

GUIDELINES FOR THE INTRODUCTION OF FREE BASIC ELECTRICITY SERVICE

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1. Definitions

“**Free electricity**” means unlimited electricity supply at no cost at all to the consumer

“**Free basic electricity**” means a limited amount of free electricity deemed necessary to Provide basic services as determined and funded by the National Government for the self-targeting poor households as a result of the Government ‘s White Paper on policy to alleviate poverty

“**Household**” means a residential *premises customer* with an official point of supply *metered on a domestic tariff*.

“**Energy White Paper**” refers to the Policy on Energy

“**Basic Fixed Charges**”. Refers to fixed charges necessary to cover fixed costs associated with typically administration, meter reading, billing, and the establishment and maintenance of distribution network.

“**Capital Costs**“ refers to costs associated with the provision of hardware systems upgrading and any other cost not of a recurrent nature associated with the provision of free basic electricity. These costs are a once-off allocation without depreciation.

“**Cost by service level**“ refers to the cost of supplying electricity infrastructure at a particular Level of service and supply capacity.

“**Bulk Cost**“ *means the cost incurred by a distributor for the supply of electricity at a bulk intake point to a geographical area.*

“**Tariffs**“ refers to charges levied for the sale of electricity

“ **Non-Grid Systems**“ refers to electricity generating system systems designed to provide electricity power supply to remote rural areas. These systems include diesel generators, biodigesters, hybrid systems, and turbines, solar Systems etc.

2. Purpose

The purpose of this document is to provide Electricity Service Authorities and Electricity Service Providers with an understanding of the implications of providing Free Basic Electricity as a National Government programme, and to provide guidelines on the implementation of such thereof.

3. Background and Legal Framework

3.1 Policy Source

National Government has decided to ensure that a basic supply of electricity is made available free to the poor. This policy has been agreed to at Cabinet level. However in terms of prevailing legislation, electricity is a Local Government / District Council competency, and Local Government is constitutionally obliged to provide electricity services. However Eskom supplies about half the number of customers in South Africa and therefore Local Government together with Eskom will have to assume the major responsibility for the implementation of the policy. There is also a growing participation of non-grid concessionaires in areas not supplied by grid electricity. Their co-operation is therefore essential. Eskom is Service Provider within many Municipalities, and in order for the service to be uniformly applied throughout a municipality it will be necessary for Eskom to standardise on the provision of such services as agreed in the

service level agreements.

The decision to provide Free Basic Electricity is based on well-recognised socio-economic benefits of providing affordable basic services to enhance the well being of the poor. The provision of electricity supply makes a direct contribution to the socio-economic well being of the poor, and has a particular incidence on women and female children who are mainly responsible for carrying firewood, and other energy carriers necessary to maintain a functional household. It will also have positive impacts on the health and safety of the communities as the need fossil based energy source is reduced. It has been demonstrated that the introduction of modern sources of energy enhances the quality of life of the indigent communities, to a large extent. (Department of Minerals & Energy 9 February 2001)

3.2 Constitutional & Legal Issues

While national government has strongly promoted a 'free basic services' initiative with a view to alleviate poverty, it is local government, which is constitutionally mandated to deliver electricity services with Eskom legally required supplying electricity within its licensed area of supply. 'Free Basic Electricity' policy must therefore be implemented at local level where decision-making must rest. However, national and provincial government are obligated to provide support to local government. Further, provincial government is required to monitor the performance of municipalities.

This document seeks to provide guidelines to support to municipalities and other Electricity Service Providers in implementing the Free Basic Electricity policy.

3.3 Local government context

- *Effective local government:* For successful electricity services delivery it is essential that local government is effective. In the current circumstances this means that the local government needs to function effectively with the existing legislations.
- *Powers and functions:* One of the most difficult challenges faced by Local Government at present is the allocation of powers and functions between local (Category B) and district (Category C) municipalities. The amendment to the Municipal Structures Act assigns electricity supply function to the district level. However, the current situation is that capacity to function as electricity providers rests at local (B) level. The amendment to the Act provides for the status quo to be maintained in the interim, and this is the approach being taken by all provinces.
- *Allocation of income:* At present the legislation provides for equitable share allocations to be made to the local (B) level. It also provides for property rates to be paid to the local level. With regards to income from user charges, this will be allocated to the sphere, which is allocated the function (districts in the case of electricity supply). However, in the interim such payments will presumably be made to the organisation providing the service, typically municipalities. FBE will also be made available to the local through Equitable Share.

