# FREE BASIC ENERGY POLICY GUIDELINES (Low-Income Household Energy Support Programme)

# DEPARTEMENT OF MINERALS AND ENERGY

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# i) ABBREVIATIONS AND ACRONYMS

CDM	Clean Development Mechanism
DME	Department of Minerals and Energy
DoRA	Division of Revenue Act
Dplg	Department of Provincial and Local Government
EWP	Energy White Paper
FBAE	Free Basic Alternative Energy
FBE	Free Basic Electricity
FBS	Free Basic Service
FBW	Free Basic Water
INEP	Integrated National Electrification Programme
SHS	Solar home System

# ii) **DEFINITIONS**

**"Free Basic Electricity"** means limited free amount of electricity supply deemed necessary to support basic energy services of a typical poor household as determined from time to time.

**"Funding Authority"** means an organ of Government responsible for funding the Free Basic Electricity;

**"Energy White Paper**" means the White Paper on Energy Policy for South Africa of December 1998;

"Household" means residential premise with an official point of supply.

**"National Electrification Programme"** means the Integrated National Electrification Programme under the auspices of the Department of Minerals and Energy intended to address the backlogs in the household electrification in South Africa.

"Service Authority" means the authority of a municipality to regulate the provision of municipal service(s) by a "Service Provider" means an agent (person or institution or any combination of persons and institutions), which provides municipal service(s) on behalf of the service authority.

"Free Basic Alternative Energy" means any other form of energy excluding electricity.

#### **CHAPTER 1**

# 1. Introduction

Since its inception, the democratic South African Government (the Government) embarked on a number of poverty alleviation initiatives, within urban, peri-urban and rural communities as a result of historical factors of deliberate under-development in certain communities. Incidents of poverty are increasing in informal settlements that are fast developing alongside the formal urban settlements as a result of rural-urban migration with inhabitants hoping to find employment in the formal sector.

Poverty South Africa manifests itself in a period characterized by slow economic growth, inequalities in income distribution, increase in the number of unemployment, insufficient infrastructure provision, incidents of HIV and AIDS, low Human Development Index, a decrease in new job creation and turmoil in foreign markets. All these negatively impact on the ability of South Africa as a developing country to participate meaningfully in the global competitive environment.

The Government has introduced a number of direct social support programmes, which are of both capital (INEP, Extended Public Works Programme, Water Supply Programmes) and operational nature (Free Basic Electricity (FBE), Free Basic Water (FBW), Free Basic Sanitation) etc.

The Government has intervened indirectly through reduction in personal income taxes for low-income groups and the removal of other taxes such as

VAT on commodities primarily used by the low-income groups such as paraffin and staple foods. The net result of these attempts is still insufficient on a macro scale due to the enormity of the challenge of poverty in the country.

FBE policy was developed by the Department of Minerals and Energy as a complementary policy to the INEP to ensure that the electrification infrastructure provides a maximum impact on poverty alleviation by providing for effective electrical energy utilisation. Notwithstanding the policy intention,

the FBE as it is, does not sufficiently provide for thermal energy needs for cooking and space heating in cases where it is implemented. The other complicating factor is that electricity is not yet universally accessible, particularly in rural communities. Low-income groups and rural communities tend to use wood, coal and paraffin stoves for cooking, space heating and for their micro-enterprises. The emitted and volatile organic substances are causes of severe health complications such as upper and lower respiratory and lung infections. Dangerous fires in informal settlements and deforestation in rural areas are additional negative impacts uncontrolled fossil-fuel combustion.

This, document seeks to provide broad, guidelines to Service Authorities, to facilitate access to other alternative thermal energy sources to poor communities. While there is a need to consider all FBE beneficiaries, the focus will be on un-electrified poor households.

# **CHAPTER 2**

# 2. Background

# 2.1. Mandate of the Department of Minerals and Energy

The Department is responsible for, among other things to develop policies and legislation within the energy sector. As a custodian for the energy legislation and policies, the Department should oversee the implementation of this policy.

Subject to the provision of the Constitution of South Africa, the Department supports implementing institutions like Municipalities, Service Providers and *dplg* in delivering value to end customer (poor households) and is of utmost importance in enhancing the quality of life of South Africans.

According to the White Paper on the Energy Policy of the Republic of South Africa regarding access to energy services:

Government will determine a minimum standard for basic household energy services, against which progress can be monitored over time and will facilitate the widening of access to such basic level of energy services, including fuels and related appliances.

