cold drinks and/or vegetables or meat and sheep's heads and trotters. Others said they sold Vienna rolls, chips, ice-cream and sweets and had found a niche market at local schools. Non-food businesses included a crèche, five people who sold clothes and shoes or beds, a hairdresser and dressmakers who complained about the limited market and expensive material. Twenty small businesses used electricity for their business, and three used wood. Ten did not use an energy service. The number of people who would like to use electricity for business is greater than the actual number of businesses, and may indicate that some households would like to run businesses for which they need electricity.

The participants in the focus groups said that if a household owned a fridge and did not run a business, then the occupants were 'lazy'. They also said that it was mainly women who run shebeens and have braai-stands for income-generating, although some men also do these things. Electricity, gas and wood are used for these businesses. There is no stigma in using wood for income generation, so wood is used to roast meat, burn the wool from trotters and sheep heads, bake fish and prepare *uMqombothi* (beer).

Men admitted that they used electricity more for entertainment (watching television and playing hi-fis) than on income generating activities. However they said that access to electricity had opened up opportunities for barber shops and welding. They argued that it is not because they are lazy that they are not taking full advantage of the electricity, but that they need powerful electricity to use equipment such as grinders and drilling machines. These are very expensive, and men are reluctant to buy such things if there is no guarantee of profit:

'People in the township don't want to pay – they always complain that they don't have money. Electricity in the township is also unreliable, which makes it difficult to

use it for income-generating activities. The power is sometimes cut off for the whole day and you don't have a back-up system.'

So does access to electricity facilitate changing roles and responsibilities?
The focus groups described the ways in which access to electricity meets women's practical needs by making things easier for women and men, and enabling men to be more independent:

'Men find it easy to cook with electricity, especially cooking meals that do not take long to cook, for instance, frying eggs and boiling water for tea. It has also made life easier for men in that there's usually ready food in the fridge – after work you simply warm up the food. We don't bother our wives anymore….'

Having recourse to the law has allowed women to refuse to perform their wifely chores with impunity and, along with improved education, granted access to (some) income and a voice in decision-making, this may contribute to meeting women's strategic needs and changing power relationships. From a man's perspective:

'Perhaps you felt like a drink or two and decided to visit the shebeen next door. When you come back late in the evening there's no food, and the dishes and pots are clean and the children and your partner have gone to sleep already. You are powerless.'

4.3. HIV and electricity use

The focus groups said:

'People who are HIV positive need a warm, dry place to live in. They can easily get sick in conditions where there are no ceilings and you can see a person walking on the street through gaps in the wall. The draughts, particularly at night, can be fatal. Warm water is also necessary but we don't have geysers here. Refrigeration is also necessary not just to keep food fresh and healthy, but for their medication as well.

As far as smoky flames are concerned, we don't seem to have much choice because cooking with electricity is expensive. If there is a person with chest problems in the house, or an HIV-positive person, it would be advisable that they are not in the house when flames are used to cook – it amounts to suicide. It is a pity that we can't use gas here as we are afraid of things catching fire. But gas is cheaper than electricity and not as bad as paraffin in terms of the smell and fumes. The use of paraffin affects everyone's health – chest pains, itching eyes. Electricity could solve all these problems if we were to use only electricity.'

5. Conclusions

The question for this study was *Can energy interventions contribute to the process of empowering women and, if so, under what conditions are these most effective?* An important component of the study was to establish the current status of women and their empowerment in South Africa, and to assess how this had changed over the past ten years. The study then asked if the framework for gender equality had been institutionalised, and whether access to a modern energy service, such as electricity, tended to reinforce or challenge existing gender relations?

Urbanisation

Urban studies are important because internationally there are strong trends towards urbanisation, and future population growth will be in urban centres (UN-Habitat, 2003). Urban areas are different to rural areas in that culture and traditions may be reconstructed to fit new lifestyles or may be dropped if this is expedient. However, some practices may be labelled as 'our culture' or 'our tradition' and upheld as unchanging and inviolable – violence to women is often claimed to be one such tradition (Manjoo, 2005). The urban context is also important in that it is more likely to offer women some recourse to the law and some access to income generation, an essential component of independence which rural women may not have.

