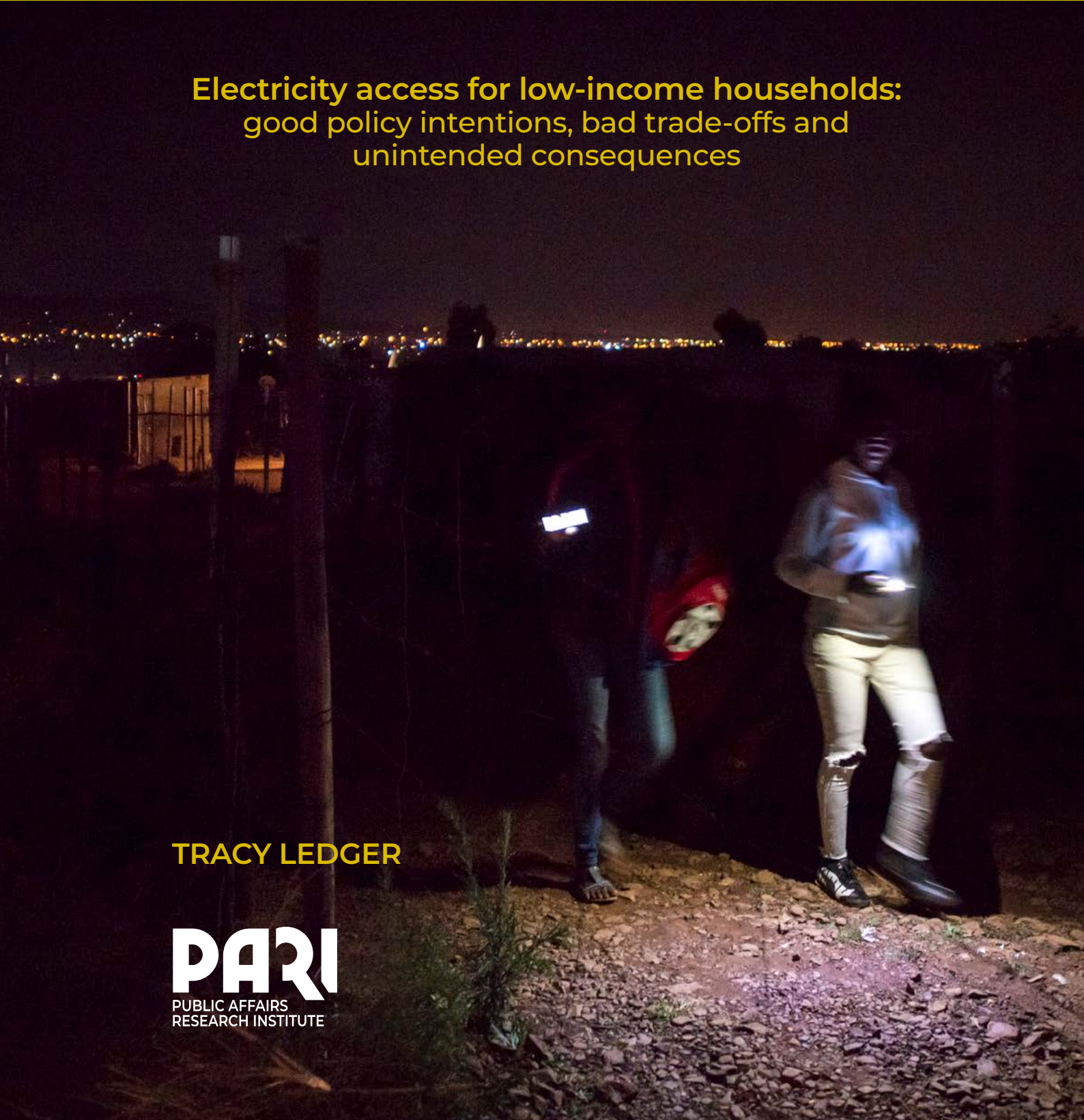


BROKEN PROMISES

Electricity access for low-income households:
good policy intentions, bad trade-offs and
unintended consequences

TRACY LEDGER

PARI
PUBLIC AFFAIRS
RESEARCH INSTITUTE





**ENERGY AND SOCIETY
WORKING PAPER #2
APRIL 2021**

**THIS REPORT WAS MADE POSSIBLE BY
FUNDING FROM AGORA ENERGIEWENDE**

**PHOTOGRAPHS BY
BRAM LAMMERS PHOTOGRAPHY**

NOTE:

In this paper we have used the term energy to indicate what is more accurately a particular sub-category of energy — electricity and its common substitutes. In turn, when we refer in this paper to the conceptualisation of a just transition in South Africa, we are making particular reference to that part of the transition narrative that deals with alternative (renewable) electricity production models, rather than all energy issues.

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1. Background	1
1.2. Modelling energy distribution and poverty	3
1.3. Affordable access: policy promises versus implementation reality.....	4
1.4. Structure of this working paper	7
2. THE POLICY CONTEXT: WHAT HAPPENED TO THE GOAL OF AFFORDABLE ACCESS? 9	
2.1. The policy promise of affordable energy for all	9
2.2. The gap between White Paper promises and policy reality.....	12
3. THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY	21
3.1. The role of local government in energy access	21
3.2. The FBE trade-off no one knows about	26
3.3. The failure of oversight and governance	34
4. SUMMARY AND POLICY IMPLICATIONS	38
4.1. Summary of findings.....	39
4.2. Policy recommendations.....	40
REFERENCES.....	42



They always promise us free electricity, they cannot turn against us and say we must pay. Pay for what, what happened to the promise?¹

¹ <https://rekordeast.co.za/318517/claiming-free-electricity-promise-north-residents/> (20 February 2019)

1. INTRODUCTION

Poverty has received scant attention from an energy perspective. This is remarkable given that energy is central to the satisfaction of basic nutrition and health needs, and that energy services constitute a sizeable share of total household expenditure in developing countries.²

1.1. Background

The ability of all South African households to access sufficient quantities of affordable, clean (i.e. non-polluting) and safe energy is directly related to both an improvement in households' standard of living, and the country's ability to achieve its decarbonisation targets, through (at least) the following factors:

- Affordable access to clean energy facilitates the preparation and storage (refrigeration) of food and the ability to work, read and study after dark.
- Affordable access supports multiple livelihood opportunities, from small-scale home-based manufacturing to the ability to keep a cellphone charged (and thus to stay in contact with potential job opportunities).
- Affordable access reduces the share of energy expenditure in household expenditure, effectively making more resources available for other basic necessities, notably food and transport. Given that 80 per cent of South African households cannot afford to purchase a basic basket of nutritious food³, even small amounts of extra money for food purchases can significantly affect a household's nutrition status. The ability to pay for transport, in turn, is key to accessing employment opportunities.
- Safe energy greatly reduces the risk of house fires and associated loss of life and property.
- Clean energy reduces the negative health impacts associated with high levels of indoor air pollution caused by energy sources such as coal, animal dung and firewood.
- Clean, safe and affordable energy sources tend to benefit women disproportionately, since they often have the primary responsibility for preparing food and in the absence of such energy sources must often walk long distances to source items such as firewood.

² United Nations Development Programme, *Energy After Rio: Prospects and Challenges*, New York: United Nations Publications, 1997, p8.

³ Ledger, 2016.

PARI's initial modelling of the linkages between energy and household poverty⁴ indicates that whether or not households actually have access to sufficient clean and safe energy that they can afford is determined in large part by the structure and operating model of the energy **distribution** system. Energy generation models impact the national level of carbon emissions, as well as the baseline cost of energy. But it is the distribution model in South Africa that has the most significant impact on whether or not households can actually access clean and safe energy within household income constraints. When they are unable to do so, they either turn to dirty (i.e. polluting) and/or unsafe sources or make do without. Both of these decisions negatively affect a household's standard of living and quality of life. Since it is the poorest households that are disproportionately affected, the result is to worsen inequality.

We believe that a truly just energy transition must incorporate the basic principles of energy justice, which we would define as **all households having access to sufficient affordable clean and safe energy**. In turn, the details of the dominant distribution model are central to whether or not we can achieve energy justice. Despite the importance of energy distribution in creating (or undermining) South Africa's socioeconomic development and transformation goals (inclusivity, equality and poverty reduction), the issue has to date received very little attention in the local just transition narratives. In these narratives, the definition of the social welfare aspects of transition have largely been limited to those of employment (or future unemployment) in the coal sector, and the negative impact of the move away from coal on areas where it is the main economic activity.

Policy making (particularly in the macro-economic resource-constrained environment in which we currently find ourselves) is fundamentally about choosing which trade-offs to make, among multiple and competing goals. Those choices, in turn, cannot be made optimally without a full picture of what those trade-offs are, and the likely implications of different choices. The problem, as we currently view it, is that because of the effective 'invisibility' of energy distribution as a problem to be addressed in any meaningful just transition, it is unlikely to receive the policy attention it requires. As a result, decisions that effectively result in exacerbating poverty are being made without full cognition of the trade-offs being made. Our aim is to remedy that situation.

4 <https://pari.org.za/working-paper-a-just-distribution-the-role-of-distribution-policy-in-a-just-energy-transition/>

1.2. Modelling energy distribution and poverty

PARI's Energy and Society Programme was established in 2020 to address these perceived shortcomings in the dominant definitions of what constitutes a *just transition*. The aim of the programme is to investigate in detail the wide range of social justice issues that originate in the distribution part of the energy system, that are not currently on the just transition agenda. Our preliminary research indicates that the current structure and governance of the energy system actively undermine the poverty and inequality reduction goals of South Africa's National Development Plan (NDP). Via a number of different but interconnected pathways, the current distribution system is actively and significantly contributing to increased poverty and inequality in a manner contrary to the intentions of both South Africa's pro-poor transformation agenda and original policy intentions, with respect to the developmental role of energy in a post-apartheid society.