3.4 Electricity services authority responsibilities

- Eskom mostly generates bulk electricity although a few Municipalities have their own generation plants.
- *Legislation and policy:* Electricity is currently provided by various service providers under licence issued by the National Electricity Regulator (NER).
- In terms of the distribution sector, Municipalities are the constitutional service authorities, but where Eskom provides electricity, its role, as service provider has not been clarified in terms of the various Acts. Eskom is legally required in terms of the

Electricity Act and its licence to provide electricity within its licensed areas of supply, but the Municipal Structures Act provides local government rights, which are in conflict with the Electricity Act and the powers of the NER.

3.5 Motivation for 50kWh

As of 2002, there are currently 6,4 million households connected to the national grid. The National Electrification Programme has over the past five years connected over 2,8 million households to the national grid. On average 56% of households consume no more than 50kWh per month. An amount of 50 kWh per month is deemed sufficient energy to provide basic services for a poor household. This amount of electricity is suitable for basic lighting, TV and radio, basic ironing and basic cooking. Using energy efficient appliances can extend this amount.

4. Grid electricity households

Cabinet has approved the provision of first 50 kWh of grid electricity free to all poor South African households that have access to grid electricity and cover up to 80% of the operational cost of the Solar Home System (SHS). This facility is known as the EBSST, and is deemed to be sufficient to provide for a basic level of service for the use of lighting, media access, basic water heating with a kettle and basic ironing. The cost of funding the 50kWh would come from the national government through a separate window of the Equitable Share. Service Authorities should pay service provider the amount of electricity rendered free to poor households.

Typical Energy (kWh, units) usage table

The follow table gives an indication of the consumption of various appliances to act as varying combinations of appliances uses guide to how much energy

Item Per month	Watts used/month	Hours used	Days used	kWhs	Qty	Cumulative
Energy Saver Light	11	5	30	1.7	1	
Light	60	5	30	9	3	
TV (b&w)	35	6	30	7	1	
Iron	1000	4	6	24	1	
Kettle	1000	0.5	30	15	1	
Hotplate	1000	1	25	25	1	
Light	100	5	30	15	1	
Fridge (small)	250	6.5	30	49	1	

5. Non-grid electricity connected households

5.1 Introduction

The Energy White Paper provides for the implementation of non-grid electricity generation technologies in the electrification programme for areas remote from the existing national grid. At the drafting of this document, the only official non-grid technology is the Solar Home System providing a 50Wp output.

5.2 Background

Non-grid Electrification is an option available for electrifying remote rural areas that have low settlement densities and are far from the national grid. The National Electrification Fund through the Integrated National Electrification Programme covers the capital costs. Operational costs are incurred in respect of battery servicing and replacement and maintenance, special bulbs replacement, solar panel maintenance and replacement, if need be, and maintenance of control systems.

5.3 Proposal

Notwithstanding any provisions in the prevailing legislation to the contrary, a portion of non-grid Free Basic Electricity for the operational cost associated with non-grid technologies shall be funded through the Equitable Share to an amount of 80% of the total operational cost of Free Basic Electricity as approved by Cabinet. A complementary contribution will be paid by the consumer in case of a shortfall between the Equitable Share allocation and the actual operational cost of the non-grid service provided.

6. Principles of providing grid and non-grid Free Basic Services.

- 6.1 Two approaches are possible for providing the free basic electricity, Self-Targeting and Broad Based Approach, Cabinet approved the self-targeting approach with current limiting option.
- 6.2 Normal connection fees levied by the distributor will still be applicable in respect of all new services.
- 6.3 Basic charges/ fixed charges may become effective when monthly consumption exceeds the free allocation or service providers may make the basic charge payable up front. ***For credit metered customers no cash refunds will be given for unused free allocations. Free allocations not claimed by prepaid customers in any calendar month are lost.***
- 6.4 The distribution/allocation of the free allocation must be as simple as possible, yet secure, to obviate the need for high levels of capital/upgrading and administration expenditure.
- 6.5 Consumer discipline must be upheld. No free allocation is to be made available following disconnection from the electricity supply for reasons normally applicable in the distributor's environment such as meter/system tampering or non-payment, until the consumer has met all the distributor's/authority's requirements to have the supply restored.
- 6.6 No cash/voucher/service should to be considered, in lieu of the free basic electricity allocation or non-grid operational subsidy for those households that do not currently have an electricity service. The free basic electricity allocation/subsidy will only be effected when an electricity supply is made available.
- 6.7 Eskom shall not pass the costs of free basic service through tariff increases on to municipal undertakings so as to avoid the municipal customers carrying a double cost.