Gender equality and gender-based violence

Overall, the evidence was that gender relations have indeed changed. The 'quick picture' survey provided evidence that the better educated men have positive attitudes towards gender equality, whereas most men in the low-income group felt negatively about the changes. [14] These men were keen to express their anger about their 'loss of rights', their belief that the Constitution was 'anti-men' and 'unworkable', and that men no longer had a place in society. Many men believe they have been forced to give up practices that were rightfully theirs ten years ago – such as the right to beat their wife. Whereas previously they had been immune to punishment, the men resented 'being locked up' by police sympathetic to women who had been abused. The degree of unhappiness is captured by one participant who was not against gender equality, but said:

> *'The problem is that the government seems to be intervening quite strongly in family matters these days. As a result the rate of divorce and men committing suicide is quite high – which was never the case before. Men commit suicide because they find it difficult to accept the conditions under which they are forced to live in the new South Africa – they find life unbearable. You can't kick out your wife if you are unhappy with her because [the police will see that] you lose your house and possessions and sleep outside.'*

While suicides and family killings do appear to have increased, this is anecdotal evidence and dealing with the opaque crime statistics in South Africa is beyond the scope of this study. Integrating domestic violence into this gender and energy study has been

[14] The high-income group consisted of similar numbers of black and white people indicating that this is an issue of class rather than race. A nine-question study conducted by Research Surveys for the University of Cape Town Unilever Institute found attitudes similar to those above in their sample of 3500 respondents (Rutter, 2004).

complicated, especially since the study is framed by the Constitution which offers increased rights for women. Literature offers reasons for gendered violence such as insecurity, the legacy of the brutality of apartheid and the confusion of identities in transition (Silberschmidt, 2001; Sideris, 2005), but there are as yet no satisfactory answers to the increased violence in South Africa. It seems as if the multiple changes in the last decade may have exacerbated emotional insecurities.

However positive changes are apparent. Facilitators found that in the groups where men and women were present, women often opened the discussion (unlike ten ago), and spoke freely during the meetings. Evidence from the focus groups is that, emboldened by the right to equality and support from the local police station, poor urban women have begun to insist on greater reciprocity from men: to be home for dinner or make their own, and not to use violence to settle arguments or to force sex.

It was apparent that men did not complain that electricity had led to them having to do things for themselves – that is they did not blame the technology. In fact, they seemed rather relieved to be able to make themselves tea and to cook if necessary – they blamed instead the change in gender relations for their change in status. It is not the technology which is gendered; it is the socio-political constructions of its use: ownership of, access to, control over, benefits from, which become gendered.

Rights and privileges

The facilitators had to be well prepared to manage the highly charged discussions about men's 'right' to violence. What the facilitators found useful was to draw a distinction between rights and privileges. The concept of equal rights for all, as enshrined in the Constitution, means exactly that. No one person should have any more or less rights than anyone else. While men agreed with this notion with regard to race, they had difficulty in applying it to gender. The right of women not to be beaten takes away the power (and privilege) of the beater, and men resented this. They also had difficulty is accepting that they had the same rights as they had in 1994, but that women now have these rights too. They resented what they perceived as losing the protection of the police while women gained this. There are far too few police who have been retrained, and those who have, are in a sensitive position and probably do not have the skills and resources to maintain a balance unless they too are continually supported (Potgieter, 2005). But the good news is that, since women have more rights (and by implication more power), we can say that gender relations are changing.

Income parity

Overall women still earn less than men for the same work. Most respondents (men and women) in the high-income group knew this, as did women in the low-income group. Most men in the low-income group thought that women earned the same or more than men. This may have been because more women reported working than men, and men equate this with earning a living wage. This is not the case for women. More women than men work in the informal sector where incomes are much lower than waged employment. Indeed, most women in the informal sector earn the equivalent of half of a living wage. Informal activities assist survival, fill the pantry for the household and create different

identities, but for most people they are not a way out of the poverty trap and the energy sector should be wary of advocating very small and micro-enterprises as a panacea for poverty (Dunnert, 2001). By all accounts women do have more control over income than ten years ago, especially if they earn it themselves, but they seldom spend it on themselves, buying only small trinkets if anything at all.