Our central premise is that there can be no just transition without a just distribution. That is, we need to incorporate a much more rigorous understanding of the multiple ways in which the current structure and operation of the energy distribution system undermine our goal of energy justice.

The first working paper in this series contains an overview of the structure and operation of the energy distribution sector in South Africa, and proposes a model illustrating the causal linkages between the current form of that distribution sector and household poverty and inequality. In this model, the central factor contributing to poverty and increased inequality was determined to be **affordable access to sufficient clean and safe energy**. Access of this kind is positively associated with a reduction in poverty and inequality. Conversely, if households are unable to access such energy at a cost that they can afford, there are multiple negative implications:

- Energy costs as a percentage of household expenditure will increase, reducing the amount of money needed for other basic necessities, such as food and transport.
- Households look for other sources of energy, many of which come with serious negative side-effects, including indoor pollution and an increased risk of house fires.
- If enough households are forced into using dirty (polluting) energy sources because of the relative cost of clean energy, the effective result can be to dilute national decarbonisation efforts.
- Unaffordable electricity drives many households toward illegal connections, which have both safety and system integrity consequences.

The model draws our attention to a series of causal drivers — factors in the energy distribution system that are the most important for determining the nature and scale of the impact on poverty and inequality. These drivers determine the cost of energy and the nature and terms of access to energy. The more these drivers increase the cost of clean and safe energy — and thereby undermine access — the greater the negative impact on poverty and inequality.

The most important drivers identified in our analysis included:

- Energy policy and energy system governance, which includes institutional arrangements. This governance structure determines what actually get prioritised in the energy distribution system (and which isn't always identical to original policy intentions), and thus determines which trade-offs are made.
- Local government, given its central role in determining both the cost of, and access to, clean and safe energy. Both the local government fiscal framework (which depends on municipalities in aggregate earning significant surpluses on electricity sales) and the ability of local municipalities to determine who gets access to subsidised services and who does not are the key factors in this respect.

1.3. Affordable access: policy promises versus implementation reality

An overview of the current South African household energy access landscape paints a grim picture:

- Significant numbers of households clearly do not have access to the amounts of clean energy that they require, at a cost that they can afford. This is evidenced by widespread electricity disconnections in poor areas, due to the non-payment of accounts, high rates of illegal electricity connections,⁵ and widespread protests about unaffordable electricity access.⁶
- Despite high household electrification levels (around 85 per cent)⁷ many households are forced into using dirty (polluting) and unsafe energy sources because they cannot afford to pay for the amount of electricity they require. A conservative estimate is that there are ten shack fires a day across South Africa (Wang et al 2020): this implies that thousands of homes have been destroyed by fire over the past five years, representing an almost total loss of all possessions for the affected families (who are overwhelmingly poor families). Hundreds of people may have died in these fires, with many more suffering serious injury. Indoor air pollution in many South African homes is significantly higher than in most industrial areas (where outdoor air pollution is more visible) and is estimated to cause around 1,400 deaths of children each year.⁸

5 <https://www.news24.com/news24/southafrica/news/illegal-connections-211-joburg-informal-settlements-accused-of-stealing-city-powers-electricity-20210210>

6 <https://www.iol.co.za/news/south-africa/northern-cape/community-threatens-to-make-upington-ungovernable-50f96c3f-305b-43c1-999a-19026f07ddaa>

7 General Household Survey, 2018

8 <https://www.timeslive.co.za/news/south-africa/2016-09-28-sa-faces-much-more-serious-problem-of-indoor-air-pollution-study/#:~:text=Indoor%20air%20pollution%20accounts%20for,scarring%20a%20few%20industrial%20hotspots.>



Given this situation, it may come as a surprise to learn that South Africa has a clear policy regarding universal access to sufficient safe and affordable energy for all poor household (and small businesses and small farmers), set out in the 1998 White Paper on Energy. The questions we have to ask are — what went wrong, and how can we get back on track to realising the White Paper’s objectives? Proposed answers to the second question should, we believe, be incorporated into existing just transition strategies.

This working paper focuses on how the affordable energy access goals of South Africa’s energy policy have been undermined: our analysis indicates that this is the result of a combination of poor system governance, the failure to allocate clear accountability for delivering affordable access, haphazard institutional alignment and an overarching failure to identify and address critical competing policy trade-offs, particularly between affordable energy access for households and municipal financial viability .

Many of these negative outcomes originate in the local government sphere of the state — in the structure of its revenue model, in the priorities emphasised by national departments with key oversight roles over municipalities, and in the central gatekeeper role that local municipalities play in determining who gets access to subsidised services and who does not. Certainly, there are multiple weaknesses in the overarching policies that local government is responsible for implementing (which weaknesses need to be addressed), but the manner in which these have been implemented by local government has made a bad situation even worse.

The current operation of the energy distribution system is actively and significantly contributing to increased poverty and inequality, as is detailed in this working paper. Key oversight institutions are effectively reproducing and entrenching these outcomes, either by neglecting their mandated oversight roles in respect of energy access, or by emphasising competing outcomes inherently at odds with a pro-poor energy agenda.

This situation is completely contrary to the intentions of both South Africa's pro-poor transformation agenda (including the central role of local government in delivering that agenda) and original policy intentions concerning the developmental role of energy in a post-apartheid society. These outcomes also have the potential to undermine the decarbonisation goals being pursued in the transition from coal to clean energy. Effectively, by ignoring the details of what is actually going on in our energy distribution system, we are building and entrenching two parallel energy systems: a visible, clean system based on renewable energy generation to which access is effectively limited, alongside a largely invisible, dirty and dangerous system that is the only option for millions of households.

Most of these negative outcomes reflect a failure of national policy coordination, coherence and alignment, and the siloed nature of the state (where national departments focus only on their own narrow mandate and largely ignore cross-cutting developmental objectives), rather than any specific malicious intent on the part of the state. However, this is meagre comfort to the millions of South Africans who have effectively been denied the access to affordable and safe energy promised to them more than twenty years ago.

This working paper focuses on three key interlinked issues:

- The failure of policy and plans to give effect to the comprehensive affordable access goals of the 1998 White Paper on Energy, even where it was clearly anticipated that they would do so;
- The nature and outcomes of a conflict of interest (between the financial viability of municipalities and the ability of low-income households to access affordable, clean and safe energy) inadvertently produced by the current operation of the local government fiscal framework; and

- The multiple gaps in the overarching governance system which have both prevented any ‘big-picture’ assessment of the reality of affordable access to clean and safe energy, and not made any one organisation responsible for achieving this goal.

These factors have underpinned and mutually reinforced each other in a long-term (and escalating) vicious cycle that contributes directly to deepening household poverty and exacerbating inequality (that is, the effects of this vicious cycle disproportionately impacts poorer households).

Our continued failure to recognise these causal linkages and drivers carries the very real risk of entrenching them into any new generation regime. This will make them almost impossible to undo. We have a window of opportunity to rethink and restructure our entire energy system, to make it fully aligned with reaching both our decarbonisation goals and contributing significantly to poverty reduction and increased equity. But these latter goals will not be fully achieved by reaching our decarbonisation goals alone. Nor will they be fully achieved under current limited definitions of what constitutes a just transition.

There is a case to be made that the goal of affordable and secure energy access will be facilitated by decarbonisation, and that decarbonisation will be facilitated by being designed and implemented as part of a wider green-and-fair development strategy.

1.4. Structure of this working paper

Chapter 2 of this paper outlines the policy trail, beginning with the 1998 White Paper on Energy, through the policies and regulation designed (in theory) to give effect to its intentions, tracking how the original policy intentions have either been diluted or erased over the past 22 years. Close attention has been paid to the free basic electricity (FBE) policy in this analysis.

Chapter 3 analyses one of the most important factors that is negatively impacting affordable access to energy and resulting in one of the invisible policy trade-offs referred to above — the local government fiscal framework. Not only does the structure and operation of this framework actively undermine the goal of affordable access, but the manner in which municipalities have implemented the FBE policy has effectively deprived millions of households of that electricity allowance.

Chapter 4 summarises our findings and makes some recommendations for how the current situation could be improved.



2. THE POLICY CONTEXT: WHAT HAPPENED TO THE GOAL OF AFFORDABLE ACCESS?

The main theme of this working paper is **unintended consequences**, largely generated by the challenge of achieving complex developmental goals in a fragmented institutional and governance environment. The result is effective trade-offs among competing policy goals, which trade-offs are deeply prejudicial to poor households. However, they remain largely invisible.

To investigate how these unintended consequences are generated — to present a comprehensive account of how we arrived at this position — we bring together a range of different threads. This chapter begins with an overview of the original policy goals of affordable energy access for a wide range of users, followed by a discussion of how those goals have been implemented — or not, which is the more common outcome. It is the failure of policies intended to give effect to the White Paper to actually do so which have contributed significantly to the situation in which we find ourselves.

2.1. The policy promise of affordable energy for all

The promise of affordable, clean and safe energy for all South Africans is a recurring thread across multiple policy documents and national plans. This goal was clearly articulated in the 1998 White Paper on Energy (RSA, 1998a), which listed the following as the first of five long-term policy objectives for a transformed and developmental energy sector:

*Government will promote access to affordable energy services for disadvantaged households, small businesses, small farms and community services. The achievement of this objective is **fundamental** to government's reconstruction and development programme, and to the future socioeconomic development of our country (our emphasis).*

It is important to note that the use of the word *promote* indicates an **active** role for the state in achieving this goal, and not merely as an observing bystander.