7. Relationship between Service Authority & Service provider

7.1 Electricity services provider arrangements (retail)

- *Urban context:* In urban areas it has been traditional in South Africa for the municipality to be the Service Provider. However, in some cases Eskom or an alternative service provider undertakes this function. In this regard non-distributing municipalities must enter into Service Level Agreement with the Service Provider and transfer the Free Basic Electricity Allocation accordingly.
- *Rural context:* Eskom services most rural areas in the country. Eskom obtains

cross subsidies from other customers nationally to provide electricity services to the unviable rural areas, thus making it difficult for local government to take over these services.

- *Non-Grid Electricity:* The Department of Minerals and Energy has appointed non-grid electricity consortia to undertake installation, maintenance and operation of non-grid services in rural areas remote from the grid on a commercial basis. Capital costs are covered by the National Electricity Fund

7.2 Financial arrangements between the Service Authority and the with service provider

7.2.1 Subsidising service provider or consumers: basic principles

- Where a Service Authority is reliant on Service Providers to provide services on their behalf and where the equitable share or levy is to be used to fund the Free Basic Electricity allocation, the Service Authority should transfer the subsidy to the Service Provider in terms of the Service Level Agreement.
- For a local municipal free basic electricity supply policy to be successful in a situation where Public Private Partnerships are desired, typically with a non-grid concessionaire, it is essential for the municipality to establish a clear set of rules for allocating equitable share subsidies. These should be applied equitably to all communities under the Municipal's jurisdiction and the Service Providers who serve them.
- Service providers can only be subsidised based on a clear set of conditions (*i.e. Service Level Agreement*), *which* include the performance indicators. These indicators should include:
 - Maintaining credit control and revenue collections,
 - Maintaining or improving the quality of service to consumers according to an agreed measure,
 - Promoting energy efficiency,
 - Improving electrification coverage.
- Regardless of whether the service provider is being subsidized for Free Basic Electricity provision, the service authority is obligated to regulate the performance of the service provider. However, if a subsidy is being applied the obligations of the service authority to monitor become more stringent.

7.2.2 Example: existing large contract – well served area

If the Service Authority has an existing electricity supply contract with a Service Provider and wishes to introduce a 'Free Basic Electricity' policy this has to be done through a process of negotiation with the Service Provider, with the Service Authority establishing the starting point based on its subsidy rules.

8. Funding

8.1 Funding principles

- 8.1.1 The cost of free allocation of both grid and non-grid Free Basic Electricity should be funded through the separate window of the Equitable Share.
- 8.1.2 The capital cost of providing systems of providing Free Basic Electricity

(vending station, systems upgrading, current limiting devices, upgrading from 2.5A to 10A or downgrading to 10A).

8.1.3 Additional administrative costs associated with the provision of FBE

9. Technical issues

Prepayment system

The following pre-payment systems are currently employed by the industry,

- **Proprietary meters**

As far as proprietary meters are concerned, special solutions need to be sought depending on specific meter types, makes and vending systems to make them compliant with the provision of FBE. In the case of incompatibility, these meters must be replaced with STS meters.

- **STS meters**

In respect of STS meters technological solutions, which do not require online vending, are available from the manufacturers. Upgrades will be required on the system master station to issue free tokens and handle redundant free tokens for revenue management purposes.

- **Online vending system**

Ultimately a full online system would be an ideal solution.

- **Credit Meter System**

The billing system of service provider's will need to be modified to accommodate provision of FBE credits. Service providers will need to put appropriate system rules in place to ensure proper financial controls and management of the system.

APPENDIX A – Business Model

1. Developing a business model to determine costs, subsidies and tariffs

1.1 Assess technical options

The minimum accepted standard is as defined in the National Electrification Programme will be required for any system to qualify for FBE benefits.

1.2 Understanding costs

Motivation: For the viability of any business expenditure on provision of goods and service needs to be covered by income from sales.

- *Cost categories:* In all but the smallest electricity distributing systems, it is important to separate bulk and retail costs. This helps considerably with tariff setting as bulk costs can be allocated to consumers on a volume and load profile basis. Retail costs (the distribution wires, sales and customer relations component of an electricity supply system) are more directly related to the number of consumer units.
- *Cost by service level:* If service level targeting is to be applied, then it is important to understand what the costs of providing each service level are per consumer unit. This is also necessary in a more general sense to get an idea of what subsidy levels are being applied.
- *Capital costs:* Cost of capital needs to be applied as part of expenditure structure. Capital cost should also include replacement cost (depreciation) of the infrastructure based on acceptable industry standards/practices.
- *Bulk supply costs:* Bulk supply costs may account for about half of the total cost of electricity supply. NRS 058 provides detailed information on cost of supply methodologies.