The gendered division of labour

If there was gender equality, men's and women's energy needs would be much more similar, whereas they vary considerably. It is clear that women still do most of the domestic chores, and that having electricity had made these easier. In addition, in most households, men contribute some form of assistance. The facilitator noted:

> *'The impression I get is that men do realise how burdensome these chores can be, but holding to tradition frees them from responsibility, particularly in a situation whereby these domestic chores have to be performed in public which they will never do.'*

As much as men's identity is vested in being head of the household and the breadwinner, so women's identity is vested in being the nurturer, and for many this means doing the chores. There is no overwhelming desire to give up control of the household. A small majority of women said that they enjoyed cooking and/or 'it is my hobby'. Half of the women said they did not want to give up cooking, and over two-thirds that they did not need help, or that they received sufficient help. What women would like to change would be to have enough food to cook and for their efforts to be appreciated. This is a good example of an unmet emotional need. Recognition of women's labour would contribute to gender equality. Interestingly, the discussions about liking or giving up cooking were not related to the energy service at hand, although in a different question women (and men) made it clear that they would use electricity every day if they could afford to.

It was noticeable that very few men help with child care, but this was not raised as an issue by any of the participants. The attitude of most men was that they would select what they would help with, and when, and some men were wary of setting a precedent of helping in case they might feel under some obligation to do so again. Most men do not take responsibility for seeing that tasks get done, as women do. This option of helping, or not, ensures that domestic chores mean something quite different to men than to women.

As far as appliances were concerned, women, men said, had an eye for a bargain or an appliance that was needed, and made these purchases of their own accord. If a substantial amount of money was to be spent, or the children were involved (many of the items households aspired to were for teenagers), then joint decisions would be made. It would appear that decision-making about appliances reflects growing equality between men and women, but women would like still further labour saving appliances – washing machines and microwaves.

Women have largely taken control of managing electricity as with any other energy service: the majority of women supply the money, go and buy credits (or send a boy or older children), key these in and monitor the meter. However, when it comes to 'doing

electrical work' – wiring, changing plugs etc., the traditional roles return and men or boys do this work. It may be that boys learn these skills from other males in the households or are expected to assume the role. Girl-children attend school at the same rate as boys in South Africa. However they do not take mathematics and science in the same numbers or follow through to university, so women's effective access to technical knowledge is still limited.

Participants could differentiate between those who used electricity the most, and those who benefited the most. The majority said that women use the most electricity, primarily because they do the cooking and/or were at home most. A smaller proportion of respondents said women benefited most from electricity (because women did the cooking), while 27% of respondents said that everyone benefited equally from electricity, and the children especially benefited from having television. Men agreed that they reap the benefits of electricity in that they are able to watch television and do things for themselves. But the perception remained that most electricity is used for cooking – and would indicate that members of the family are unaware of their contribution to consumption.

Women engage in a variety of micro-enterprises but make less than a living wage from these. Women use electric fridges and whatever fuel is cheapest for preparing food to sell. Since there is no stigma attached to burning wood for income generation this is used when available. Men admit that they use electricity more for entertainment than on income-generating activities, but they argue that this is not because they are lazy, but because they need expensive equipment and a powerful electricity supply and they cannot take the risk of not being able to pay for or rely on these respectively. Thus men justify their inactivity with recourse to traditional notions of masculine work and have been slow to take on new identities (Segal, 1990).

Another indicator of women's empowerment is leisure and the time available to engage in activities of choice. Both women and men enjoyed more leisure time in electrified households, and men especially said that this gives women the time to attend church meetings without worrying about coming home to cook. While women agreed it was quite clear that they would like more labour-saving devices, most community-minded women put their energy into church activities. There is no longer a strong women's movement, and collective action is often limited to reacting to issues such as the non-delivery of services or rape.