The following was offered by the White Paper as some of the reasons why affordable energy access was considered so very important for reducing poverty and inequality, and for achieving socioeconomic development targets:

The environmental effects of household energy use are particularly severe on the rural poor, who use fuelwood as their primary energy source. Coal-use in urban areas also results in indoor air pollution with serious health consequences. With both fuels, pollution in many cases exceeds World Health Organisation standards.

Energy security for low-income households can help reduce poverty, increase livelihoods and improve living standards. Government will determine a minimum standard for basic household energy services and monitor progress over time. People must have access to fuels that do not endanger their health. Basic energy needs must consider costs, access and health.

Productive activities in underdeveloped areas will economically empower the poor. Energy, particularly electricity, is a key requirement for these productive activities

The White Paper was also clear on what exactly this objective implied in terms of the **tangible outcomes** to be achieved:

Energy should therefore be available to all citizens at an affordable cost. Energy production and distribution should not only be sustainable but should also lead to improvement of the standard of living for all of the country's citizens.

The White Paper made it clear that 'government is committed' to promoting this objective. This is an important point to remember: the state made a clear and public commitment to what it considered to be the most important long-term objective of its energy policy.

It is also notable that this objective — access to affordable energy services — was not just going to be delivered to a limited number of the poorest households: instead, small enterprises and small farmers were also going to benefit — **all** citizens would have access at an affordable cost. This wide definition of policy beneficiary was a clear recognition of the importance of affordable access to clean and safe energy in facilitating livelihood generation, a more equitable distribution of business ownership, and the success of the land reform programme.

This, in turn, echoed the general policy sense that close to full electrification of South Africa was central to the ambitious post-1994 transformation agenda. The Integrated National Electrification Programme (INEP) was set up to connect all energy users to the grid, save for a few areas where this was deemed to be prohibitively expensive, either because of the terrain or a very small number of users in remote areas (Bekker *et al*, 2008). It should be noted, however, that INEP's goal is to provide a **physical access point** to as many users as possible. It is thus not in any way concerned with the issue of the *affordable* access that was the number one objective set out in the White Paper, since it plays no role in determining the tariffs that users pay once they are connected.

The drafters of the Energy White Paper were clear that *physical* access was not the same thing as *affordable* access, and therefore that additional measures were required in order to ensure that this objective (*affordable* access) was actually achieved: 'many people cannot afford to use electricity optimally, even if they have access to it' (p30).

Unfortunately, the White Paper did not contain any guidelines or targets for determining affordability (such as a maximum percentage of household expenditure to be allocated to energy). It is worth remembering that electricity prices in 1998 were significantly lower in real terms than they currently are. In just ten years, the electricity price has increased by more than double the consumer price inflation rate.⁹ Thus, the question of affordability may not have appeared as urgent in 1998 as it does now, when tens of thousands of households face disconnection because of their inability to pay for electricity.

The White Paper also contained a clear vision for significantly restructuring the electricity distribution sector: it proposed that local municipalities would no longer have a role in distribution (the authors were particularly critical of the principle of using electricity revenue to cross-subsidise other municipal activities). Instead, the White Paper envisaged a system where all distribution was consolidated under a number of regional electricity distributors (REDs). We might assume that the plan was that these REDs would directly address the issue of affordable access, since it would presumably fall under their distribution mandate, but the structure was never implemented.

The National Development Plan (NDP) was released in 2011 and is currently the overarching apex socioeconomic development plan for South Africa. The NDP proposes that higher living standards — one of its key priorities — can be achieved through 'a combination of increasing employment, higher incomes through productivity growth, a social wage and good-quality public services (NPC, 2011, p25). The social wage includes social grants, subsidised or free public services (such as health and education) and subsidised or free basic services (notably electricity, water and sanitation). The aim of the social wage package is to raise the living standards of those who are unemployed, or whose wages do not cover their basic living requirements, by compensating them for their lack of income.

9 <https://www.businessinsider.co.za/water-prices-have-increased-massively-in-south-africa-over-the-last-decade-the-reserve-bank-says-2020-10>

The main themes that emerge from the Energy White Paper and the NDP are those of universal access to a quality service (in the case of energy this is generally intended to mean a formal electricity connection) and that the service be provided either free or at a cost that is affordable for households. As the NDP pointed out — ‘many households are too poor to pay the costs of services’, implying that effective access requires the state to subsidise the difference between what households can afford to pay and the cost of a basic requirement. It should be noted that the NDP also does not set any benchmarks for how the affordability in question is to be determined, or what exactly constitutes being *too poor* to pay for a service.¹⁰

So what exactly has been done since 1998 to realise the primary objective of affordable access to energy for all citizens? The short answer is — very little.

2.2. The gap between White Paper promises and policy reality

The White Paper on Energy did not deal with the details of how its objectives in respect of affordable access to energy were actually to be achieved — this is not the purpose of such a document. However, it was intended to be the guiding document for all subsequent legislation and plans: it was this legislation and these plans that were meant to give full effect to the intentions of the White Paper (in the absence of which it would be no more than a lengthy document).

The first important policy document intended to deliver the objectives of the White Paper (of which affordable access to energy for households, small business and small farmers was the premier objective) is the National Energy Act of 2008 (RSA, 2008). The word *affordable* appears only twice in that Act: right at the beginning, when the aim of the Act is described (‘to ensure that diverse energy resources are available in sustainable quantities and at affordable prices’) and in section 5 (‘energy access for households’) where 5(1) states:

The Minister must adopt measures that provide for the universal access to appropriate forms of energy or energy services for all people of the Republic of South Africa.

In meeting this objective, the Minister is required to take into account affordability (section 5(2)(g)).

It appears, therefore, that the Act accurately reflects the White Paper’s prioritisation of affordable access. However, there is no definition anywhere in the Act of exactly how affordability is to be measured, nor (critically) is there an indication of how trade-offs between affordability and other important issues in the energy sector (such as the financial sustainability of the main utility) are to be addressed.

¹⁰ A level of income has been set for determining indigent household status, but of course this does not take into account the expenditure requirements of that household, which is what actually determines effective poverty.

Instead, the Act shifts the responsibility for actually delivering the affordability objective onto the Integrated Energy Plan (IEP)¹¹ in section 6(2):

The Integrated Energy Plan must deal with issues relating to the supply, transformation, transport, storage and demand for energy in a way that accounts for ...

(c) affordability

(d) universal accessibility and free basic electricity;

(e) social equity; ...

(j) contribution of energy supply to socioeconomic development.

We would thus assume that the IEP has the final responsibility for ensuring that affordable access actually materialises. The most recent (2016) version of the IEP (DOE, 2016) articulates this obligation clearly: 'The National Energy Act thus encapsulates the key objectives espoused in the Energy White Paper and more specifically translates them into concrete objectives that must be addressed by the IEP.'

The IEP starts off in a promising manner:

One of the key objectives of the Department of Energy (DoE) is to ensure energy security which, in essence, is about ensuring the availability of energy resources, and access to energy services in an affordable and sustainable manner, while minimising the associated adverse environmental impacts (our emphasis).

It also re-emphasises that the first objective of the White paper is that 'government will promote access to affordable energy services for disadvantaged households, small businesses, small farms and community services'. The IEP further states that 'energy equity refers to the accessibility and affordability of energy supply across the population' and that energy equity is a government objective.

However, the IEP fails dismally in developing any meaningful strategy that actually realises this White Paper objective:

- i. Nowhere is there a definition or benchmark for assessing whether or not an energy service is affordable.
- ii. No oversight mechanism is implemented to monitor the realisation of the goal of universal affordable access to energy.
- iii. The IEP states that 'for low income households, the most significant challenge is to provide access to modern forms of energy and to minimise the use of solid fuel sources such as coal, wood, dung and other biomass'. That is, the IEP does not even consider that the cost

¹¹ The Integrated Resource Plan (IRP) is not directly mandated to give effect to these particular objectives, although resource planning obviously has an impact on both access and affordability.

of energy might be an important decision making factor, despite the White Paper highlighting that many households are unable to afford modern energy.

- iv. The IEP suggests that the national electrification strategy together with the free basic electricity is sufficient to meet in full the objective of 'access to affordable energy services', which is clearly not the case.
- v. By the end of the IEP document, the goal of affordable access for small businesses and small farmers (in addition to households) has been completely excised.

The failure of the IEP to meaningfully deliver its White Paper mandate is compounded by the fact that those institutions for whom affordable energy access **should** be a priority (such as the National Department of Mineral Resources and Energy (DMRE) and the National Energy Regulator (NERSA)) have largely failed to assume any responsibility in this regard. DMRE's annual reports give no indication that it exercises any oversight over local municipalities in terms of how they regulate the terms of energy access for poor households. Nor does it give any indication of having an interest in the details of what might constitute affordable tariffs for households. NERSA has responsibility for tariff determination, but they have never interrogated the White Paper's goals of affordable access, and have never set any benchmark for what might constitute an affordable tariff.

The main (essentially only)¹² concrete policy implementation to date of the ambitious goal of affordable access to energy for poor households, small businesses and small farmers is the 2003 Free Basic Electricity (FBE) policy (DME, 2003) — and even that is limited to households alone, small businesses and small farmers being seamlessly swept under the policy carpet. Prior to the implementation of the FBE policy some municipalities were providing free basic electricity (on a voluntary and self-funded basis), but it was not regulated. In addition, no direct Eskom customers benefitted (Makonese, Kimemia and Annegarn, 2012), a notable omission since this represented almost half of all households, and most likely an even greater share of poor households.¹³ In itself, the FBE policy represents only a partial delivery of the White Paper's affordable access goal, and even that limited response is significantly undermined by very poor implementation (as discussed in more detail in the next chapter).

