

Rural Energy

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**Equity and empowerment:
possible outcomes of the rural
electrification programme?**

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Executive summary

Equity objectives in the South African electrification programme aim at correcting the outcome or expression of the inequalities in society through attempting to improve access to electricity and ameliorate the financial burden of the poor of gaining access to and using electricity. Through recognition of the existence of racial and class inequalities in South African society equity strategies, such as the subsidisation of tariffs, are considered to be justified and are implemented. Although some research studies examine the effects of electrification on women, unequal power relations of gender, however, do not inform the development of equity strategies for rural electrification.

While it is important to devise strategies which will improve access to electricity, it is not appropriate to stop at this. As the livelihoods of poor people are characterised by vulnerability, strategies which attempt to ensure that poor men and women are able to use their electricity supply on a continuing basis, without prejudicing their ability to survive are essential. Together with improving access, then, providing for *security* (continued access and use) is important, especially if we are to ensure that the provision of electricity contributes towards the amelioration, rather than exacerbation, of poverty. Although achieving rests largely with poverty alleviation, ensuring that both men and women have control over resources necessary for their survival is equally important.

A useful way of illustrating this point is through the examination of women's land rights under customary law: women have access to land, but do not necessarily have control over it. As women have access to land through husbands or brothers or chiefs they are vulnerable to loss of that resource, especially as pressure on the land increases and less land is available. Underwriting women's tenure rights in law has been an important strategy to ensure that women's access to land is secure. In terms of rural electrification, the introduction of credit schemes for appliance purchases may result in improved benefits for women who are unable to secure control over household resources.

Although these policy measures provide an important framework for transformation, they will not necessarily lead to shifts in the unequal power relations which ultimately determine unequal access to and control over resources. It is important that these unequal relations are challenged and transformed. Technical or legal solutions to inequality can always be challenged and undermined: for example, even in India where the women have legal title to land, the social relations of power operate in a myriad of ways to subvert this legal right. In the same way, strategies which aim to provide for continuing access and use of electricity may be undermined. Thus, together with providing this framework, investment in human capacity to take control over the development process and contribute towards social transformation is also necessary. In other words, attention is given to the empowerment of poor and marginal people.

Empowerment, however, cannot be automatically delivered through a rural electrification programme. Even the adoption of a participatory approach to the delivery of rural electrification will not result in an injection of power into the lives of poor and marginal people. However, participatory approaches can and do build human capacity for transcending behaviour and investment in human development is essential. If, in our implementation of participatory development, we absorb the issues concerning power, conflict and diversity, it may be possible to at least resolve some of the problems which have been encountered by rural people in the South African rural electrification programme.

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Introduction

[As] many households are presently unable to afford cost based tariffs, government acknowledges that moderately subsidised tariffs for poor domestic consumers are necessary for equity reasons. (DME 1998)

Whilst equity objectives form the basis of many policy decisions and strategies made in the energy sector in South Africa, empowerment is not often cited as the goal of programmes and projects, especially within the context of rural electrification. This paper, one of the final summary papers of the EDRC project entitled 'The role of electricity in the integrated provision of energy to rural areas', sets out to examine the concepts of equity and empowerment with a view to assessing whether objectives which flow from them could be achieved in the rural electrification programme.

The need to examine the concepts of equity and empowerment is borne out of the difficulty of establishing the meaning(s) ascribed to them. Both concepts are used without much thought about what is meant by them or how they could be achieved and, for this reason often remain little more than platitudes. As we became aware of the difficulty of ensuring that the project's policy recommendations would lead to an electrification programme which benefited poor and marginal rural people, and did not only reach the relatively more wealthy rural people, it became clear that we needed to examine what was meant by equity and how a rural electrification programme was to achieve it. Through an understanding of electrification as a social intervention, we examined the process of delivery of electricity in various communities. This led to evaluating the possibility of facilitating the empowerment of rural people through the electrification programme. The centrality of power relations in the delivery of electricity emerged as a key concept in the exploration of both equity and empowerment.

This paper will begin by summarising the findings on rural electrification and equity in other countries, as well as examine the notions of equity in South African energy discourse. The strategies which have been implemented to achieve equity goals in South Africa will be examined. It will be argued that the equity objectives in the electrification programme aim at correcting the outcome or expression, rather than the underlying causes, of the inequalities in society. Thus, rural electrification equity strategies will not lead to shifts in power relations which ultimately determined unequal access to and control over resources. For this reason, it is important to turn to the possibility of facilitating the empowerment of rural people through rural electrification. The paper examines the concept of empowerment, and the role of a participatory approach to rural electrification in achieving it. It argues that while participation cannot miraculously deliver empowerment, participatory approaches can and do build human capacity for transcending behaviour.

Rural electrification and equity: perspectives from other countries¹

The early rural electrification programmes viewed rural electrification as an effective instrument in redressing the regional inequalities in Third World countries. It was assumed that urban biases inherent in the allocation of resources would be reversed. And at the village level, increasing the productive uses of electricity would 'narrow the gap' between the poor and the rich by creating new jobs and improving the standard of living of the poor (Barnes 1988). However, assessments of rural electrification programmes soon pointed to the fact that 'there was a marked tendency for rural electrification to accrue mainly to better off and influential people' (Munasinghe 1987: 10) and that electricity predominantly reached more prosperous farms, businesses and villages (Fluitman 1983).

¹ This section is taken from the report 'The impacts of rural electrification: exploring the silences' (James 1995).

In the short term rural electrification benefits have been found to initially accrue to the relatively wealthier people in rural areas. Rural electrification has benefited medium and large farmers, while remaining beyond the reach of small farmers and landless labourers (Fluitman 1983). Wealthier households are able to afford connections first, and are also more able to exert political influence over which villages will receive electricity first (Cecelski 1992; Barnes 1988). Also, distribution of appliances favours relatively wealthy rural dwellers (Barnes 1988). It has been argued that subsidies (which are often aimed at the poor), have in fact benefited the relatively wealthy sectors of rural communities (Fluitman 1983). In conclusion, in the short term rural electrification has resulted in inequalities within regions, villages, and farms.