Further more:

Government supports the concept of 'energisation' i.e. the widening of access to a safe and effective energy package within grasp of low-income households and will promote its implementation where appropriate

Statement quoted from the Energy White Paper in respect of coal:

The coal energy industry will remain deregulated and its level of performance will be monitored.

The above statements form a policy environment within which this policy document is based.

# <sup>2.2.</sup> Mandate of the **dplg**

**Dplg** as a relevant line function Department in the provision of basic services listed in Schedule 4 B of the Constitution is mandated through legislation to oversee the performance of provinces and municipalities. The **dplg** is also required to facilitate capacity building and municipal support in respect of municipalities needing such capacity to perform municipal functions under the Constitution.

This is further echoed by Section 156 (1) of the Constitution of the Republic of South Africa that states that:

A Municipality has executive authority in respect of, and has the right to administer local government matters listed in schedule, part B and schedule 5 part B

Schedule 5(B) - markets (energy markets)

The Equitable Share allocation provides for the provision of access to other forms of energy (there is an energy component in the Equitable Share).

#### 2.3. Mandate of Provinces

Section 104 (4) of the Constitution provides for

Provincial legislation with regard to a matter that is reasonably neccessry for, or incidental to, the effective exercise of power concerning any matter listed in Schedule 4 of the constitution.

Section 139 (1) of the Constitution provides for:

Provincial intervention when Municipalities do not fulfill their executive obligation.

#### 2.4. *Mandate of Municipalities*

In terms of the Section 77 of the Municipal Systems Act, municipalities are responsible for the provision and co-ordination of municipal services in their jurisdictions. Municipalities through financing or arranging for financing thereof of municipal services through entering into Services Level Agreements and Funding Agreement with Services Providers.

This is further enforced by the DoRA requirements that require municipalities to

account for the funding made available to them in each financial year. The Equitable Share

allocation facilitates provision of access to other forms of energy (there is an energy component

in Equitable Share).

Municipalities will therefore be required:

- provide access to basic municipal services including, energy to indigent households.
- fund the provision of FBAE to indigent households as determined by their indigent register or policy.
- fund large variety of other alternative energy sources to indigent
- households as per their indigent register or policy.
- recognise different supply chains and related command structures.

3. Challenges Facing FBE Implementation- (A Need for the Total Energy Outlook).

#### 3.1 Limitations of the FBI: Programme

While intended for application to all poor households, the current FBE programme is constrained by a number of issues that need to be addressed outside the FBE policy. The following are key impediments that need to be addressed in order to ensure the alleviation of the impacts of poverty in the poorest of the poor communities.

#### 3.1.1 Infrastructure

The INEP infrastructure has to date reached less than 50.3% and 79.8% of the rural and urban populations respectively.

#### 3.1.2 Solar Home System (SHS)

In limited areas where SHS are applied, the operational costs are high and in addition, the thermal requirements are not met. In this regard, households still need to fend for themselves to provide alternative thermal fuels and appliances.

#### 3.1.3 Limitations of 50kWh

The 50kWh allocated for grid connected households is regarded as sufficient electrical energy to facilitate access to the electronic media, lighting, and limited thermal application like water heating, basic ironing and cooking. The utility of the grid FBE can be extended by utilisation of energy efficient technologies, especially in respect of compact fluorescent lighting (CFLs). It should be noted, that energy efficiency initiatives are relatively costly for the poorest households.

#### 3.1.4 Challenges of Urban Areas

Urban areas pose interesting challenges to the criteria used for FBE qualifications. The nature of the poor households in the urban areas ranges from high occupancy with backyard dwelling to pension households.

# 3.2 Thermal Requirements and Environmental Impacts.

In all respects of the FBE provision, the thermal requirements for cooking and space heating are not addressed. In this regard, the environmental impacts of fossil thermal fuels are not addressed. The indoor air quality and health concerns, de-forestation, environmental degradation will remain unabated despite the current FBE implementation.

# 3.3 **Promotion of Renewable Energy**

In the current form, the FBE application does not fully enhance the promotion of the renewable energy applications in accordance with commitments to WSSD and other global environmental requirements.

#### 3.4 Availability of Alternative Energy Sources

The availability of some alternative energy sources like firewood, SHS, mini-grids, hybrid systems, coal and other new technologies is not uniform in all target areas.

The other challenge is in respect of the capability of existing supply chains to effectively deliver the non-conventional alternative energy sources and appliances across the country, especially within rural areas. If well developed and managed, there are opportunities for the establishment of Integrated Energy Centers, SMMEs and BEEs in facilitating access to alternative energy sources and thus addressing the poverty reduction goal of the Government.