Despite its considerable shortcomings, the FBE policy is put forward as proof that the state has delivered on its commitment to affordable access to clean and safe energy: the ministerial foreword to the original FBE policy document highlights that the policy represented the main strategy of government 'to address affordability issues'. This line of thinking has continued; in almost every official policy document that does raise the issue of the affordability of energy, the FBE policy is put forward as **the** solution. (Which, of course, implies that the subject is closed for further discussion.)

12 The policy of stepped tariffs for electricity is notionally intended to be pro-poor, but the level of even the lowest tariff relative to household disposable income is too high to have this effect. Further, larger households (commonly poorer households) are disadvantaged by this system.

13 Many of these direct customers were in low-income urban township areas.



The FBE policy is based on a free monthly allocation of 50kWh to qualifying households. A number of studies have pointed out that this is an insufficient amount of energy for even very modest household needs: EarthLife Africa (2010) calculated that the basic energy requirements for a household of five persons¹⁴ was between 320 and 420kWh per month, with households requiring more in winter due to heating requirements. Even if we adopt a very conservative approach to their calculations and remove entirely the energy their model allocates for heating, cleaning and entertaining, we still reach a basic minimum requirement of around 250kWh per household per month.

Makonese, Kimemia and Annegarn (ibid) reached similar conclusions around the inadequacy of the FBE threshold to meaningfully improve standards of living — the overarching policy intention stated in the White Paper, and subsequently the National Development Plan. They took a much more conservative stance than the EarthLife Africa study, making no provision for heating and only including sufficient electricity for cooking one meal a day on a hot plate. Their analysis still indicated a base minimum electricity requirement of 200kWh per month ‘to meet basic energy needs of the poor and (to contribute to) improving social development of the poor’ (p7).¹⁵

14 This was the average size of a household in their sample group.

15 Of course appliances have generally become more energy efficient since the date of this study, but we still have to consider the ability of poor households to purchase the most efficient appliances.

So how did the FBE policy settle on a monthly household allowance of 50kWh? The Energy White Paper stated that 'government will determine a minimum standard for basic household energy services', but on what empirical basis did the FBE policy decide that the minimum standard should be set so low? A standard, incidentally, which has never been revisited.

According to the policy itself, the official reason for setting the FBE allowance at 50kWh was described in the 2003 policy document as the following:

the average poor household does not consume more than 50kWh of electricity per month ... households that are 'poor' (their emphasis) generally have a low demand for electricity.

This represents an astonishing line of argument for a state that depicts itself as pro-poor and pro-transformation. The fact that poor households cannot afford to consume more than 50kWh per month is taken as 'proof' that they do not require more. This is analogous to pointing to data which shows that the poorest households only consume very small amounts of nutritious food and concluding that that this 'proves' that they have a low demand for nutritious food.

This fallacious reasoning is completely at odds with the White Paper, which was clear that the main reason why poor households did not use electricity was because of 'the considerable inequalities in wealth which have resulted from past social and economic policies'. That is, they consumed so little because they could not afford to purchase more. In addition, the transformative role of energy could only be realised if consumers had access to **more** of it (at an affordable cost) than they had in the past. These key points from the White Paper seem to have been completely ignored in the drafting of the FBE policy.

The FBE policy itself recognises that one of the biggest demands for electricity is for cooking (and the ability to cook food is an important part of a low-cost household food security strategy), but then ignores that requirement in its conclusion that the FBE allowance is 'adequate ... to meet the needs for lighting, media access and limited water heating and basic ironing' (p12). Makonese, Kimemia and Annegarn (2012) estimated that using one hot plate for only 25 hours per month would take 25kWh – half the total FBE allocation. EarthLife Africa (2010) found that poor households required 60kWh per month just to meet basic cooking requirements

It gets worse: the FBE policy included a number of guiding principles for how it should be designed and implemented. Local municipalities would have the primary responsibility in this regard: they would be responsible for setting the parameters for determining whether or not a household was to be classified as *indigent* (against a number of suggested, not compulsory indicators), and would manage its implementation. Where Eskom directly supplied customers, the municipality would inform Eskom which households had made it onto the indigent list, Eskom would supply the FBE to the household, and then claim the money back from the

municipality. Funding would be made available to municipalities via the annual budget process, based on an estimate of the number of potentially qualifying households in each municipality, and the cost of supplying the 50kWh.

One of the suggestions contained in the FBE policy for how the process might be managed seems intended effectively to punish any poor household who might need more electricity than the 50kWh per month.

Consumers whose electricity demand exceeds or whose consumption exceeds the limits for free basic electricity set out in this policy would suggest an ability to afford full electricity services. These consumers should then be converted to normal domestic tariff.

That is, if you live in a large household (typical of many poor households) and you manage to scrape together a little extra money each month to purchase electricity, as punishment you should no longer qualify for the free basic service.

Many municipalities have in fact adopted this particular draconian provision as part of their indigent household policy (SERI, 2013). There are also several other restrictions that are common, such as potentially losing your right to the allowance if you fall into arrears on the remainder of your municipal account (ibid), the reasoning seemingly being that if you are too poor to pay such accounts you should immediately be pushed into even deeper poverty by losing your free electricity allowance. The FBE policy tacitly supports such strategies: 'Consumer discipline must be upheld' (p24).

Other recommendations in the policy include limiting the household supply to a maximum of 10 Amps as a precondition for obtaining the allocation — thereby putting the use of many basic household appliances permanently out of the household's reach.

It should be noted that a very small number of municipalities do make a higher allowance (i.e. more than 50kWh per month) available to households, presumably funding the difference out of their own revenue. You might expect that national government would be pleased about this development, since it furthers the White Paper's objectives. You would be wrong. Commenting on this situation, NERSA wrote the following (NERSA 2016, p13):

It would be unfair for NERSA to penalise municipalities due to previous decisions in this regard, however [NERSA] will welcome methods of reducing the FBE allocation where it is above 50kWh per month ... It is agreed that a standard 50kWh threshold be strictly enforced as a national policy.



This truly dismal FBE policy represents our best effort to date at implementing the pro-poor and pro-transformation goals of the 1998 White Paper. The FBE policy clearly views safe and clean energy not as a basic right of all South Africans, not as the great enabler of widespread socioeconomic transformation, but rather as a privilege to be handed over grudgingly in tiny amounts to the poorest households, and liable to be taken away at any infraction.

It should further be noted that the FBE policy only makes provision for an allocation to **households**: there is no mention at all of the small businesses and small farms that were intended to benefit from the vision of affordable energy described in the White Paper. Nor has there been any subsequent policy to address the affordable energy requirements of these users. For all intents and purposes, these groups — clearly intended to benefit from more progressive energy policy — have simply been erased from all subsequent policy and planning documents.¹⁶ Even worse, small enterprises located in poor households (such as a small shop) often disqualify that household from receiving any FBE allocation at all, in terms of the municipality's qualifying criteria. In this manner, official energy policy is effectively **reducing** the ability of these households to leverage affordable, safe and clean energy to support livelihoods.

Although the phrase *affordable access* is constantly used in the context of energy policies and in respect of the basic services component of the social wage, there has never been any associated clear target or indicator for what exactly might be considered an affordable (and by definition, an unaffordable) basic service such as electricity. The failure to develop such an indicator — together with the baseless assumption that poor households do not need more than 50kWh of electricity every month — are fundamental reasons for why a genuinely pro-poor energy access policy has never materialised.

Another reason is local government, and in particular the (unacknowledged) trade-off between the role of electricity in municipal financial viability, and the goal of affordable access. The latter has been the constant loser to the former. This issue is discussed in more detail in the next chapter.

¹⁶ In fact, the Integrated Energy Plan – which is specifically intended to give effect to these White Paper objectives – largely ignores small businesses and small farmers as the intended beneficiaries of affordable access initiatives.



3.

THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

Local government plays a central role in determining whether or not households are actually able to access affordable energy, although this role is largely invisible in national energy debates. In this chapter we have examined how the structure of the local government fiscal framework, together with the implementation at municipal level of the FBE policy is undermining access to affordable energy for millions of households. This situation is exacerbated by gaps in the national governance and oversight structure.

3.1. The role of local government in energy access

Local government plays an important role in setting the terms of access to energy, and thus whether or not affordable access (which is made up of both physical access and cost relative to household income) is the outcome of the electricity distribution system. The following key mechanisms apply:

- On-grid electricity distribution to households is a shared function between Eskom and local municipalities, and they each supply around 50 per cent of all households.¹⁷ The municipal tariff structure is thus a key factor determining affordability.
- Local municipalities are the effective gatekeepers of the FBE programme for all households (including those supplied by Eskom), and have the final word on who can access the programme and who cannot. Although we are critical of the small amount of electricity that can be accessed through this programme, it nonetheless has a pro-poor impact — but only if households are actually able to access it.

Thus, the way in which local government manages electricity distribution (notably how it sets tariffs), and how it implements the FBE policy determines the extent to which households are actually able to realise the promise of affordable, clean and safe energy.¹⁸ However, maximising the number of households that have access to this kind of energy is not a local government priority. In fact, it doesn't even appear to be one of its objectives. For the main institutions charged with the oversight of local government — the National Department of Cooperative Governance and Traditional Affairs (Cogta) and National Treasury — it does not appear to be an objective either.

¹⁷ Only a tiny percentage of South African households are off-grid entirely, and there are no generators currently licensed to sell directly to end users.

¹⁸ And of course Eskom's pricing and access policy in respect of poor households also has an important impact.

As just one indication of this, neither department reports on household energy affordability indicators, or has made any recommendations on how energy could be made more affordable, or the details of the implementation of the FBE policy (that is, how many households actually benefit relative to how many are funded in the national budget each year). In their defence, these departments would probably contend that neither energy nor the details of electricity distribution is within their mandate.