Equity in South African energy discourse²

Striking inequalities in access to social infrastructure will have to be eliminated and urgent new programmes initiated to meet basic needs... The vast majority of the black population do not have electricity in their homes, whilst almost all whites, even those on remote rural farms, are connected to the national grid. Unelectrified households rely on wood, coal, paraffin, gas, candles and batteries for cooking, heating and lighting, and are denied the convenience and flexibility of electrical appliances such as kettles, irons, refrigerators and the multitude of time-saving devices found in high-consumption homes. Many of the non-electric forms of energy also degrade the local environments of users which, in turn cause adverse impacts on the health of people exposed to these effects. For many of the urban poor who do have access to electricity the quality of the service they receive is far inferior to that enjoyed by white consumers, with interruptions in supply and poor maintenance. Moreover, poor consumers in electrified townships often pay higher electricity tariffs than consumers from historically white areas in which the grid and reticulation costs have long since been paid off... *The key equity issue in the energy sector is the access of poorer households to adequate and affordable energy supplies* (Eberhard & van Horen 1995: 37).

For energy policy makers and researchers, equity concerns the need to redress the imbalances which have arisen due to racist apartheid and colonial policies which neglected to provide electricity and energy to the majority of people in the country. Clearly, a commitment to this end is essential but, the discussion below will show that the way in which equity is defined and understood sets the boundaries for how these inequalities should be addressed.

The analysis quoted above outlines the dominant way in which equity is understood by energy policy makers in South Africa. The 'striking inequalities' are presented as a comparison of energy services available to black and white people. This is a valid analysis. What is interesting, however, is the contradiction which is set up between this analysis and the key equity issues. Although it is easy to assume that redressing inequalities would mean that the same energy service should be provided to all, that is, *equality* in energy services across racial boundaries, the key equity issues defined above do not mean this.

Adequate does not suggest equal: at best it can mean 'proportionate to the requirements' and at worst it can mean 'barely sufficient'.³ Although it is unlikely that these energy researchers would advocate the latter meaning of adequate, it is a slippery term which is open to multiple interpretations. How do we measure what is adequate and affordable? By which and whose standards do we measure them by? Even within the broad category of 'the poor' there is evidence to suggest that what is adequate and affordable for one person may be neither for

² Over the last few years there have been a number of EDRC energy researchers who have questioned the dominant way of viewing equity in the energy sector. Thanks in particular to Gillian Simmonds, Wendy Annecke, Tim James and Cecile Thom for useful discussions on our notions of equity.

³ The *Oxford English Dictionary* defines adequate as 'proportionate (to the requirements); sufficient; satisfactory; barely sufficient.'

someone else. Take Eskom's initiative to pilot the 2.5A supply of electricity at Tambo. Based on willingness-to-pay survey data it was thought that people would be able to pay a R15 flat-rate tariff every month. The low average monthly kW/h consumption data led to the assumption that people did not use electricity for thermal applications and the 2.5A current limit would be adequate. However, it was soon clear that the 2.5A supply option not affordable for the majority of the community members, and nor was it adequate for everyone.

The problem with the meaning ascribed to equity by the energy sector, then, is that it has the 'semantic shadow of equality'⁴ which hangs around it. But, equity should not be confused with equality. Achieving social equity is equivalent to social justice or fairness, while equality refers to being equal or having equal quantity or quality. As with the concepts of adequate and affordable, there are similar difficulties in determining what is fair or just.

Rural electrification strategies which aim for social equity

In terms of social justice there are a number of technical/financial strategies which can be adopted to improve poor people's ability to gain access to electricity, as well as to use it. Electrification programmes throughout the Third World, including South Africa, recognise that poor people cannot afford to pay 'market-related' prices for electricity and thus, in the interest of social equity subsidisation is considered to be desirable. Due to the financial implications of receiving and using electricity many of these strategies are concerned with ameliorating the financial burden electricity places on poor households. Although households face these financial pressures through having to pay connection fees, buy appliances, wire their homes and buy electricity, South African social equity strategies have largely aimed at reducing the connection fees and the electricity tariffs paid by poor people. For instance, Eskom has undertaken electrification of low-income households through subsidising the capital costs of the programme. Under the new policy directive electrification will continue to be subsidised via a National Electrification Fund and tariffs will be subsidised (DME 1998).

There are no programmes or initiatives which aim at reducing the cost which poor people have to pay for electrical appliances electrical. With the exception of the energisation⁵ package at KwaBhaza where gas stoves may be subsidised in order to reduce the cost, most appliance programmes have a different focus, such as achieving energy efficiency. Programmes, such as the immanent energy efficient lighting programme to be implemented by Eskom, do attempt to reduce the cost of efficient appliances. However, the effect of this strategy is to bring the cost of efficient appliances in line with other appliances. The benefits to poor people lie in the reduced operating cost rather than in a reduction in the price of the appliance (Simmonds 1998).

Systems and methods of payment are also important in reducing the burden which electricity places on poor people and should aim to ensure that poor people are able control their expenditure on electricity. For instance, pre-payment meters are better than flat rate tariffs because of the flexibility and control they allow for users. Research has shown that the flat-rate tariff militates against the sustained use of electricity by the very poor. It was found that the flat-rate tariff resulted either in households being unable to use their electricity supply or in stress on household budgets. Equally important is the finding that poor households were paying more per month for the same electricity service (for example, lighting) than other households, which were able to afford a higher connection fee for a higher level of supply with a pre-payment meter. Aside from the inherent inequality in this, such a situation can have little impact on improving the conditions of the poor (James 1997).

⁴ I owe this phrase to Tim James of EDRC.

⁵ Energisation refers to an Eskom package where photovoltaics and gas are offered to rural people.

These strategies are in keeping with initiatives in other Third World countries where electricity is unaffordable for poor people.

Innovative lower-cost strategies and more liberal credit and connection policies for housewiring and appliances are being experimented with in some countries to enable grid electrification to increase access to electricity among rural households in electrified villages, expand the use of electricity beyond lighting to other appliances in more households, and bring electricity within the reach of more poor households. (Cecelski 1996: 11)

To date no attention has been given to the difficulties which poor households experience in wiring their homes. Very few rural households have invested in house wiring, with the majority of rural households using candles and paraffin in conjunction with electricity for lighting. There are a number of strategies which could be put in place to enable poor people to wire their homes by improving supply of wiring equipment to rural areas, introducing education programmes which train people to wire their homes and establishing wiring financing schemes (James 1997).

Another strategy which would enhance the benefits of electrification for poor people is by making internal mechanisms available which will enable battery-operated radios to run on mains electricity. Research has shown that households are unable to enjoy the benefit, and cost saving, of using electricity to operate radios. Most radios have no internal mechanism to use mains electricity and there are no conversion mechanisms available and dry cell batteries are still used to power radios. Thus, electricity often places a burden on household energy budgets as expenditure on both electricity and batteries occurs (Annecke 1996, James 1997).