1.3 Poverty relief options

This section outlines different options for the provision of FBE while the powers and functions of the local sphere of Government are acknowledged. However, it should be noted that Cabinet approved the Self-Target approach for the implementation of the FBE.

This section seeks to outline the implementation modalities of possible options available for the provision of FBE. The principles are equally applicable to other municipal services. The section is intended to provide background information to stakeholders in the Electricity Distribution Industry.

	Rising/inclining block tariffs	Targeted credits	Service level targeting
Description	Rising/inclining block tariff is applied to all residential consumers, with the first block typically set from 0 to 50 kWh with a zero tariff. No fixed monthly charge applicable to those using below poverty relief consumption limit. The Department rejected this option since it promote cross subsidization while funds for free	Each consumer who is selected for poverty relief gets a credit on their electricity account, which would typically be sufficient to cover the charge for the poverty relief free.	Those service levels, which provide a restricted capacity, 10 Amps are provided at no charge. Those with higher service levels pay the normal tariffs, with the possibility of

	basic electricity is allocated in the Equitable Share.		applying credits in exceptional cases.
Targeting method	Self-targeting (first 50 kWh free to households applied for 10Amps options). However, targeted fixed monthly charge may be necessary for holiday areas. These may be considered as commercial entities, thus exempt from the EBSST considerations.	All poor households will be encouraged to apply but and get the meter restricted to limited current (10). Only basic appliance could be used.	.
Applicability	Mainly A, B1, B2 municipalities and Eskom. Not suited to situations where there are a high proportion of holiday homes unless it is supplemented with a targeted fixed monthly charge.	Can be used in A municipalities but more typical for B1 to B3 municipalities. Requires a billing system to be in place for all consumers.	Best suited to B4 municipalities, particularly for first order strategy, but can be used in urban areas as well.

Note: Local authorities have been grouped into five categories:

- A = metro authorities
- B1 = a local municipality with a large town or city as its core
- B2 = a local municipality with a medium sized town or towns as its core urban area/ areas
- B3 = a local municipality with a small town or towns as its core urban area/ areas
- B4 = a local municipality with no core urban or industrial area.

- Method of selection

	Rising/inclining block tariffs	Targeted credits	Service level targeting
Advantages	<ul style="list-style-type: none"> • Does not require targeting. • The 'free basic electricity to all' message can be applied but it is misleading as larger consumers typically pay more. 	<ul style="list-style-type: none"> • Suited to situations where there are fewer larger consumers. • Relatively simple to apply from an accounting point of view. • Easy to integrate with other services where a 'free basic service' policy is being applied. 	<ul style="list-style-type: none"> • Suited to municipalities with lower capacity and a large proportion of poorer consumers. • Typically does require a metering and billing system for restricted supplies.
Disadvantages	<ul style="list-style-type: none"> • Only applicable where there is a relatively high proportion of larger consumers. • Requires an effective metering, billing and credit control system. • In conflict with cost reflectivity and may be punitive to industrial and commercial consumers. 	<ul style="list-style-type: none"> • Requires a system to select those who are to benefit from poverty relief measures. • Requires an effective metering, billing and credit control system. 	<ul style="list-style-type: none"> • Targeting may be poor, there is a large proportion of households using restricted flow services. • Will only work if metering, billing and credit control system for normal supplies is effective.
Residential frequency	Typically requires 30% of residential consumers	Only dependent on frequency distribution if	Not relevant unless poverty relief is to be

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distribution requirements	purchasing more than 350 kWh/month	poverty relief is to be partly or wholly funded from electricity account.	funded from income raised from consumers with metered connections (which is seldom possible)
Impact of non-residential consumption	Typically requires more than 20% of electricity sales to be non-residential consumers	Only relevant if poverty relief is to be funded from non-residential consumers.	Generally there is only a small proportion of non-residential consumers and it is not possible to fund poverty relief from income raised from them.

APPENDIX B: Options for Implementing Free Basic Electricity

The table below indicates different options of implementing the free basic electricity as outlined in the policy.