The Department of Mineral Resources and Energy (DMRE) is conspicuously absent: although DMRE's website states that part of its mission is to provide 'sustainable and affordable energy for growth and development', and it is the 'owner' of the FBE policy, in practise, it does not exercise oversight over local government's implementation of the policy. **The Department's 2019/20 Annual Report (DMRE, 2020) does not contain a single reference to the implementation of the FBE policy.**

The reality, then, is that instead of being viewed first and foremost as an enabler of socioeconomic transformation (as it is viewed in the Energy White Paper), electricity in local government is primarily viewed as a **source of revenue**; a very important one. Revenue enhancement (via tariff setting and account collections) is almost invariably the most important determinant of how municipalities implement policies that directly impact affordable energy access.

The basis of the current local government fiscal framework is the 1998 Local Government White Paper (RSA, 1998b) finding that local government (in aggregate) had 'considerable' own-revenue raising capacity. In fact, the Local Government White Paper concluded that 90 per cent of all of local government's operating revenue requirements, in aggregate, could be covered by own revenue collection. As a result of this assumed own-revenue-raising potential, local government receives less than 10 per cent each year of nationally raised revenue, through the annual division of revenue via the equitable share mechanism.

Within this 90 per cent assumption, the White Paper analysis proposed a fiscal model for local government based on the following:

- i. 73 per cent of total operating expenditure requirements (including critical expenditure categories such as the maintenance of all municipal infrastructure) could be funded from property rates and the the sales of trading services such as electricity, water and sanitation; and
- ii. just over 37 per cent of total operating expenditure requirements across local government could be funded by electricity sales alone.

**THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY
AND AFFORDABLE ACCESS TO ENERGY**

The Local Government White Paper assumed that this electricity contribution could be reached even if the RED model proposed in the Energy White Paper was implemented:

Alternative income from levies on electricity sales will be generated once restructuring within the electricity sector results in municipalities no longer playing a direct service provision role.

However, it should be noted that the Local Government White Paper was also clear that, within this proposed fiscal model, municipalities still had to respect their fundamental developmental role by ensuring (i) that services were priced at a level that made them affordable for all users and (ii) that households unable to pay for basic services were still able to afford them.

Municipalities need to develop a clear tariff policy, including a policy to ensure that indigent households have access to basic services.

Another reason why services had to be affordable was so that municipalities could actually collect payment:

Credit control measures will only be successful if targeted relief is available for those households who cannot afford to pay for services.

However, like the Energy White Paper, the Local Government White Paper emphasises the importance of affordable services without ever providing more detail as to how affordability should be assessed or suggesting any benchmarks or indicators for this purpose. Subsequent legislation and regulation in respect of the pricing of municipal services has remained largely silent on the matter. As a result, the notion of affordable services has largely been erased by the need to increase service charges to balance municipal budgets.

In short, the White Paper took the position that it was perfectly possible for a municipality to provide services 'at levels which are affordable' (although it did not specify what those levels might be) and be 'able to recover the costs of service delivery' at the same time. It was silent on how to proceed if cost recovery tariffs were, in fact, unaffordable for significant numbers of households. That is, there was no anticipated conflict of interest among the goals of affordable services, relief for all indigent households and sufficient cost recovery to ensure that electricity would contribute, in aggregate, 37 per cent of total operating expenditure requirements. The reality has been very different.

What is the current situation?

The cost paid for electricity by municipal end users varies enormously, based on factors such as type of user, type of connection and where they live.¹⁹ The distribution system is thus characterised by significant complexity in determining exactly what a particular customer in a particular place will pay, and easy comparisons among users in different municipalities (such as an ‘average’ annual increase in prices) is difficult. The National Energy Regulator (NERSA) is responsible for setting annual base price determinations, but these are far from simple, and cover multiple permutations of usage, location and customer.²⁰ Eskom also charges its municipal (and direct) customers a range of different rates, based on factors such as categories of users, kind of connection, time of day, distance of connection, and many others. Municipalities, in turn, charge different rates based on factors such as kind of connection, type of user and others.

Importantly, municipalities are entitled to charge additional fees over and above the fees (and fee increases) that are approved by NERSA. These additional fees are generally related to the municipality’s estimate of additional funds that it requires — either in order to meet a full electricity supply cost recovery requirement, or to ensure that its budget is fully funded. Not all of these charges apply to all users in one municipality, nor are they uniform across municipalities. The effective result is that a household in one municipality can (and very often does) pay a completely different price for exactly the same amount and kind of electricity to a household that lives in another municipality. In addition, users with prepaid meters pay different amounts (depending on usage) than households that are billed via monthly accounts.

Across the board, however, all municipal services have increased in price well above the rate of consumer price inflation over the past 10 years, making it clear that affordability is not a priority in the current system. The South African Reserve Bank reported the following increases in municipal services costs over the ten-year period from 2010 to 2020 (during which period the increase in headline consumer inflation was 68 per cent):²¹

- Rates and taxes: +118 per cent
- Electricity: +177 per cent
- Water: +213 per cent

Municipal services income is the single biggest source of income for local government, and the reality is that municipal services income is the local government income statement balancing item (Ledger and Rampedi, 2020), since it is illegal in terms of current legislation for a municipality to have an unfunded budget that is, to plan to spend more money than is available. There is no legislation that limits municipal

19 www.nersa.org.za

20 https://www.nersa.org.za/wp-content/uploads/bsk-pdf-manager/2020/09/NERSA-Approved-Municipal-Electricity-Tariffs-2018_2019.pdf

21 <https://www.businessinsider.co.za/water-prices-have-increased-massively-in-south-africa-over-the-last-decade-the-reserve-bank-says-2020-10>

THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

expenditure to ensure that services are affordable: instead, the overarching philosophy is one of *cost recovery*. Although it certainly makes sense that the cost of providing a service should be covered by the fee that is charged, there are few controls in the system to keep costs as low as possible. In addition, revenue from electricity is not intended merely to cover the direct costs of providing that service, but also to subsidise a significant portion of other operating expenditure items.

Despite these significant price increases, income from electricity sales has failed to meet the expected contribution to operating revenue (that is, 37 per cent). Ledger and Rampedi (ibid) calculated that billed electricity revenue, in aggregate, contributes less than 30 per cent of local government's total operating revenue, and that the actual contribution is probably closer to 25 per cent — since not all billed amounts will actually be collected. Local government, in aggregate, is increasingly in a state of financial distress, which coexists alongside generally **declining** perceptions of service delivery levels (in other words, consumers are paying much more, but they are less satisfied with the quality of the services they are receiving).

In the 2013/14 financial year, 86 municipalities (out of a total of 278) were considered by National Treasury to be in a state of financial distress. That number rose to 125 in the 2017/18 financial year — representing almost half of all 257 municipalities.²² For the 2017/18 financial year the AGSA made this observation:

There are increasing indicators of a collapse in local government finances – we assessed 76% of the municipalities to have a financial health status that was either concerning or requiring urgent intervention. Almost a third of the municipalities were in a particularly vulnerable financial position. (AGSA 2019, p9).

A growing number of municipalities appeared to the AGSA to be unable to operate as financially going concerns.

In the 2018/2019 financial year,²³ things got even worse: financial outcomes deteriorated in most provinces. The AGSA found that in the 2018/19 financial year:

- 79 per cent of municipalities had a financial health status that was 'either concerning or requiring urgent intervention';
- 31 per cent of municipalities were considered to be in a 'particularly vulnerable' financial position; and
- 34 per cent of municipalities ended the year with a deficit (involving an aggregate amount of R6.3 billion of unfunded expenditure).

²² The number of municipalities declined by 21 in 2015, as a result of the redetermination of municipal boundaries by the Municipal Demarcation Board.

²³ The most recent year available at the date of this report.

The Auditor-General concluded that '[there is] a financial cul-de-sac that many of the local municipalities and districts have already reached across the whole country, with a few and limited exceptions' (AGSA, 2020). **Probably the most disconcerting part of the 2018/19 audit report is that these dire outcomes reflect the state of local government finances before the impact of the coronavirus pandemic lockdown and subsequent sharp decline in economic activity.**

There is increasing evidence that more and more municipal customers cannot pay their accounts; that the gap between so-called affordable costs and actual costs is considerable (and rising). SEA (2017) reports that poor households spend more than 10 per cent of their income on energy, and that the poorest households spend considerably more (up to 17 per cent). Outstanding debt owed to local government has risen steadily over the past few years, from just under R130 billion at the end of the 2016/17, to just over R230 billion at the end of December 2020 (which in turn was almost R50 billion higher than in March 2020). Most of this debt (R192 billion) has been owed for more than 90 days, and 72 per cent is owed by households. Some R27 billion of that total was in respect of electricity (up from R20 billion in March 2020)²⁴. The Auditor-General estimates that no more than 60 per cent of that debt can ever be recovered, given the assessed ability of households to pay.

Despite this growing pile of household debt, and numerous statistics indicating that more than half of South African households live below a monthly household income poverty line of R3,720²⁵ and that chronic food insecurity affects at least 30 per cent of all households (Ledger, 2016), the official line is that households must be forced to pay their accounts. Indeed, national government has taken the position that if municipalities had effective revenue collection models in place, they would not have any financial difficulties. Ensuring that households have access to affordable services is not part of this model.

In summary, what has been created is a vicious circle of increasingly financially distressed municipalities coexisting alongside more and more households who are unable to access the services they require because they cannot afford to pay for them.

In this environment, the free basic electricity (FBE) policy should be providing an important support for millions of households. Is it filling this role?