All of the strategies above aim at ameliorating the financial burden of electrification on households and implicate state support or action. Within the current macro-economic framework, it is feasible that state commitment to achieving these equity objectives will always be mediated by other concerns:

In its approach to electricity pricing policy government has to achieve an appropriate balance between meeting equity, economic growth and environmental goals. (DME 1998: 154)

Equity and economic growth are uneasy bedfellows, and it is possible that the current situation could change. It is likely that the restructuring of the electricity supply industry (ESI), will see the resources currently allocated to electrification forming part of the fiscus and being allocated through budgetary processes. Thus, it is possible that the pressures on the fiscus will come to bear on the electrification programme and decisions about the need for subsidisation could be changed. While this move is likely to have positive effects by enabling policy makers to weigh up the need for electrification against other needs, such as water, in rural areas, it could also lead to less subsidisation and greater disparities between the poor and the relatively wealthy.

Inequality and equity

Unlike equality, inequality retains a 'relationship' with equity in that the desire to address societal inequalities often motivates the inclusion of social equity goals and strategies in policy. Equity objectives in energy policy aim at ameliorating the outcome or expression, rather than the structural causes, of inequality in society.

While equity strategies, such as subsidisation, lead to improved access to energy supplies, they are limited in their ability to redress inequalities in society. It has been noted that the strongest rationale for rural electrification in South Africa is the need to address the inequalities in access to electricity (see Thom 1997: 33). In effect, access is understood as 'connection to the grid' and the number of connections is considered to be an indicator of the success in achieving equity goals. Without undermining Eskom's enormous achievement of reaching the target number of connections per year we would like to suggest that an exclusive focus on access

detracts from the social inequalities which lie inside these access figures. The case study below has been included to illustrate this point.

Access to electricity but cannot use it

Mrs C, 53, lives at Mafefe with four of her children and three grandchildren. She has no regular source of income, but tries to earn money by making mud bricks and building mud houses for people. In order to earn enough from this task she must collect her own soil and cow dung. Her earnings are small: for example, R100 for a two-roomed house, R25 for a yard wall. Sometimes she will collect dung for people and will charge them 20c for a 20 litre tin. Her sons help her to dig the soil when she is building, whilst her daughters collect wood to sell and receive R10 per bundle. Mrs C is desperate for a pension, but has to wait another seven years. She does not think she will be alive by then.

Coupled with the lack of opportunity to earn enough money, Mrs C has no land to plough and no livestock: 'I have nothing.... I am just a person of God'. Although she has borrowed and continues to borrow from relatives and neighbours, she is concerned that it 'disturbs' them.

Her house has two rooms, although she has built another three-roomed house from mud bricks. Her sister's son gave her a bag of cement, a window frame and a door frame. He has also promised to give her corrugated iron for the roof. In the meantime she has no poles for the beams and her house has no roof. She is worried that it will collapse if a roof is not put on before the rains come.

Mrs D has stopped using electricity altogether. This household has made an investment in electricity, albeit a small one, by paying for the connection and wiring the homestead with three light bulbs: two outside and one inside the two-roomed house. This is not insignificant, given the household's circumstances. However, they have not paid their electricity bill for the last two months. Mrs C feels that it is useless to report to the agency that she cannot afford to pay. They use four candles a month – which is cheaper than paying for electricity. She feels that electricity is useless for her and that it is only for rich people. Thus, for this household, which exists in extreme poverty, the flat-rate tariff of even R8.50 is unaffordable. Buying candles is cheaper and having to pay for electricity places a burden on the household.

(Source: James 1997)

The extreme condition of poverty described above has resulted in Mrs D not being able to use electricity at all. Unlike many other countries in the Third World, progressive connection policies, which are relatively low,⁶ have enabled poorer households to get electricity connections, thereby lessening the disparity in access. But, when it comes to using electricity on an ongoing basis poor households face other resource difficulties, such as purchasing appliances, wiring their homes and paying for the electricity they use. Mrs D's electricity problem may be resolved by giving her a pre-payment meter so that she can at least use electricity when she has money available for it, and she will not be penalised by reconnection fees and debt. But, strategies such as providing pre-payment meters, will not change the condition of impoverishment of the majority of rural people in South Africa as the structural causes of poverty remain unchallenged and unchanged. As Colleen Crawford Cousins (1988) argues, '[e]lectrification cannot solve the problem of intra-community equity in the areas under discussion. Intra-community equity has been irrevocably undermined by the experience of and response to dispossession, apartheid, and "homeland" rule'.

Women and equity in rural electrification: perspectives from other countries

Unequal power relations do not only exist within communities but, also operate within households. It is interesting, however, that studies from other countries rarely focus on the inequalities within households. While women are singled out as an important category, equality

⁶ In fact, in the electrification project at Mafefe where Mrs D lived the connection fee for the 2.5A households was R10 which was even lower than standard connection fee of R 45 during that time.

and inequality do not enter the discussions of women and equity in the rural electrification literature. Although a focus on women may imply that inequalities between women and men exist this is never explicitly articulated. Rather, the key equity 'issues' with regard to women have focused on whether women benefit more from having electricity than do men, as well as on attempting to understand what effects electricity has had on the lives of women (and children) with a particular focus on assessing the impact on women's workload, productivity and income. The main points of the discussions on women and equity in the international literature are summarised below.

Women are thought to benefit from rural electrification through improved lighting which has led to an extension of their working hours and enabled them to engage in productive work (Barnes 1988). In Morocco both men and women reported additional economic activities in the evening hours due to electric lighting. Similar findings are true for Thailand where home-based industries increased their output by working later and agricultural activity also increased as women were able to postpone the preparation of the evening meal (Cecelski 1996). In Colombia, instead of increased productivity, rural electrification has led to increased women's time for leisure activities (Barnes 1988).

There are concerns about the impact of the extension of working hours on women's health and well-being as a number of studies draw attention to the fact that the number of hours spent sleeping had been reduced as a result of extended working hours (Cecelski 1992; Cecelski 1996). Also, Barnes (1988) and Cecelski (1992), mentioned the fact that women may be negatively affected by agricultural mechanisation which is brought about in part by rural electrification. In Indonesia and Bangladesh women's wage labour in rice production was found to be displaced through mechanisation (Cecelski 1992).

It is thought that benefits of household electrification are enjoyed primarily by women and children as they spend more time in the home (Barnes 1985). Electrification is considered to be important because it lessens women's drudgery by reducing workloads through the use of appliances and mechanised facilities, such as electrified grain and food processors (Barnes 1988; Cecelski 1992).