Health and safety

Both men and women are concerned with health and safety, particularly with regard to paraffin use. Women's health improves considerably if they are not exposed to paraffin, while men feel the responsibility of having to salvage materials and rebuild shacks after fires (Ross and Lerer, 1994; Mehlwana, 1999). All participants wanted warm water, electricity and a warm, dry home for AIDS patients, although no-one admitted to having or knowing anyone with HIV.

In negative terms, that fact that eight more households have televisions than electric stoves is a consequence of affordability and safety where children are concerned: parents like to have children at home, and preferably indoors. It was also noticeable that fewer girl children than boys are sent to buy electricity. Rape outside forced marital sex is not dealt with in this study, but the danger of abduction and rape is one of the reasons that girls are kept at home.[15]

In conclusion, asymmetrical gender and power relations mean that the scales are tipped in men's favour and, generally, domestic roles and responsibilities have not been transformed by the gender equality clause. Women still do the bulk of domestic chores. Some aspects of electrification help to break down stereotypical roles of what men and women do and don't do – such as sharing cooking, heating water and charging the meter, but others such as wiring and fixing reinforce gender roles and men still tend to dominate. In addition, the fear of violence is a major force in keeping women submissive and 'doing their duties'. There have been improvements in the justice system which make it possible for women in some areas to defy men and/or report abuse, but this is not so for the majority of women. Men and women appear to have unfulfilled emotional needs which hamper progress towards gender equality; ways of meeting these will have to be found.

However, achieving gender equality is a process, and in answer to the question '*How can energy interventions most effectively contribute to the process of empowering women',* what this case study shows is that, backed by serious institutional support for gender equality, access to modern energy services, in this case electricity, can facilitate shifts in gender roles and responsibilities in the domestic sphere. The reasons for this are two-fold: firstly women know they have legal backing to assert their rights, and men are pushed by the legal system to accept this. Secondly, electricity makes it easier for men to perform domestic chores because they are not as burdensome or demeaning. South Africans' antipathy to LPG makes it difficult to generalise this finding to all modern energy services. However, it is clear that gender equality is not only a matter of meeting material needs and offering equal opportunities, it is also necessary to meet emotional needs in an accepting cultural environment.

Researchers always want more. This was an exploratory study, constrained by having to explore some numerical trends as well as conduct in-depth discussions and train facilitators. Having laid the groundwork, more qualitative work would be useful. At the same time, as one participant in the DFID study asked, 'how much do we need to know to do the right thing?' This study provides several pointers for effective action towards gender empowerment and effective energy interventions, and these are discussed below.

[15] South Africa's rape and murder statistics are shocking, a girl child is raped and murdered at least once a month in the Khayelitsha area. More than 50,000 rapes have been reported each year since 2000. How many were not reported can only be surmised (www.rapecrisis.org.za).

6. Recommendations

6.1. Make gender equality a priority and provide the resources necessary

Gender relations are systemically and structurally determined and perpetuated, and so recognising gender equality at the policy level is a necessary step towards a society in which men and women are equal. Enforcing these rights is the next step and, for this, institutional change is necessary. This includes political support for gender equality, access to opportunities and resources for women, independent incomes, education and the belief in human rights, as well as legal enforcement. We can only recommend on-going support for these and urge the inclusion of trying to find ways to meet emotional needs.

Seeing the effect of national level policy at the micro-level can be difficult and is often obscured by the challenges of implementation. In this study, national policy changes in gender equality and the energy sector are implemented through changes to the system of justice (which includes retraining the police), and an efficient utility. Neither is perfect, but at the sites where this study was carried out, access to electricity joins the notion of gender equality in enabling women and men to shift some of their gendered roles and some aspects of power in their relationships. Some women can refuse their traditional tasks, without fear of reprisal, because they have institutional support. The implication is that delivery in all sectors will create unexpected and beneficial ripple effects, so although integration may be the ideal, consistent delivery and support is also important.