3.2. The FBE trade-off no one knows about

Local government is the gatekeeper of the free basic services programme (including FBE) and is the final arbiter of who can access these and who cannot. In terms of that policy, it is each municipality's responsibility to identify households within its boundaries that qualify for indigent status, to keep a record of such households, and to then ensure that they receive the free basic services. The indigent registration process is central: a household that is not registered by a municipality cannot obtain

²⁴ Our calculations, based on the Section 71 municipal reports, available at www.mfma.treasury.gov.za

²⁵ About USD265.

THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

any free service, including the FBE, no matter how poor they actually are. The 2003 FBE policy set out suggested guidelines for how municipalities should approach registration, but the final authority for setting (and implementing) indigent household criteria rests solely with the municipality, and requirements do vary. Most municipalities set an upper limit on household income (commonly around R3,500 per month — double the current older person's grant), together with other qualifying criteria, such as the requirement to be the homeowner (not a tenant). The registration is generally effective for a limited period (usually 12 months) after which the household must reapply.

Once households have been officially registered as indigent, the municipality is supposed to make a package of free basic services available to them, including the 50kWh of electricity every month (where the household has a formal grid connection). For historical reasons (including the township electrification initiative undertaken by Eskom before the current municipal structure was put in place) Eskom has a significant share of poor households as customers. However, even where they obtain electricity directly from Eskom and not the municipality, poor households' access to the FBE allowance energy is still determined by local government via its gatekeeper role in the implementation of the policy.

Where registered indigent households receive electricity directly from Eskom, the municipality should give Eskom a list of these households. The utility can then deliver the free allocation, generally in the form of tokens for prepaid meters. In return, Eskom receives money for each beneficiary household from the municipality, based on an annual determination (per kWh) from NERSA. That rate is currently set at 127.2 cents per kWh, or R63.60 per month for the 50kWh.

Moreover, the FBE (along with the other free basic services) has a dedicated source of funding outside of municipal own revenue. That is, a municipality is not required to fund the provision of free basic services from its own revenue — unless it decides to fund a greater number of households than it receives funding for, or to supply a higher amount than the 50kWh,²⁶ or is unable to supply the service at the cost allocated in the budget. Instead, there is an annual allocation in the national budget to each municipality in respect of these services. The amount per household is calculated using an estimated average cost of providing each service, and contains both an operations and a maintenance component. That amount is multiplied by the number of assumed qualifying households in each municipality (using adjusted household income data from the 2011 census and the 2016 community survey) to arrive at the final amount.

However, the supporting budget documentation is also clear that municipalities have the option to provide fewer households (than they receive funding for) with basic services, subject to 'their budget documentation clearly set[ting] out why they have made this choice and how they have consulted with their community

²⁶ The most recent detailed review of the provision of FBE – for 2015 – indicated that 18 municipalities provided more than 50kWh. There is no consolidated data in respect of the current situation, but we are aware that some municipalities do provide more than this amount.

during the budget process'. To date, we have not seen any indication that these reporting and consultation requirements are either enforced or that there is regular oversight of how many households actually receive services compared to how many households are funded in each municipality and the reasons for the difference.

If a municipality actually provides fewer households with the free basic service benefit (compared to how many are funded in the national budget), the balance of the money allocated to that municipality for free basic services goes into general revenue, and can be spent as the municipality wishes. Given the precarious financial status of many municipalities, and the lack of oversight of how many households actually receive benefits, is there an incentive for municipalities to avoid registering households for the benefit, and to keep the difference?

Research (ABS, 2018; SERI, 2013) suggests that the way in which many municipalities design and implement their indigent household policies has the effective outcome of excluding significant numbers of qualifying households, *even when there is funding available in the national allocation for such households to receive free basic services*. Although we do not want households who are not really indigent to receive the benefit, we **do** want as many qualifying households as possible to receive it. Given that StatsSA has estimated that about 60 per cent of all households (that is, about 10 million households) fall under the R3,500 per month commonly-used indigent level, there would certainly appear to be a large pool of potential beneficiaries.

The 2003 FBE Policy emphasised that 'the distribution/allocation of the free basic electricity allocation must be as simple as possible to obviate the need for high levels of capital/upgrading and administration expenditure' (p24). Instead, most municipalities have put in place a very complex (and likely expensive) process which many households experience great difficulties with (SERI, 2013). In fact, many qualifying households are not even aware that they might benefit from the free services (ibid), suggesting that many municipalities are not making much effort in this regard. Households are required to present proof of their poverty — and it is not an easy thing to prove that you don't have something, in this case an income. The use of documentation such as that issued by the Unemployment Insurance Fund (UIF) is completely irrelevant to the large number of people who have never been formally employed. Many municipalities set the qualifying income threshold below the threshold set in the national budget (SERI, ibid). This is particularly detrimental for larger households.

THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

According to SERI (ibid) most municipalities require the following minimum documentation as part of an application to be declared an indigent household:

- an application form signed by the ward councilor;
- copy of the applicant's ID document;
- proof of residence or ownership of property;
- latest municipal account;
- proof of income or unemployment; and
- proof of any social grants received.

Many municipalities require additional documentation, such as a report from a social worker confirming that the household is poor, but provides no assistance to households to obtain such documentation (ibid).

One of the most exclusionary requirements is that beneficiary households are often required to own their house. This obviously excludes a significant number of the poorest households, such as those who are backyard tenants. It is important to point out that the original FBE policy did not include a proposal that allocations should be limited to registered property owners, but merely that it was to be made available to households.

The research around the registration of indigent households suggests that municipalities are not attempting to provide free basic services to as many households as possible, but rather to restrict access. ABS (2018) came to the conclusion that

the more financially strained the municipality is, the more likely it is to use the ES (equitable share funds allocated for free basic services) for operational expenditure and therefore frame their indigent policies in fairly strict and exclusive terms ... One can argue that this is the perverse incentive inherent in the unconditional nature of the ES' (p15). That is, municipalities are making it as difficult as possible to access the free basic services because the system has a built-in financial incentive for them to do so.

But what is the actual situation? How many households are obtaining the free basic services (and in particular the FBE) compared to how many are being funded in the national budget? ABS (2018) determined that, in the municipalities that were the focus of their research, fewer than 30 per cent of households for which the municipality received basic services funding were actually receiving services. Research by SERI painted a similar picture across a wider sample of municipalities. Are these findings supported by examining the consolidated national data over the past few years?

CHAPTER THREE

In order to answer this question, we drew on two sources of information: the first is the annual division of revenue (part of the national budget documentation), which specifies how many households are funded for basic services, as well as the funding allocations for each service for household. For the 2020/21 budget, the funding allocations (Rands per service, per household, per month and in total) are as set out in the table below.

TABLE 1: AMOUNTS PER BASIC SERVICE ALLOCATED THROUGH THE LOCAL GOVERNMENT EQUITABLE SHARE, 2020/21

Service	Allocation per household (R/month)			Total for the fiscal year (R billions)
	Operations	Maintenance	Total	
Energy	84.30	9.37	93.66	11.645
Water	130.38	14.49	144.86	18.011
Sanitation	96.21	10.69	106.90	13.290
Refuse removal	80.65	8.96	89.61	11.141
Total basic services	391.53	43.50	435.04	54.087

*Source: Annexure W1 – Budget Review 2020 (p39)
Amounts may not add up due to rounding*

That is, an amount of R435.04 per month (R5,220.48 per annum) is made available to fund a basket of free basic services to each qualifying household.

The annual division of revenue contains information about how many households in total have been funded for these free basic services (and the detailed allocations²⁷ provide information as to the number of funded households in each municipality). In theory — and unless they have a good reason — municipalities should be providing all funded households with free basic services. That is, if a municipality has received funding for 10,000 households, we would expect that it is actually providing services to close to this number of households, or if it isn't, that it has complied with the requirements both to explain why and to consult with the local community before making this decision.

So how does the actual number of households receiving free basic services compare with the number that are funded in the annual budget? Data on the delivery of free basic services is captured in the annual Non-financial Census of Municipalities (StatsSA publication, P9115). It indicates how many households in each municipality are receiving free basic water, electricity, sanitation and solid waste removal. This data is supplied directly by each municipality, and StatsSA officials follow up to assist with data collection. Since each municipality presumably complies with the legal requirement to maintain a reasonably accurate indigent register (at least in respect of total beneficiaries), and the survey has had a 100 per cent response rate for the past four years, we can make the assumption that the data probably has a relatively high degree of accuracy.

²⁷ Available at http://mfma.treasury.gov.za/Media_Releases/LGESDiscussions/Pages/default.aspx

THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

Our own review of the last set of available data showed that only two municipalities had submitted a '0' return in respect of the number of households receiving free basic electricity, and only one of these (a small rural municipality) had a '0' return across all categories suggesting that it probably could not submit any data. In summary then, we can take the information in the Non-financial Census of Municipalities as a relatively accurate reflection of how many households are actually being provided with free basic electricity by municipalities, compared to how many are funded in the budget each year.

The table below shows data in respect of households actually receiving FBE compared to the number of households funded in the budget, for the period 2014/15 to 2019/20. A figure in brackets in the 'difference' column indicates that **fewer** households received the FBE benefit than were funded, and the extent of that difference. The last column indicates the funding difference, that is, the amount of money that was available for free basic services, compared to what was actually spent. A positive figure in this column indicates that local government received more money for providing FBE than it spent on providing it (assuming the cost of doing so was equal to the allocation).

TABLE 2: HOUSEHOLDS RECEIVING FBE VERSUS HOUSEHOLDS FUNDED FOR FBE

Year	Households funded for FBE	Households receiving FBE	Difference – number of households	Funding difference (R billions)
2014/15	8,702,989	2,747,490	(5,955,499)	R4.304
2015/16	8,965,790	2,454,903	(6,510,887)	R5.172
2016/17	9,193,130	2,563,493	(6,629,637)	R5.647
2017/18	9,550,380	2,179,521	(7,233,236)	R6.608
2018/19	9,805,644	2,047,218	(7,758,426)	R7.599
2019/20	10,109,607	2,108,634*	(8,000,973)	R8.992

Source: LGES Summary Data and Formula, P9115, own calculations.