Policy-making and generalisations

The summary of the effects of rural electrification on women included above points to the difficulty of making generalisations about women (or any other social category), their position and the effects on them of an intervention, such as electricity. Although this is acknowledged by some of the writers who suggest that the effect of rural electrification on women's overall work and income cannot be assumed as it varies from one locality to another (Cecelski 1992), the analysis does make generalisations about women and treats women as an homogenous group.

The problem with treating women as a distinct and homogenous social category, is that it implies that women operate in a social vacuum, isolated from their relations with men and each other. Women are not all the same: there are distinct differences (for instance, of age, race, class and religion) within the social category of women. These differences give rise to different needs and interests. Treatment of women as a distinct category assumes that all women benefit from rural electrification in the same way and that all women want and need electricity for the same reason. However, generalisations about social categories are often legitimated by statistical trends which fit more easily into the process of policy-making. For instance, generalising about women has further been legitimated by the trends which suggest that the feminisation of poverty in South Africa, and elsewhere, is on the increase as more and more women face extreme poverty and are unable to ensure their own survival or that of their families. The statistics show that

The general inadequacy of service provision impacts disproportionately on women, particularly in rural areas. Twenty percent of African women aged 20 or above have

received no formal education compared to 14% of African men, and 0% of white women and men. Women suffer from substantially higher unemployment rates than men (35-38% versus 25%). The rate of unemployment is even higher, at 47% for African women. Women also predominate in the informal sector of the economy where they are engaged in lower status and lower paid occupations such as street vending, domestic work and scavenging. Even in formal employment more women than men are working in unskilled occupations such as garbage collecting and seasonal farm work. (Liebenberg 1997: 2)

It is extremely difficult to deal with difference and diversity in policy formulation and generalising trends which are found makes the task much easier. As Crawford Cousins (1998) argues, the 'discursive practices', outcome and aim of policy formulation and social science are different where the 'social scientists stress processes of fluidity, diversity, locality, strategy and multivocality – rich in description, they are poor in generalisation'.

While this may be true it is often the case that policies and strategies, which develop from generalised trends and problems, may either miss the mark totally or exacerbate the problems experienced. The use of the category 'female-headed household' in policy is a good example of how this can happen. Like many Third World countries, research trends in South Africa suggest that 75% of female-headed households – compared with 64% of male-headed households – are poor (May et al 1995). As a result, female-headed households often become the proxy for 'women' or 'gender' and are then used as a vehicle through which policies and strategies aimed at poor women are fulfilled. For example, efforts to increase women's participation have targeted female-headed households. While the number of women participating in that particular project may increase, negative effects on women, such as increased workload, have occurred (Rowlands 1997).

Targeting female-headed households in a bid to reach poor women also has the effect of obscuring the circumstances and needs of other women.

Consistent with the global trend, an increasing number of households are headed by women. Contrary to the common stereotype, households headed by women are not necessarily poorer than households headed by men. Indeed, often only women with independent means can afford to head a household. The poorest households are most often extended households. (Moser 1998: 11)

This finding is also true of South Africa where the statistics show that certain women in male-headed households are amongst the poorest of the poor (May et al 1995). If our policies and strategies target female-headed households as the surrogate for poor and marginalised we will fail to reach other poor women. Further, the structure of households is continually changing in response to the need to reduce vulnerability. Households are not static entities:

[Households] routinely restructure for internal reasons, such as birth, death, marriage, child-care needs, marital conflict, and the need to support weaker members, such as the elderly. They also restructure in response to external crises, such as housing and employment problems. In the shorter term households act as 'shock absorbers', reducing vulnerability for individuals who join them. In the longer term restructuring can increase or decrease vulnerability for the household as a whole, depending on the financial and labor contributions made by the new members. (Moser 1998: 10)

Depending on the socio-economic context, women adopt different strategies for coping with the restructuring of households which arise from the termination of marriage (divorce, separation or death). For instance, in Hungary poor women tend to stay single after the termination of a marriage in order to qualify for benefits available for single women. In contrast to this, for middle aged poor women in Zambia heading a household is a 'high-risk' arrangement due to economic difficulties facing women who have to take responsibility for income earning (Moser 1998).

Jo Beall (1997) argues that social development programmes which target specifically identified groups or respond to the needs asserted by a group at a particular time, can reinforce and

create these identities. So disabled people (or women from female-headed households) will always be seen as only disabled people (or women from female-headed households), without the right to other identities, interests, needs or affiliations. She argues (1997: 9) that

the fundamental dilemma facing the social development practitioner when considering difference is that of 'naming', 'othering', 'categorising', or 'differentiating' which holds the danger of inducing the status or reposes implied by the label itself. People choose to locate themselves among multiple and hyphenated identities that are fluid and contingent. Yet when social planners identify and respond to one or more of these identities with policies, programmes or projects, there is the potential for them to become codified and carved in stone as if they are immutable.

Based on the action implied in the concepts difference and diversity, Beall (1997) makes a useful distinction between the two. The concept of difference, which embodies the action of differentiating, she argues, implies 'categorisation, prioritisation and potential hierarchies; at worst it can imply discrimination and social engineering'. In contrast to difference, diversity refers to 'variation, modification and protection against loss', and implies process rather than identities. She argues that the verb 'to diversify' implies 'action *among* and *by* people, rather than *on* or *for* them', thereby making diversity a more dynamic and fluid concept than difference. Beall argues that this does not necessarily mean that policies and projects targeted at particular groups are all bad. However, it is important that the identity of a group is understood as being acquired through a 'process of conscious assertion and imagining', rather than conceiving of it in static or essentialist terms.

Notwithstanding the tension embodied in making our policies and strategies fit the complex reality of poor people's lives and of taking account of difference and diversity, it is clear that effective strategies and policies will only emerge if we move beyond making generalisations and treating social groups – women, men, children, the poor – as homogenous entities with the same interests and needs.

Women and equity: a gender relations perspective

The discussions on women and equity from other countries are useful as they draw attention to the notion that the benefits of electricity are not experienced uniformly in households and that women have different interests, needs and experiences from men. This is premised on the understanding of gender roles within the household where women are primarily responsible for ensuring the survival of the household through undertaking both 'domestic' work (such as fuel and water collection, cooking and childcare) and productive work (such as agricultural production and income generation). Women bear the responsibility for budgeting for and providing energy and appliances, managing their use by the members of the household and using energy to fulfil other responsibilities, such as cooking.