Although agency at the household level is important for women to improve their own lives (as are some forms of technology, in particular electricity and electrical appliances), this is insufficient to bring about transformation. Cases of gender inequality have come before the courts in South Africa with some success, but there are significant battles still to be fought, and enormous prejudices and obstacles to overcome. These include far too few watchdog and policing agencies to ensure personal safety let alone equality for women. Police such as those mentioned in this study tend to be exceptional and need all the support they can get. The researcher is involved with discussions with the Superintendent to see what media or other assistance would be helpful, but the police are known to be under-resourced.

6.2. Bring more men on board

Disaffected men may constitute a threat to themselves and society, and clearly many men in this study were unhappy with current conditions. Gender relations are about the give and take of power. Some men have experienced their loss of power as a personal affront and have reacted violently - either physically or emotionally. There are several gender activist groups that engage men against violence[16], but few that work to change disaffected men.[17] A positive sign was that men were eager to participate in the

[16] Men as Partners (MAP) is one such network, Men in Partnership against HIV/AIDS (MIPAA) is another.
[17] The fatherhood project may be one of these (www.hsrc.ac.za).

discussion groups about gender. While this was used as an opportunity to vent their anger (the most telling responses were of deep nostalgia, and a wish to go back to 'the traditional ways, when men were the head of everything'), these meetings also offered an opportunity to seek solutions. The men's first solution was to organise a march to parliament to demand a return of their rights. Much more discussion and consultation is needed, and resources for this are being explored. Several men argued for women's rights to be recognised, and these men could be trained as facilitators and counsellors according to the recognised needs including for emotional support (Khumalo, 2005).

Education and relative security appear to have assisted middle class men to accept gender equality – we need to provide similar conditions for other men as well as more role models. To date, gender sensitisation and the marketing of notions of masculinity, which include performing domestic chores, are aimed at the middle class and are inadequate for low-income groups. Without shifts in the attitudes of men, modern energy services may fail to play an optimal role in facilitating gender equality. The energy sector could also take a more proactive role in addressing gender and exploring ideas of equality with men and women. The time for this is ripe. Global media reach has helped spread the word on human rights, and this has assisted women's struggles and claims. Human rights and democracy are 'in the air' and pervade much discussion about the future of Africa and other developing continents. This could profitably be brought into gender and energy forums.

6.3. Keep paying attention to women

The victories for the women in this study have been small. Women need continual support and education to empower themselves. It was noticeable in the one meeting which was formally structured (by the participants) that women were quieter. Formalities act as a reminder of traditional values such as deferring to gender and age, and can be used to silence women. There needs to be a conscious effort to make such forums informal and welcoming to women.

Women still lack confidence in even small technical tasks such as wiring and changing plugs. Utilities engaged in townships should include such elementary demonstrations in their electrification and social responsibility programmes.

Women's emotional needs are unmet, these include recognition of the work they do, as well as emotional security, and an end to power play and the acceptance of women as equals.

6.4. Investigate decreasing household size and its impact on gender relations and energy use

An important characteristic of households in Khayelitsha is that household sizes are decreasing. This may affect energy use and gender relations and should be investigated. Smaller households in urban areas may of themselves relieve some of women's physical burden in that there are fewer people to cook and wash and clean for. This is not

necessarily the case in rural areas where family labour may be needed to cope with the tasks at hand.

There were an unexpectedly small number of children in the sampled households – a phenomenon not easily explained. A doctor reported that 50% of the children in Khayelitsha die of HIV-related illnesses before they turn five (personal communication, June 2005). If this is correct, it will have significant impact on gender and energy planning. Little has been done in the energy sector to accommodate the impact of HIV/AIDS, [18] and this is a priority area for research.

It is difficult to find a balance between celebrating the small but important victories in the empowerment of women through energy interventions in South Africa, and the amount of work still to be done. Further research is necessary to understand the gendered nuances of energy use better, to identify key aspects in the re-orientation of the justice system that support women, and to monitor ongoing changes in the relationships between the two.

[18]In South Africa some 400 000 people are dying of AIDS-related illnesses each year, and the number is predicted to increase.

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