* Estimate

For the 2019/20 year, the number of households receiving free basic electricity has been estimated, since the data is not yet available. We have adopted a conservative approach towards this estimate, assuming that the number of households receiving services actually increased from the previous year, by the same percentage as the number of funded households increased (that is, 3 per cent).

Furthermore, the time periods for P9115 and the national budget are not the same, because local and national government have different financial year ends (March for the former, and June for the latter). Although we might expect that this discrepancy results in some difference between the number of funded households and households actually receiving benefits (as municipal budgets catch up with national allocations), we would not expect that the difference is significant, given that the changes in the number of funded households is calculated on a standard formula.

There is clearly a huge difference between the number of households being funded for FBE and the number actually receiving the benefit. Fewer than 25 per cent of funded households are actually receiving the benefit, implying that there are more just over 8 million households who are funded for FBE, and are not receiving it. This finding confirms those made by SERI (2013) and ABS (2018), and thus reflects a long-term state of affairs. In fact, the situation has worsened since these research reports were written.

It should be noted that although electricity is the basic service where there is the biggest difference between national budget allocation and actual delivery, all the basic services are delivered at a level significantly below the number of funded households, and that gap is getting wider each year. For example, fewer than one third of the households funded for the free basic water allowance are reported by municipalities to actually be receiving it. The number of households receiving free water **declined** by 1 million between 2018 and 2019 (StatsSA, 2021).

StatsSA summarised this finding in the latest edition of the Non-financial Census of Municipalities²⁸:

There has been a reduction in the coverage of free basic services across the board. In terms of water, for example, 6,9 million consumer units benefited from free water in 2006, falling to just over 3 million in 2019. In 2006, 76% of consumer units received free water, falling to 22% in 2019

There appear to be two factors contributing to this situation:

- i. Significant numbers of households that are poor are not being registered as indigent by municipalities, and are therefore not obtaining the FBE for which there is funding in the budget (or any other services); and
- ii. There appear to be households who are registered as indigent, but are still not being given the FBE as part of the free basic services package. (There is a difference of more than 1.5 million households receiving free basic water compared to free basic electricity). Our initial community survey work supports this assumption: we have found significant numbers of households registered as indigent and receiving other free basic services (such as water), but not electricity, even though they are connected to the grid.

In addition, the number of households receiving the FBE benefit has generally **declined** over the past five years, while the number that are funded in the national budget has **increased**. What could explain this enormous difference? There are a number of possibilities:

28 <http://www.statssa.gov.za/?p=14178>

THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

Firstly, the correct number of indigent households could be actually be significantly lower than the estimates in the national budget — that is, local municipalities are not supplying services to as many households as are funded because there are far fewer poor households. This is so unlikely as to be almost impossible: StatsSA suggests that about 10 million households survive on less than R3,500 per month. Although this estimate is not based on current empirical census data, StatsSA is very unlikely to have overestimated household poverty to the extent of more than 250 per cent. Other poverty data (such as the General Household Survey) supports the estimate of 10 million households. In the highly unlikely event that the national budget **has** actually overestimated the number of indigent households by more 100 per cent, this would suggest that the current level of free water and electricity could be doubled within current budget constraints, making a significant positive impact on poverty.

Secondly, could it be that the cost of providing the free basic electricity is significantly higher than the amount provided for in the budget? It's possible, but we should remember two factors before we come to that conclusion:

- i. The first is that many poor households purchase power from Eskom, and the Eskom recovery rate is significantly **lower** than the rate paid out in the budget (currently R63,60 per month for the 50kWh versus R93.66 in the budget). Our initial survey work in a community in Dihlabeng Local Municipality (Free State) where all households have an Eskom prepaid meter indicated that a large percentage of households were registered as indigents, but that none of those received the FBE allowance. They are generally unaware that they qualify for the benefit.
- ii. Secondly, many poor households are on prepaid meters. Charges vary, but a reasonable average would probably be around R1,70 per kWh for the first block tariff.²⁹ That equates to R85 per month for 50kWh, which is less than the amount allocated in the budget for the FBE. If a municipality is prepared to supply 50kWh at that rate to a paying customer, why would it be too expensive to supply it to an indigent household at a higher rate?

Finally, the actual level of FBE allocation could be low because many indigent households do not, in fact, have a formal (grid) electricity connection. That might explain a part of the difference: at an 85 per cent electrification rate, we could assume that about 2.57 million households (out of a total of 17.16 million) do not have a formal grid connection, and therefore cannot be provided with the FBE³⁰. However, there is a Free Basic Alternative Energy Policy in place to provide households without access to the grid items such as paraffin and candles. StatsSA (StatsSA, 2021) calculates that no more than about 150,000 households are benefitting from this policy.

²⁹ It is what the author currently pays.

³⁰ Electrification rates vary across provinces, from 78% in Gauteng to 92% in Limpopo, reflecting rapid urbanisation.

But even if we make the assumption that there are 2.57 million households where the only factor preventing their access to the FBE is their lack of a formal electricity connection, we are still left with **some 5.4 million households that should be receiving FBE, but are not. The amount of money involved is estimated at just over R6 billion in the current year alone.** Given that none of these households appear to have been consulted on their municipality's decision not to provide them with this funded service, this effectively amounts to an involuntary R6 billion municipal tax on South Africa's poorest households. These households, in turn, are being deprived of 3 million MWh of free electricity each year,³¹ and have to purchase the equivalent out of their own limited income, sacrificing expenditure on other necessities such as food.

The evidence thus suggests a conclusion that supports SERI's (2013) finding: municipalities are deliberately making it difficult for indigent households to access free basic services because there is a financial incentive for them to do so. And because there is no one to prevent them from doing so.

3.3. The failure of oversight and governance

This wholesale deprivation of poor households of their FBE (and the other basic services) has occurred over a long period of time. One of the cornerstones of South Africa's policy to address poverty and inequality has been eroded to a truly astonishing degree. Alarming, no one who is accountable for the implementation of South Africa's socioeconomic transformation agenda seems to have noticed, much less done anything about it.

The siloed nature of the state — divided into departments with limited mandates — is poorly equipped to exercise oversight over a development goal that crosses over multiple mandates (energy, local government, budgeting and social development). There is no governance arrangement in place to compensate for this organisational structure, that is, to ensure that different departments cooperate and coordinate their activities.

Legislated oversight departments (Cogta, National Treasury and DMRE) are all responsible for overseeing a portion of the programme, but no one entity is responsible for overseeing the entire value chain of free basic services, from budgetary allocations to municipal indigent policies, to the actual delivery of services. As a result, key parts of this value chain appear invisible to certain departments, and thus operate without any effective oversight, to the considerable detriment of the poorest households.

31 5 million households at 600kWh each per annum.

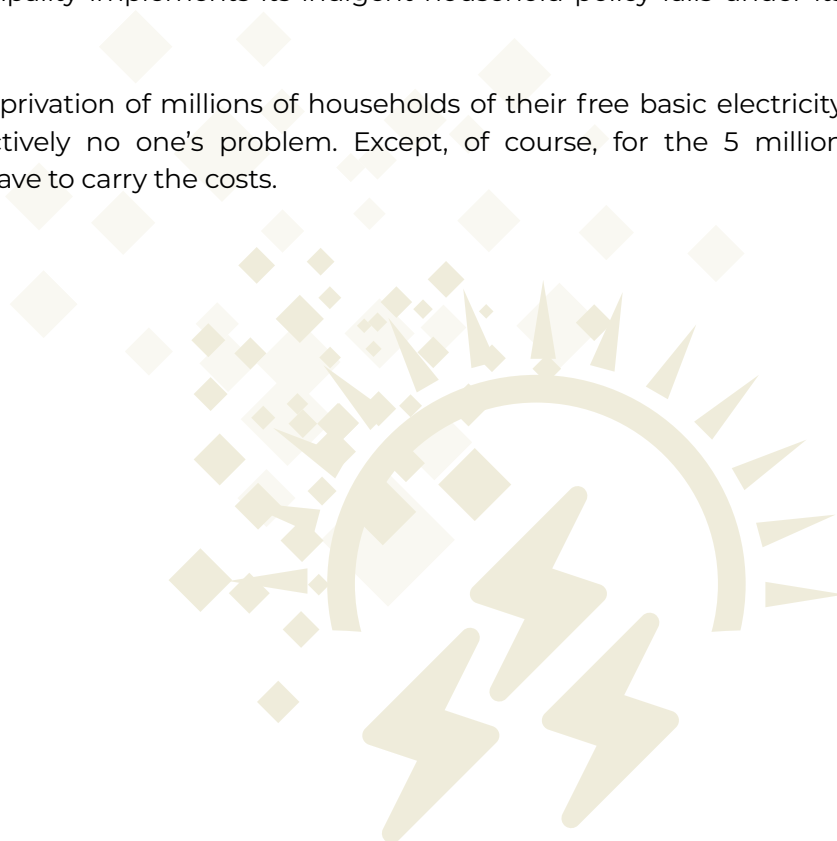
THE TRADE-OFF BETWEEN LOCAL GOVERNMENT'S FINANCIAL SUSTAINABILITY AND AFFORDABLE ACCESS TO ENERGY

As one example, Cogta has a public web page³² which states that in 2017 a total of about 3.5 million households were registered as indigents across local government, and thus qualified for free basic services. In that same year, the national budget included funding for 9.5 million households — almost 3 times as many — and yet the gap is neither highlighted or interrogated (no doubt because the Cogta mandate does not include the compilation of the annual budget).