In the same way that the earlier discussion pointed to the inability of rural electrification equity strategies to redress the inequalities within society, the analysis of women and equity presented above obscures the unequal gender relations in society. Take, for instance, the issue of improving women's productivity. While rural electrification may extend women's productive hours, the growing phenomenon of the exploitation of a non-unionised, female workforce is not examined: Latin America has seen the expansion of 'rural industrial homework' where textile and clothing production is sub-contracted to a predominantly female workforce (Crummett in Rogerson 1997). Similar findings have emerged for India where it is argued that women become 'invisible producers' in the home which has led to an intensification of the exploitation of rural women (Mies in Rogerson 1997). Thus, it emerges that the power relations within society which locate women (and men) in different positions in relation to resources, such as work, will also shape the way in which the benefits of electrification are experienced.

The focus on women's roles (as primarily responsible for energy) also leads to a descriptive account of the effects of electrification within the context of women's responsibilities, roles and

obligations. As these roles and responsibilities are not located in time the analysis implies that they will not change, thereby inhibiting an understanding of why and how changes in women's lives and behaviour occur. This focus on women's roles obscures the underlying power relations which give rise to women's (and men's) roles.

We would argue that unequal gender relations of power give rise to the gender division of labour which allocates roles and responsibilities to different women and men. These roles and responsibilities are not natural or immutable, but are understood to be shaped by power relations. The possibility of challenging these roles, is thus established.

For the policy-maker, pointing out these differences in approach may seem to be an obscure and unnecessary deviation into theory. What is the relevance of bringing these perspectives to bear on the discussion of equity in a rural electrification programme? To illustrate the significance of introducing these 'theoretical' debates it is useful to present a case study from the research conducted at Tambo in order to show how equity strategies would differ according to whether we adopted a 'women's roles' perspective or a 'gender relations' perspective.

Unequal gender relations

Mr and Mrs F were both born in Lady Frere. When they got married they moved to Dimbaza near King Williamstown where they lived and worked as factory workers for 16 years. When they visited their cousin at Tambo they decided that they would like to move there and started negotiating for a place of their own. The cousin, who was on the village committee, helped with the arrangements and they moved to Tambo in 1994 prior to the national elections.

Mrs F is 47 – 21 years younger than her husband. They have four children, three of whom are at school. The oldest boy is 22 and he dropped out of school (Std 10) in June. He has been a source of worry to his parents as he started wearing dreadlocks, smoking dagga, associating with 'bad' groups and then dropped out of school. Although he already has his own piece of land for the time when he wants his independence, he stays at home 'doing nothing' except for taking responsibility for herding the livestock. They have five sheep, ten goats, a number of chickens and about ten cattle.

Their primary source of income is Mr F's pension. As he still gets it from Dimbaza, he has to pay transport costs in order to fetch it. Mr F supplements the household's income by fencing people's yards, for which he earns about R250 per job. Mrs F takes responsibility for the domestic work in the household, such as collecting wood, water, cooking and child care.

Besides the expense of daily living, a major expense in this household is the lucerne which is bought to feed the cattle. The lucerne costs R150 and lasts only ten days. Mr F 's cattle are very important to him and he 'would rather go without food than see his cattle die of hunger because of the drought'. Although the household benefits from the availability of sour milk, the ability to meet other household needs are clearly compromised. According to Mrs F, her husband is

very strict and aggressive but he is a good husband and father. He has matured through the years as he used to beat me up when we were newly married. If I had gone to collect firewood and came home much later than expected I would be beaten.

Although this no longer happens, it is clear that Mr F makes all the major decisions and determines where his pension moneys are spent. Money to support his drinking also places a drain on the household resources:

He drinks a lot but the good thing about him is that he sleeps a lot when he has had a lot to drink, he does not bother anybody, he only does when he is sober.

This household has more livelihood strategies: pension, informal work, credit, livestock and a vegetable garden than other households in the village. However, it has been unable to pay the flat-rate tariff and has had its electricity supply cut off. The main reason for this is that the husband has prioritised expenditure on his cattle over and above the needs of the household, and the ability to buy food, and pay for the electricity has been compromised.

(Source: James 1997)

A women's role perspective would attempt to determine which of Mrs F's activities would be affected by the provision of electricity – for example, by examining whether she wished to use electricity for cooking and thus, would require an upgrade from a 2.5A to a 20A. And it might go further by examining whether cooking with wood would be eventually displaced by

electricity and whether this meant that Mrs F had more time to rest or undertake some productive work. Equity strategies which flowed from this might suggest that cooking appliances should be subsidised so that these benefits could be experienced.

A gender relations perspective on the same case study, however, would pick up the unequal access to and control over resources in the household. It would suggest that the unequal relations of gender in this household have resulted in Mr F having control over the resources and decision making process which determines what will be bought with the money. However, it would also be understood that we cannot generalise about men having control over resources and decision making processes. Other studies have provided evidence to suggest that the opposite is true, for instance, at Tambo it was found that *despite* oppressive gender relations in households, some women have considerable influence over expenditure on energy and energy appliances (James & Ntutela 1997).

This perspective would also acknowledge that Mr and Mrs F have specific roles and responsibilities within the household. Thus, it would also attempt to devise strategies which catered for Mrs F's needs, for instance in providing food for the household. It would argue that the subsidisation of cooking appliances is an important strategy, but that it would not necessarily benefit Mrs F as she may not be able to buy the appliances as she is unable to influence how money is spent in the household. An equity strategy borne out of this perspective might argue, for example, that together with the subsidy for cooking appliances a credit scheme specifically targeted at women might ensure that she benefits from electricity. Further, it would recognise that without Mrs F being able to find ways in which to challenge the current relations of power within her household it is unlikely that any conventional equity strategy will achieve its desired outcome.

Transformation of power relations in society is a complex issue and will be examined, to a limited extent, in this paper in the discussions on empowerment in rural electrification. Before this, it is important to draw together the major strands of the different arguments which have been made about rural electrification and equity.

Equity: status quo or social transformation?

So far, we have argued that the equity objectives in the South African electrification programme aim at correcting the outcome or expression of the inequalities in society through attempting to improve access to electricity and ameliorate the financial burden of the poor of gaining access to and using electricity. Through recognition of the existence of racial and class inequalities in South African society, equity strategies such as the subsidisation of tariffs are considered to be justified and are implemented. Although some research studies examine the effects of electrification on women, unequal power relations of gender, however, do not inform the development of equity strategies for rural electrification.

While it is important to devise strategies which will improve access to electricity, it is not appropriate to stop at this. As the livelihoods of poor people are characterised by vulnerability, strategies which attempt to ensure that poor men and women are able to use their electricity supply on a continuing basis, without prejudicing their ability to survive are essential. Together with improving access, then, providing for *security* (continued access and use) is important (May et al 1996), especially if we are to ensure that the provision of electricity contributes towards the amelioration, rather than exacerbation, of poverty. Although achieving significant improvements in the conditions of such peoples' lives rests largely with poverty alleviation, ensuring that both men and women have control over resources necessary for their survival is equally important.