	Self Targeting with Current Limiting	Self Targeting without current limiting	Broad Based Approach
Description	<p>This approach restricts the electricity consumption for every qualifying household receiving the free basic electricity. Only poor households with limited consumption can benefit from this method.</p> <p>This method will not be suitable for households with many members since frequent tripping of the control systems will be experienced.</p>	<p>This is an alternative method of selecting households by using monthly average consumption per household. Households consuming less than 150kWh on average could be regarded as poor and be offered the 50kWh free. This method is mostly convenient for credit conventional metered households. It is suitable for households with many members.</p>	<p>This method provides free basic electricity to all households. The method does not select poor households directly. It works better with cross-subsidies or rising block tariffs since Government provides the FBE subsidy, there is no need for the method to be used.</p> <p>The method also has an effect of distributing prices especially to the middle class and as inputs to the commercial sector.</p>
Targeting method	<p>Poor households should apply for free basic electricity and get their electricity meters converted to 10 Amps maximum, thus restricting the consumption per household and excluding households that can afford to pay full to municipal services.</p>	<p>Poor households are selected by their monthly average consumption. The consumption should be less than 150kWh, to be considered for free basic electricity.</p>	<p>No targeting is required since the benefits derive from zero based block.</p>
Applicability	<p>This method is practical to all service providers supplying limited current unmetered and pre-paid metered supplied customers. The only constrain might be the capital required to convert the current meters to 10 Amps.</p>	<p>This method can be easily used on both credit and prepaid meters. This method is possible to all service providers with functional credit metering controlling systems.</p>	<p>This method might not be suitable for B3, B4 Munics and Eskom since most of their customers are rural based and consume less than 50kWh.</p>

Advantages and Disadvantages

	Self Targeting with Current Limiting	Self Targeting without current limiting	Broad Based Approach
Advantages	<p>It targets specifically only poor households but is suitable for small households (rural areas).</p> <p>Few numbers of households will receive the free basic electricity especially in rural areas thus the method is cost effective in targeting the poor.</p>	<p>This method is easy to apply especially in urban areas where conventional meters are still being used and the number of household occupants is large (with extended families, backyard dwellers, etc).</p>	<p>This method is easy to implement.</p> <p>No capital required to upgrade the existing system both prepaid and credit meters.</p> <p>All households will</p>

	On pre-paid STS meters, the upgrading and discontinuation of benefits can be done electronically at least cost.		receive the free basic electricity
Disadvantages	<p>The option might be perceived to provide electricity sufficient to perform economic development needs.</p> <p>The capital cost for implementing this method might be high in respect of non STS metered areas or areas needing unplanned meter changes and new vending system.</p>	<p>Households, which are not poor (rich households), can also receive the free basic electricity.</p> <p>Leakage of benefits to affording but smaller households.</p>	<p>The energy bill for high electricity consumers (industries, commercial sector, thus promoting fuel, etc, switching and undermining the cross-subsidisation principle.</p> <p>The allocated Equitable Share for basic services might not be sufficient</p> <p>Approach defies cost reflectivity principles.</p> <p>Costly for industrial and high consuming domestic sector since tariffs are artificially inflected.</p>

10 Implementation

10.1 Steps to successful implementation

A 'free basic electricity' approach at local level is intimately linked to the electricity services development planning process. In fact the steps to be taken in implementing such a policy are similar to those required for an electricity services development plan. For a 'free basic electricity' policy to be successful at a local level the following steps need to be taken:

10.1.1 Understand consumers

An understanding of consumers is an essential part of the activity of an electricity services authority (local government) and an electricity services provider (local government, Eskom and non-grid providers).

Key points to be addressed are given below:

10.1.2 Current population and households

- Numbers of people.
- Number of households
- Household size
- Settlement types - important where there are rural areas.
- Information source - typically the census.
- Additional local information to assist with detailed IDPs

10.1.3 Income distribution

- Income categories to be used based on housing subsidy categories.
- Information to be sourced primarily from census data.

10.1.4 Consumer Analysis

- Number of consumer units is key to successful planning.
- Split into consumer categories: single dwellings, multiple dwellings on one stand, group dwellings, etc.
- Allocate to settlement types.

10.1.5 Existing level of service

- Related to service typology.

10.1.6 Consumption

- Split into three consumer categories, residential, commercial, industrial.
- Residential consumption required per consumer unit, preferably also by service level.
- Information on frequency distribution of residential consumption is essential if a rising/inclining block tariff is to be used.

10.1.7 Willingness/Ability to pay

- ‘Willingness to pay’ is an economic term which means the amount that a consumer is prepared to pay for a product or service which they desire. One of the factors affecting willingness to pay may be that the consumer is not satisfied with the level of service provided, although he has the means to pay.
- ‘Ability to pay’ Service providers will need to assess the ability of customers to pay for service from an affordability point of view when assessing tariff levels.

10.1.8 Monitoring and control

- A key to the success of a system where subsidies are provided to smaller electricity services providers is in the monitoring and control arrangements. Part of the control system must include internal audit, external audit and appropriate audit trails.