As another example, National Treasury states in each explanatory memorandum to the annual budget that if a municipality supplies fewer households with basic services than are funded, then the municipal budget documentation must 'clearly set out why they have made this choice and how they have consulted with their community during the budget process'. That seems a reasonable caveat, but to our knowledge it does not appear that there are checks in place to ensure that this actually happens. For example, it is not a requirement of formal budget submissions to clearly indicate the difference between funded indigent households and those who actually receive services, and to explain the difference. It also does not appear to be a performance issue that is overseen by the Auditor-General's office during the municipal audit process, or included in those audit reports.

Finally, there is no question that DMRE — responsible for supporting municipalities in respect of energy matters and the owner of the FBE policy — should be playing a central oversight role. It is failing to do so, no doubt because it would not consider that how a municipality implements its indigent household policy falls under its mandate.

As a result, the deprivation of millions of households of their free basic electricity allowance is effectively no one's problem. Except, of course, for the 5 million households who have to carry the costs.



32 <https://www.cogta.gov.za/index.php/2019/10/31/facts-about-indigent-households/>



How are we expected to pay (for) electricity when only three out of ten people who live here are working? How do you expect people to pay electricity when we are poor and unemployed? ³³

³³ <https://rekordeast.co.za/318517/claiming-free-electricity-promise-north-residents/> (20 February 2019)

4. SUMMARY AND POLICY IMPLICATIONS

4.1. Summary of findings

The transformative role of clean, safe and affordable energy in reducing poverty and inequality, and in improving the quality of life of poor South African households as envisaged in the 1998 Energy White Paper, has failed to materialise to any significant degree. The overwhelming reason for this is the failure of energy policy and governance, and the absence of effective oversight of how local municipalities have actually delivered energy services to households.

There is an important lesson in this governance failure for the broader just transition movement: we cannot hope to solve complex, multi-faceted socio-economic problems if we do not think very carefully about the institutional and governance arrangements necessary to ensure that comprehensive planning, action and oversight are all aligned to long-term policy priorities.

Policymakers have consistently failed to incorporate the developmental aims of the White Paper into energy policy, most notably where these pertain to poor households, small businesses and small farmers. This shortcoming has been compounded by the failure to oversee the effective implementation of even the mediocre response constituted by the free basic electricity policy. It appears that there is little interest in working towards affordable, clean and safe energy access for those who require it the most.

These multiple failures result in poor households having to spend money that they desperately need for food and other essentials on purchasing energy. They suffer enormous health consequences as a result of being forced to use dirty (polluting) energy sources. They lose what few possessions they have (and sometimes their lives) in countless house fires caused in large part because they are forced to use dangerous energy such as paraffin. They are forced to pay an effective involuntary R5.7 billion municipal tax each year.

The current situation underscores both the extent to which the current operation of the electricity distribution sector in South Africa is actively contributing to poverty and inequality, and the critical importance of changing this situation as part of any energy transition that aims to be *just*. Given the entrenched structural factors underpinning the current anti-poor energy distribution system, and the vested interests in maintaining the existing trade-offs between poor households and municipal financial viability, it would be naïve to believe that moving to a decarbonised energy generation system — while maintaining the current distribution system — will make much difference to poor households. There is an argument that poor households will somehow automatically benefit from the lower generation costs generally associated with renewable energy sources. But this argument fails to take into account the strong vested interest in using the difference between current and future bulk costs to shore up the collapsing local government balance sheet. In the absence of a clear policy commitment to affordable access to sufficient quantities of clean and safe energy for South Africa's 10 million poor households — which commitment does not currently exist — very little will really change for those households.

4.2. Policy recommendations

What are the main policy actions that could address the current situation?

1. In the short-term, decisive action should be taken to ensure that municipalities significantly increase the number of indigent households that are registered and who receive services. If necessary, they can be assisted to do this in a more administratively-efficient manner. The requirement of having to explain the difference between funded households and benefitting households, and to consult communities on this decision, must be strictly enforced.

There is no doubt that this will reduce local government revenue available for other (non-free basic services) expenditure. In some municipalities this reduction will be significant, and the effect will generally be higher in municipalities that have high service-provision costs. This is no excuse not to proceed: if the state has decided to sacrifice the provision of free basic services in order to support the local government balance sheet then it should be clear and transparent about that decision. The current situation, where we effectively pretend to have a free basic services policy and then work behind the scenes to hollow it out, is untenable.

2. A clear definition and benchmarks for exactly what constitutes 'affordable access to sufficient quantities of clean and safe energy'³⁴ must be established and should be incorporated into all existing relevant policy and plans. This includes the manner in which *cost recovery* for basic service provision is

34 PARI's Energy and Society Programme will be conducting research on this issue during the course of 2021.

defined: the entire service provider value chain (and not just municipalities) must be oriented toward providing services at a cost that fits within the limits of affordability, instead of the other way around. In fact, it might be a good idea to start talking about *facilitating affordability* instead of *cost recovery* as the guiding mechanism for the pricing of all basic services.

We acknowledge that it might not be possible to give all qualifying households access to the (likely) minimum 200kWh that constitutes sufficient energy for their purposes, but that does not mean that it should not be our goal. We need to move away from the current FBE assumption that poor households are to be permanently deprived of sufficient energy to make significant improvements in their quality of life simply because they are poor.

As part of this process, small enterprises and small farmers should be written back into affordable energy policy. Many micro-business opportunities require modest amounts of electricity, which are simply beyond the financial reach of low-income individuals. The White Paper was clear that 'Productive activities in underdeveloped areas will economically empower the poor. Energy, particularly electricity, is a key requirement for these productive activities'. However, to date no policy or regulation has been enacted to give effect to this goal. Access to sufficient quantities of affordable (and reliable) energy are central to small farmers' ability to move themselves up the agricultural products value chain, and increase their income opportunities.

3. A significantly improved oversight system is required: responsibility for the entire value chain of ensuring access to affordable energy should be made the final responsibility of one entity. That one entity must be accountable for ensuring that policies and plans actually incorporate the intentions of the White Paper, and be responsible for regular reporting on progress towards those goals.

We recommend that the provision of all of the free basic services (against the amount funded in the budget each year) be included in the annual audit undertaken by the office of the AGSA for each municipality. This would ensure that the gap between funded households and beneficiary households is made much more visible, and increase pressure on local municipalities to disclose the reasons for this gap.

4. It is critical that South Africa's definition of what constitutes a 'just transition' is expanded to include the details of what would constitute a just **distribution**. We require a significant re-orientation of our entire energy system; a reorientation that sees energy primarily as transformative and pro-poor.
5. The problem of just distribution (access) needs to be addressed jointly with the policy decisions that are tackling the electricity supply side crisis and energy system decarbonisation.

REFERENCES

- ABS. (2018). *The realities of free basic services and indigency: human rights, dignity and financial sustainability. Policy Brief.* Accounting for Basic Services Project.
- AGSA. (2020). *Media Release 1 July 2010.* Auditor-General of South Africa.
- AGSA. (2019). *Executive Summary – MFMA 2017/18 Local Government Audit Outcomes.* Auditor-General of South Africa.
- Bekker, B., Eberhard, A., Gaunt, C. T. and Marquard, A. (2008). South Africa's rapid electrification program: policy, institutional, planning, financing and technical innovations, *Energy Policy*, 36 (8), pp 3125 – 3137.
- DME (now DMRE). (2003). *Electricity basic services support tariff (free basic electricity) policy.* Department of Minerals and Energy. Republic of South Africa.
- DMRE. (2020). *Annual Report 2019/20.* Department of Mineral Resources and Energy. Republic of South Africa.
- DOE (now DMRE). (2016). *Integrated Energy Plan.* Department of Energy. Republic of South Africa.
- EarthLife Africa. (2010). *Free basic electricity: a better life for all.* EarthLife Africa Johannesburg.
- Ledger, T. (2020). *A just distribution: the overlooked role of energy distribution policy and governance in achieving a just energy transition in South Africa.* Energy and Society Working Paper #1. Public Affairs Research Institute.
- Ledger, T. (2016). *An empty plate: why we are losing the battle for our food system, why it matters and how to win it back.* Jacana.
- Ledger, T. and Rampedi, M. (2020). *The end of the road: a critical review of the local government fiscal framework.* A PARI Report. Public Affairs Research Institute.

- Makonese, T., Kimemia, D. K. and Annegarn, H. J. (2012). *Assessment of free basic electricity and use of pre-paid meters in South Africa*. Paper presented at the 20th Domestic Use of Energy Conference, Cape Town, January 2012.
- NERSA. (2016). *NERSA Report on the national free basic electricity (NFBE)*. National Energy Regulator of South Africa.
- NPC. (2011). *National Development Plan 2030*. National Planning Commission of South Africa.
- RSA. (2008). *National Energy Act, 34 of 2008*. Republic of South Africa.
- RSA. (1998a). *The White Paper on Energy*. Republic of South Africa.
- RSA. (1998b). *The White Paper on Local Government*. Republic of South Africa.
- SEA. (2017). *Sustainable energy solutions for South African local government: a practical guide*. Sustainable Energy Africa.
- SERI. (2013). *Targeting the poor? An analysis of free basic services (FBS) and municipal indigent policies in South Africa*. Socio-economic Rights Institute of South Africa.
- StatsSA. (2021). *Non-Financial Census of Municipalities 2019*. Statistical release P9115. Statistics South Africa.
- Wang, Y., Gibson, L. A., Beshir, M. and Rush, D. (2020). Preliminary investigation of critical separation distance between shacks in informal settlement fires, *Proceedings of 11th Asia-Oceanic Symposium on Fire Science and Technology*, pp 379 – 389.