A useful way of illustrating this point is through the examination of women's land rights under customary law: women have access to land, but do not necessarily have control over it. As women have access to land through husbands or brothers or chiefs they are vulnerable to loss

of that resource, especially as pressure on the land increases and less land is available. Underwriting women's tenure rights in law has been an important strategy to ensure that women's access to land is secure (Cross & Friedman 1997). In terms of rural electrification, the introduction of credit schemes for appliance purchases may result in improved benefits for women who are unable to secure control over household resources.

Although these policy measures provide an important framework for transformation, they will not necessarily lead to shifts in the unequal power relations which ultimately determine unequal access to and control over resources. It is important that these unequal relations are challenged and transformed. Technical or legal solutions to inequality can always be challenged and undermined: for example, even in India where the women have legal title to land, the social relations of power operate in a myriad of ways to subvert this legal right (Argawal 1988). In the same way, strategies which aim to provide for continuing access and use of electricity may be undermined.

Thus, together with providing this framework, investment in human capacity to take control over the development process and contribute towards social transformation is also necessary. In other words, attention is given to the empowerment of poor and marginal people. The rest of the paper will define the role of a rural electrification programme in achieving this end.

Empowerment and power?

Can an electrification programme lead to the empowerment of rural people? What would the components of such a programme look like? What is empowerment? These are some of the questions which we have examined in the project. Before examining the first two questions we will briefly discuss what is meant by empowerment.

Initially the concept of empowerment presupposed powerlessness or the absence of power. However, this static conception was critiqued as 'powerlessness suggests a total absence of power whereas in reality even those who appear to have very little power are still able to resist, to subvert and sometimes to transform the conditions of their lives' (Kabeer 1994: 224). This notion of powerlessness has been critiqued by other observers as well. Such a perspective ignores the 'unobtrusive realm of political struggle' or 'infrapolitics', suggests James Scott (1990). This form of resistance which occurs covertly, hidden from public view, aims at a re-negotiation of power relations, albeit unobtrusively. These 'weapons of the weak' (after Scott 1985), such as acts of defiance and 'muffled voices of opposition', would be included in our understanding of power, and thus, empowerment.

Poaching and squatting on a large scale can restructure the control of property. Peasant tax evasion on a large scale has brought about crises of appropriation that threaten the state. Massive desertion by serf or peasant conscripts has helped bring down more than on *ancien regime*. Under the appropriate conditions, the accumulation of petty acts can, rather like snowflakes on a steep mountainside, set off an avalanche. (Scott 1990: 318).

A more complex view of power would understand that those who are apparently powerless are not 'utterly passive victims' and may be involved in resistance to power, as well as negotiation and strategic compliance. And nor are the 'powerful' completely in control (Villareal 1992).

According to Friedmann (in Beall 1997: 19) his vision of an 'alternative development' is dependent on people being empowered in terms of social, political and psychological power. Social power refers to a household's access to productive wealth, information, knowledge and participation in social organisations. Political power is concerned not only with the right to vote but also the 'power of voice and collective action'. Where people have self-esteem and are self-confident they are considered to have psychological power.

Over the past decade empowerment has been central to debates on gender and development (Moser 1989). The key to empowerment has been the transformation of social relations of

power which result in women's subordination and oppression. Thus, through empowerment women are able

to take control of their lives to set their own agendas, to organise to help each other and make demands on the state for support and on society itself for change. With the collective empowerment of women the direction and processes of development would also be shifted to respond to women's needs and their vision. The collective empowerment of women of course, would bring with it the individual empowerment of women, but not only for individual advancement. (Young in Rowlands 1997: 18)

These ideas have resonance with the notions of empowerment embodied in participatory approaches to development, such as Participatory Rural Appraisal (PRA), which have been adopted by development agencies, ranging from the World Bank to progressive NGOs. An important component of these approaches is their focus on people, rather than infrastructure, such as electricity, and their understanding that development is a social, rather than technical, intervention.

Rural electrification as a social process⁷

For most engineers and technical experts electrification is largely understood to be a technical process, concerned with things such as wires, capacitors, transformers and circuit breakers. While it is all these things, we have continually emphasised the importance of understanding electrification as a social process.

In order to successfully implement an approach emphasising user involvement, planners can no longer focus narrowly on technological factors. Managers must understand the social fabric in which the technology will be embedded: the human dimension affecting community acceptance, use, and how the management of technologies is organised. This is particularly important when the goal is to reach the poor. (Narayan 1996: 3)

In fact, there is growing recognition within Eskom that the success of their electrification projects is most often not dependent on whether the technology performs adequately, but rather on how rural people interact with that technology. Over the last decade there has been a shift in approach to water and sanitation programmes from programmes which are centrally managed, supply-driven to demand-driven, community partnership approaches. This has meant that factors which were originally considered to be irrelevant to engineers, such as the social organisation (networks, community groupings, local leadership and rivalries, power relations, gender roles) have become relevant. Unlike, the water sector, however, Eskom is slower in shifting towards a practice which reflects this understanding.

For the most part, Eskom does not engage with communities beyond 'information sharing' with community members, and 'consultation' with committees or community leadership, such as the chief. Getting rural people to 'buy into' Eskom's project plans, creating opportunities for rural people to participate in project construction and consulting with committees are the predominant mode of participation in electrification projects. Participation remains instrumental (ensuring project effectiveness and efficiency), rather than transformative (enabling the empowerment of rural people).

It has been argued that many of the problems which rural people experience could be ameliorated if the process of the delivery of electricity of electricity was improved.⁸ It was found that the current methodology, which relies exclusively on mass meetings, of information

⁷ The rest of the paper summarises the arguments made in the report 'Community participation in rural electrification: building human capacity through the delivery of electricity to rural areas' (James 1998).

⁸ For a full account of Eskom's current approach to working with communities see the report 'Community participation in rural electrification: building human capacity through the delivery of electricity to rural areas' (James 1998).

dissemination and education, is not effective. Also, Eskom's desire to deliver electricity through a process which 'removes the politics', is 'neutral' or 'a-political', captures the approach of many Eskom staff who working with communities. It is imperative that Eskom accepts and understand that its actions are inherently political. It is likely that bringing electricity to resource poor areas will lead to some sort of jostling or struggle for power and control over the process and outcome of delivery. Rather than assert that politics is separate from development, it is critical that Eskom staff understand the ways in which power operates in a particular community. Participatory development potentially offers a way of working with power and improving the method and approach to rural electrification.