10.1.9 Improving information

- *Motivation:* It is evident from this guideline that for a free basic electricity policy to be successful good information is required by the service authority/provider Therefore an effective management information system is required to improve on ‘free basic electricity’ arrangements.
- *Poverty database:* A poverty database is needed if a targeting approach is used. The database might not be necessary if self-targeting with current limiting is used. Municipalities are encouraged to allow Service Providers to use the Self-Targeting approach as tried and tested implementation methodology

10.1.10 Monitoring arrangements

Electricity Services Authorities need to set up monitoring arrangements to assess the effectiveness of the ‘free basic electricity’ initiative.

10.1.11 'Free basic electricity' requires good management

Finally, it needs to be noted that for success to be achieved with free basic electricity it is necessary to have sound management arrangements at Service Authority and Service Providers levels.

10.1.12 Communications Strategy

Capacity building and customer information education are important. Appropriate communication plans must be developed and implemented. The plan should be in line with the broader communication strategy of the national government a provision of Free Basic Services.

11 NER approval

Service providers must be aware that it is necessary to obtain NER approval for tariff changes prior to implementation. The NER has not been mandated to approve cross subsidisation for FBE purposes since the fiscus has provided an allocation the Equitable Share.

12. Non-Grid

The Free Basic Electricity policy provides for up to 80% of the operation and maintenance cost of non-grid systems to be subsidised through the Free Basic Electricity subsidy for all non-grid systems for households. The current systems supported are the Solar Home Systems (SHS). The SHS are funded through the National Electrification Fund, and are installed and maintained by approved concessionaries. The projected operation and maintenance cost over the life of the systems is R 45.00 in 2000 terms. It is proposed that a subsidy of up to R48 per system per month (in 2003 Rand) be paid from the equitable share allocated to all households.

APPENDIX C – Subsidy Background Information (from 8.2 – 9.0 incl)

1.1 Subsidy framework

- *Need for a subsidy:* If an individual is paying less for their electricity supply than the cost of providing the service, then they are receiving a subsidy. The subsidy should come outside the electricity system if not funded from the Equitable Share.
- *Need for subsidy framework:* A subsidy framework is an essential part of a pricing policy. An approach to setting up a subsidy framework is required. Emphasis is placed on transparency, equity and ease of implementation, within the NER approved tariff structure.
- *Subsidy options:* The selection of the subsidy option is the key to success. The basic options for applying a subsidy from outside the electricity account are summarised below.

Option	Advantages	Disadvantages
Demand side		
- Coupons/vouchers	Consumer can choose service provider	More capital might be required for installation of new prepaid meters and vending stations.
- Credits	Relatively simple to administer	Requires a billing system. Difficult to target poor households.
Supply side		
- Payments to service provider	Simple to administer	Poor targeting; does not promote efficiency of service provider

1.2 Determining the subsidy amount per consumer

- *Importance of knowing the amount:* Determining a subsidy amount is essential with all the poverty relief options. However, it becomes particularly important in the case of the targeted credits, as the amount of the credit per consumer needs to be specific.
- *Calculating the amount – service cost basis:* under ‘free basic electricity’ policy the amount of the subsidy has to be sufficient to cover the cost of providing the 50kWh basic supply. Therefore the starting point is to calculate how much it costs to provide the service per consumer. Then the number of consumers who are targeted to receive the subsidy needs to be calculated. The funds for subsidizing the free basic electricity should come from the Equitable Share on self-targeting basis grid systems. If the local authority cannot fund the all the targeted households from the allocated budget, then the number of consumers needs to be reduced by using the self-targeting approach where by individual households should apply for FBE and get their meters converted to 10Amps. The limitation of 10Amps should be clearly outlined to the consumer before applying for free basic electricity. Consumers not willing to be connected to the current limiting facilities should pay normal electricity tariffs.
- *Calculating the amount – available funds basis:* Approaching the subsidy calculation from the opposite direction, the starting point can be based on the amount of funds

available. The number of consumers to be targeted to get a subsidy per consumer then divides the total amount of funding available for subsidy. The subsidy should at least fund 50kWh per month free as indicated on the policy document. It is then up to the service provider to use this subsidy to the greatest effect to provide as much of the FBE service as possible.

1.3 Setting the local subsidy rules

- *The importance of rules:* If the local authority wishes to have a transparent policy which promotes (1) access to electricity supply by the poor and (2) efficiency on the part of the services provider, then a clear set of rules (in Service Level Agreement) needs to be established for the area.
- *Content of the rules:* The rules should state:
 - The group to be targeted (the poor households).
 - The amount of subsidy to be provided per consumer (to fund 50kWh/month).
 - Any time related variation, with clear provision for the basis on which changes will be made.
 - Any variation to be provided to the subsidy amount and the reasons for this.
 - The requirements for Service Providers to access the subsidy timeously.
 - The method of disbursement to Service Providers.
- *Allowing for phasing:* Due to the fact that local authorities are in a state of transition and that the funding sources they have at the moment are uncertain to cater for all the poor households, it is appropriate to provide for a phasing of the subsidies. This can be related to the strategy ordering process: establish figures for a first order strategy and making provision for changing them in the future. It would obviously be wise to start with 50kWh and increase subsidies progressively until a final (third order strategy is completed), where contemplated, or start with the poorest and roll out to next order of poverty in a self-targeting manner.