Empowerment: the promise of participatory development

Participatory development methodologies implicitly challenge hegemonic strategies by encouraging multivocality and tolerating ambiguity. In other words these approaches recognise that the *question of power is at the heart of social process*; that there are many more than one right answer to every question; that anyone who holds out for one has a particular interest in control; that both questions and answers depend on whose voices are heard; and that by having enough different voices stating and restating a problem we go some way towards changing things. (Crawford Cousins *et al* 1994: 7)

According to Srinivasan (in Crawford Cousins *et al* 1994) there are three areas of intervention around which development organisations, such as NGOs, have focused their energies in recent years. The first is concerned with *coping behaviour* which enables poor people develop skills to cope with their lives. The second, *transforming behaviour*, aims to promote assertiveness of oppressed people so that they can mobilise for social change. The last, *transcending behaviour*, concerns the need to build capacity for self-reliance and exertion of personal power for independent action. Participatory methodologies aim primarily to build transcending behaviour where poor people are able to plan, take initiative, self-organise and take responsibility for social change and development.

Transformation of the unequal power relations in society is possible through building personal strength, self-reliance and self-worth (personal empowerment) which leads to mobilisation and organisation for collective action (collective empowerment), as well as the ability to negotiate, communicate, defend rights (empowerment in close relationships) (Rowlands 1997).

Other participatory methodologies, such as PRA, legitimise knowledge of the poor and marginalised, as well as their right to speak. It is through a reversal of what is 'normal professionalism' – where the concepts, values, methods and behaviour of development professional prevail to produce 'controlled conditions and universal truths' that empowerment is enabled (Chambers 1995). This calls for a reversal of roles, where 'outsiders' listen, facilitate and learn. Participatory approaches emphasise people's ability to undertake a range of activities and processes are facilitated in order to achieve this. These include appraisal, analysis, planning, experimenting, implementing, monitoring and evaluating. Visual tools and activities are planned in participatory processes in order to stimulate reflection, analysis and planning (Srinivasan 1992; Chambers 1995).

Can participatory methods deliver empowerment?

While there is little doubt that participatory group processes in communities will improve Eskom's practice in communities, the question of whether this will lead to the empowerment of rural people must still be examined. Can participatory approaches result in unequal transformation of power relations in communities and households?

Participatory approaches aim to 'give people a voice' (Narayan 1995) as well as enable outsiders 'to listen' (Gianotten & Rijssenbeek 1995). As a metaphor of the reversal of power, PRA practitioners hand over 'the stick' to rural communities. PRA 'has stressed *abdication* of power' and the 'prime actors are the people', where the outsider 'is less extractor, and more convenor, facilitator and catalyst' Chambers (1994b). But can outsiders 'abdicate' power? Does this position not run the risk of leading to the obfuscation of power relations between outside and insiders?

Participatory methodologies follow a behavioural view of the world, emphasising people's values and attitudes, rather than examining the relations of power which exist between people. Thus, questions are concerned with how to design procedures to bring parties into contact, how to change behaviours and attitudes and how to give primary stakeholders a voice (Nelson & Wright 1995).

Therefore, following a participatory approach does not remove the 'central paradox' of the development intervention: that of 'powerful outsiders' helping 'powerless insiders'. 'Handing over the stick', or stressing empowerment and participation does not necessarily remove the inference that 'an injection of power' from outside can shift the balance of power. It is essential that we understand that different groups and individuals represent different interests, which are supported by different resources (Long 1992; Crawford Cousins et al 1994).

Development processes do not follow a simple trajectory which can be shaped and manipulated from the outside, but are shaped by conflicting loyalties, negotiation over 'truth' and knowledge, as well as by contesting interests. By emphasising methods and attitudes, 'outsiders' are not seen as actors with their own interests who might struggle to project particular images and meanings, or set boundaries which are constantly challenged by 'insiders', or other colleagues (Villarreal 1992). Complex power processes and struggles take place between 'insiders' and 'outsiders' in the arena of development interventions.

[I]ntervention is continuously being modified by the negotiations and strategies that emerge between the various parties involved ... issues of boundaries, interfaces, and power within specific arenas where direct and in-direct information ... leaks into groups, not as 'pure' data, but reinterpreted and recreated differently by each 'receiver' as well as by each 'sender'. This 'joint' creation of knowledge ... constitutes an ongoing, dynamic activity which shapes ... situations in many ways, while at the same time being shaped by these same encounters. (Villarreal 1992:265)

It is critical that an understanding of development intervention as negotiated, jointly constructed and contested, inform our practice of participation. This perspective challenges the notion that powerful 'outsiders' can 'deliver' power (empower) to the powerless 'insiders' (Villarreal 1992).

Participatory approaches and power within communities

Inasmuch as adopting participatory approaches does not necessarily lead to the transformation of power relations between 'the community' and outsiders, neither does the approach automatically challenge power relations within communities.

In many of the evaluative reports of participatory programmes recognition is given to the difficulty of ensuring that everyone participates equally. There are some programmes, however, which have managed to achieve participation of poor and marginalised people. It is recognised, however, that there are certain people who will be 'empowered' and others who will not, and that 'the weak and the poor may end up worse off'; the solution is to be found in a 'legitimate and sensitive PRA which will take deliberate steps to offset any such 'bias':

The challenge is then to introduce and use PRA that the weaker are identified and empowered and equity is served. Fortunately, the tools available suit the task.

Sequences, such as participatory mapping leading to household listing to well-being ranking and then to livelihood analysis, can identify groups distinguished according to local values. Focus group discussions can then be convened to enable different group categories of people, including and especially the disadvantaged, to identify their priorities and interests.... Differentiating by groups, interests and gender can empower the poor and women. (Chambers 1994c: 9)

Thus, the problem is predominantly attitudinal and methodological. That unequal power relations *within communities* constrain participation is not theorised or worked with. Participatory methodologies are no quick fix to transforming these structural limitations. Communities are divided according to gender, age, education, employment status and political affiliation. Dominance of one group's perspective will bias a development intervention, which can obscure other needs.

Despite these limitations, a participatory approach to rural electrification can build human capacity for transcending behaviour and investment in human development is essential. Rather than obscure these limitations, it is important to be conscious of them in order that our interventions do not entrench inequalities. However, it is our opinion that Eskom is not best placed to fulfil these functions, largely because its organisational structure and culture supports the delivery of a technical good together with marketing and selling this good. It is also likely that the restructured regional distribution agencies (REDs) will have similar organisational structures and cultures, thus making it difficult for them to adopt a participatory approach to working with communities. For this reason it is recommended that these functions are sub-contracted to organisations and institutions with the requisite skills to build human capacity in the delivery of electricity. There are two possible, but not mutually exclusive options: first, in the restructuring of the electricity distribution industry (EDI), parallel organisations which are attached to the distributor could be established, with the explicit function of providing an interface between communities and the REDs; and, secondly, these functions could be sub-contracted to NGOs.

By removing these functions from the distribution agency, there is more potential to implement some of these strategies within a framework of participatory development, where investment in human development is prioritised. In the context of rural electrification in South Africa, partnerships with rural communities would be developed so that decisions could be made jointly. The restructuring of the EDI offers an opportunity to assert the importance of creating REDs, with supporting sub-contractors (both technical and social) which can support improved practice. For this to happen, thought must be given to the organisational culture, form and role of the REDs. While REDs should not undertake this work, it is critical that resources are allocated towards this end. For this reason, it is essential that the debate about the way in which electrification is delivered is placed within the public policy arena. If it is considered an operational issue, to be shaped by Eskom or the REDs, it is unlikely that we will see any changes in practice.

Conclusion

In this paper we have argued that the equity objectives in the South African electrification programme aim at correcting the outcome or expression of the inequalities in society through attempting to improve access to electricity and ameliorate the financial burden of the poor of gaining access to and using electricity. Through recognition of the existence of racial and class inequalities in South African society equity strategies, such as the subsidisation of tariffs, are considered to be justified and are implemented.

Although policy measures which aim to improve poor people's access to and secure use of electricity provide an important framework for transformation, they will not necessarily lead to shifts in the unequal power relations which ultimately determine unequal access to and control

over resources. It is important that these unequal relations are challenged and transformed as technical or legal solutions to inequality can always be challenged and undermined.

Furthermore, in the long term the implications of continued state support to achieve equity goals is considerable. Thus, investment in human capacity to take control over the development process and contribute towards social transformation is also necessary. In other words, attention is given to the empowerment of poor and marginal people.

Empowerment, however, cannot be automatically delivered through a rural electrification programme. Even the adoption of a participatory approach to the delivery of rural electrification will not result in an injection of power into the lives of poor and marginal people. However, participatory approaches can and do build human capacity for transcending behaviour and investment in human development is essential. If, in our implementation of participatory development, we absorb the issues concerning power, conflict and diversity, it may be possible to at least resolve some of the problems which have been encountered by rural people in the South-African rural electrification programme.

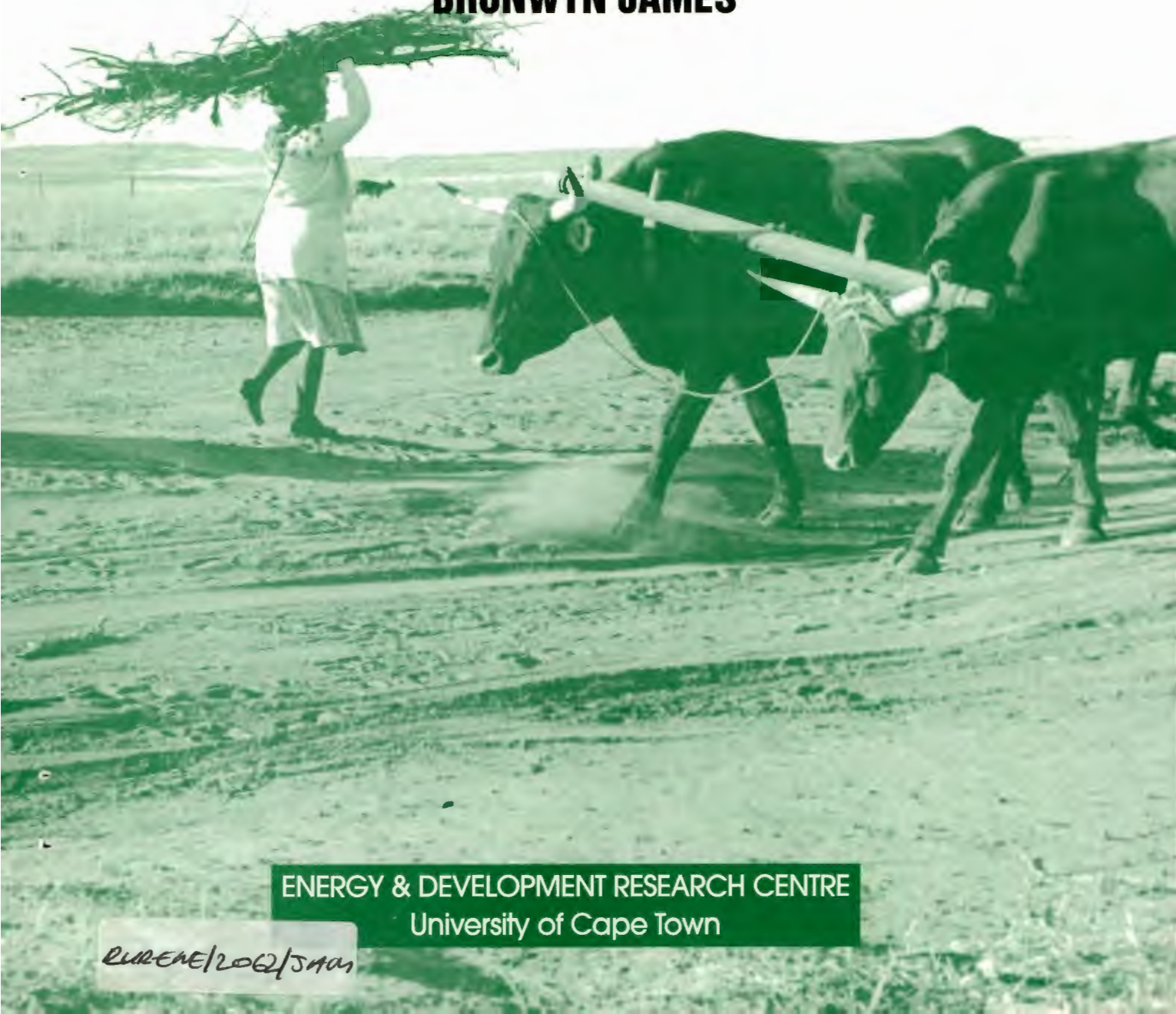
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Equity and empowerment: possible outcomes of the rural electrification programme?

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