1.4 Subsidy targeting

The examples of targeting options can be used:

Targeting option	Applicability
Consumption based measures	Households consuming less than 150kWh per month could be regarded as poor and be given the 50kWh per month. .
Service level targeting	The Self-targeting approach with 10Amps is of essential to restrict the consumption of individual households applied for free basic electricity. This option will restrict the consumer to use basic appliances. The approach proved to be the best by the research and confirmed by the pilot studies on free basic electricity. This approach could work for all Municipalities

Income based measures	Household income is the most conventionally used measure of poverty. However, it is often difficult to measure.
Other measures of poverty	The quality of a dwelling is one example of another measure.
Geographic targeting	The subsidy can be provided to all those living in an area with certain characteristics.
Combination options	For example, geographic targeting can be used in combination with housing quality (those with expensive houses can be excluded).

2. Pricing

2.1 Tariff structures – residential

Once the subsidy framework has been set up under the pricing policy, tariffs need to be addressed. A range of options for residential consumers is summarised below:

- *Fixed monthly charges varied for different groups (flat rate):* The option of the fixed monthly charge being one amount for all except those targeted for poverty relief has been raised above. It is also possible to vary the charge for different socio-economic groups. A feature of this tariff is that the low usage consumers subsidise high usage consumers.
- *Rising/inclining block tariffs:* This is the required tariff for use with the poverty relief option based on cross subsidies and rising blocks. For the tariff to be 'pro-poor' it cannot be associated with a fixed monthly charge to all consumers, as stated above. Effectively with this tariff structure there is a large amount of cross-subsidisation from higher to lower consumption customers. This approach might have negative impact on the cross-over point on medium usage customers. However it should be noted that the NER as an economic regulator, has not been mandated to approve such tariffs because they will not be in line with the provision of the Energy White Paper on cost reflectivity.
- *Single energy rate tariffs (the same amount for each kWh consumed irrespective of the amount used):* since the poverty relief option is based on targeted credits or service level targeting, then single energy rate tariffs can be used for the consumption related charge. However, single energy rate tariffs are simpler and often more suited to B3 and B4 municipalities and non-grid concessionaires.

2.2 Tariffs for Non-Residential Consumers

- *Cross-subsidise from businesses:* A key decision facing Service Authorities is whether to cross subsidise from commercial and industrial enterprises to poor residential consumers. The argument for this is that business has a responsibility at the local level to assist the poor. The argument against this is that if local economic development is to be promoted, then the input costs to business should be kept as low and cost reflective as possible. This is a local choice, but the current view of national government is that tariffs to commercial and industrial consumers should be as cost reflective as possible (i.e. minimal cross subsidies).
- *Tariff structures for non-residential consumers:* The use of rising block tariffs for non-residential consumers is not recommended because larger users end up paying for most of their consumption in the top block, which may be highly expensive for their

input costs.

ANNEXURE D – Frequently asked questions BASIC ELECTRICITY

Overview

This document seeks to answer basic questions that are frequently asked by stakeholders regarding the provision of free basic electricity as announced by the Government in year 2000.

The following are the frequently asked questions about Free Basic Electricity (FBE).

1. What is free basic electricity?

Free basic electricity is the amount of electricity, which is deemed sufficient to provide basic electricity services to a poor household. This amount of energy will be sufficient to provide basic lighting, basic media access, basic water heating using a kettle and basic ironing in terms of grid electricity and basic lighting and basic media access for non-grid systems.

2. What is regarded as a household?

It is a residential customer with an official point of electricity supply

3. What is Government Policy regarding Free Basic Services?

Access to basic energy and other basic resources have a significant role to play towards enhancing the well-being of consumers.

Government's intention is to support the needy by facilitating the provision of free basic services. Government has announced its intention of providing free basic water and electricity services for all. However, the provision of the free basic electricity will be provided specifically to the poor households through self-targeting approach. This approach enables poor households to be provided with limited but sufficient electricity output.

It must be emphasized however, that *qualifying consumers will pay for any consumption over the set free basic service level*. For that reason, strict credit control measures and revenue management must be maintained.

4. What is Self-Targeting Approach?

Households that are "poor" generally have a low demand for electricity. Their needs could adequately be met by restricting the current drawn from the supply to about 10 Amperes. These households would consume the free basic electricity at no cost and pay the approved tariff for all units of electricity consumed above the free allocation.

5. What amount of electricity will be considered as Free Basic Electricity?

The proposed levels of service are 50kWh per household per month for a grid-based system for qualifying domestic consumers, and 50Wp per non-grid connected supply system for all households connected to the official non-grid systems.

6. Who is supposed to get the Free Basic Electricity per month?

The focus of free basic services is intended for poor households.

7. How much is 50kWh and what can be done with this amount of electricity?

The 50kWh is equivalent to energy necessary for basic lighting, small black and white TV, small radio, basic ironing and basic water boiling through an electric kettle for grid-connected consumers.

8. What will happen if one uses more than the 50kWh?

Only 50kWh per month would be provided free, extra units would be charged at approved rates tariff.

9. How would one know when the 50kWh has been exceeded?

For pre-paid meters a household will be provided with a non-interchangeable voucher or token loaded with free basic units per month. When the free units have been used up, the consumer will need to buy additional units at the prevailing approved rates.

For credit-metered customers, the total units consumed will be reduced by the amount of free basic units. For credit-meter customers, it is not easy to see when the free units are exceeded.

10. What will happen if I do not collect the voucher?

The voucher will be valid for one month only, and units will not accumulate to the next month (claim it or loose it). The same applies for credit-metered consumers (use it or loose it). Remember that network charges will be imposed to all consumption exceeding 50kWh per month.

11. Who is responsible for the provision of the free basic electricity?

National Government will provide policy and guidelines in respect of free basic electricity. Local Government will be responsible for implementation of the FBE with the aid of guidelines from National Government

12. How will non-grid electricity customers benefit from the free basic electricity policy?

Of all available non-grid systems, only Solar Home Systems that are currently installed as an alternative to grid electricity under the National Electrification Programme.

Solar Home Systems (non-grid) are unique in the sense that they produce energy on site from sunrays. Most of the cost of Solar Home Systems goes towards maintenance and operation. A capped maintenance and operational cost of R48 per month will be made available to subsidise households connected to Solar Home Systems under the National Electricity Programme. Consumers will be expected to pay the balance between the subsidy and the prevailing tariffs. Other technologies are still being investigated

Criteria for other systems like mini-grids and hybrid systems will be developed as such systems are approved.

13. What benefit can be derived from Solar Home Systems

Solar Home Systems provide basic lighting, access to Black and White TV and a small radio.

14. What will be done with people who do not have the infrastructure to get the free basic electricity?

Presently the Department of Minerals and Energy is progressing with the electrification of households in un-electrified rural and urban areas in order to achieve the goal of *Universal Access* to electricity under the Integrated National Electrification Programme.

The free basic electricity policy is intended for consumers who are already connected to electricity systems.

It is worth noting that Value Added Tax (VAT) has been removed from paraffin to provide affordable alternative energy for poverty relief to un-electrified poor households.

15. When is the free electricity going to be provided?

It is not intended to provide *free electricity* but *free basic electricity*.

Free Basic Electricity will commence on a phased manner from July 2003, after Municipalities have received their funds from the Department of Provincial and Local Government.

The above does not stop able and affording Municipalities to proceed with provision of free basic services in their areas of jurisdiction if funds are available.

16. What will happen to areas where Eskom is the provider (not Municipalities)?

Local Government is responsible for the provision of basic services in its area of jurisdiction. Eskom is providing a service on behalf of Municipalities. Even in a case like this, Municipalities will still be responsible for funding the provision of free basic services.

Where Government grants are paid to municipalities, these must be paid to Eskom to cover the cost of providing free basic electricity to the targeted households.

17. How will the service providers deal with non-payment of electricity by customers who consider themselves as poor, yet consuming more electricity?

Unless otherwise stated, the provision of free basic electricity should neither be an excuse for non-payment of previous debt, nor should it be an excuse for future debt accumulation. The FBE is about poverty alleviation not free electricity as may be misunderstood. Municipal terms and conditions regarding non-payment for services will not be affected by the provision of free basic service to the targeted households.

18. How will this policy be integrated with other services?

Both the Departments of Minerals and Energy and Water Affairs and Forestry (DWAF) are cooperating to make the provision of free basic electricity and water services possible. The provision of free basic electricity should be in line with the provision of free basic water.

19. What is the role of the National Electricity Regulator (NER) in the piloting and implementation phase of the FBE system?

The NER is responsible for regulating the electricity industry and will be involved in approving the electricity tariffs on annual basis in line with the relevant Laws of the country.

CONTACT DETAILS

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