# **3.5** Integrated approach to poverty alleviation

It is recognised that the provision of energy alone will not wholly alleviate poverty but will be an essential component of a basket of services provided by Government to achieve this ideal. The provision of basic energy services should be seen in the context of broader social intentions which have the capacity of facilitating socioeconomic development through avoided costs of engaging in energy acquisition activities like gathering fuel wood, medical costs of ingestion of fuels such as paraffin, minimising costs associated with particulate and other poisonous volatile organic substances.

#### 3.6 Balance between urban and rural development

Poverty is more prevalent in rural areas. In order to bring about effective poverty alleviation, focus should be placed on addressing energy sources used by rural comities. In this regard, Service Authorities should strike a balance between providing free basic energy support to urban areas with well-developed infrastructure and rural areas with poorly developed energy provision infrastructure.

# 3.7 Recognition of attempts to date by the government to eradicate poverty and their shortfalls.

The following are achievements thus far in respect of Government's provision of free basic energy.

- DFBE focus has been on grid and non-grid electrified areas, based on the targeting methodologies outlined in the FBE policy;
- no provision has been made for *thermal* energy for all energy carriers;
- no provision has been made for alternative energies as a complement or supplement of electrical energy provided under the INEP;

# **CHAPTER** 4

# 4. Alternative Energy Sources

# 4.1 Paraffin

#### 4.1.1 Application

Paraffin in a hydrocarbon fuel that has been used by un-electrified households in rural, peri-urban and urban areas over a number of decades. It is mainly used for lighting, cooking, and space heating.

#### 4.1.2 Advantages

It also finds application in grid electrified households for cooking and space heating to avoid high electricity prices or where electricity is deemed to be expensive (travel costs to procure electricity coupons and the loss of electricity coupons at remote vending stations is more than the cost of procuring paraffin at a local retailer in small and affordable quantities

#### 4.1.3 Disadvantages

Paraffin is generally *stored* in used beverage bottles and becomes prone to ingestion by small children, leading to various degrees of injury, poisoning and death in severe cases.

Paraffin is also responsible for household and or fires where accidentally ignited and spilled leading to death and loss of property.

Paraffin' produces toxic fumes that can cause or excavate respiratory diseases.

#### 4.1.4 Delivery mechanisms and pricing

Distribution channels of paraffin are pervasive even in deep rural areas.

Due to the unregulated nature of the retail price, the pricing of paraffin beyond the wholesale or *distributor* gate is uncontrollable, albeit the removal of Value Added Tax to enhance its affordability.

Paraffin does not have electrical energy application for media access.

#### 4.1.5 Opportunities for SMME/BEEs

Due to its pervasiveness, opportunities for SMME and BEEs exists in which markets or in existing markets where price and service competition is possible

#### 4.1.6 Appliances

Paraffin appliances are relatively inexpensive and are easily available. There is no formal maintenance programme for paraffin appliances.

#### 4.2 Liquefied Petroleum Gas (LPG)

#### 4.2.1 Application

LPG is a hydrocarbon fuel that is used by both electrified and un-electrified households for cooking and space heating. It also finds application in large scale cooking (African Functions-catering) and other industrial applications.

#### 4.2.2 Advantages

LPG is a clean burning and effective heating fuel that is easily stored and has low waste. LPG has a longer calorific value than coal making it more efficient particularly as a cooking source. The other additional advantage of LPG over other sources, is its spontaneous heat release that quickens cooking.

#### 4.2.3 Disadvantages

LPG is relatively expensive and as a result, it does not become a reality available to extremely poor households.

LPG does not have electrical energy application for media access.

4.2.4 Delivery Mechanism and Pricing

The nation wide delivery channel of LPG is not widespread thus limiting its application.

LPG pricing is based on the high octane (93) petrol price and thus tends to be expensive and unaffordable to poor households. LPG price also varies as the petrol price varies.

4.2.5 Opportunities for SMMEs and BEEs

In areas where the distribution channels are existent or well developed, there are great opportunities for both SMMEs and BEEs participation, hence job creation opportunities. There are also opportunities for gas appliance relating and provision of maintenance.

#### 4.2.6 Appliances

Gas appliances are relatively expensive. In areas where there is utilization, there are no formal maintenance programmes for appliances and the sale, of accessories.

#### 4.3 Coal

Coal is used predominantly in the domestic sector as a thermal fuel for cooking and space heating. It is used in formal commercial and also in homemade stoves (imbawula).

Coal is predominantly available in the Mpumalanga Province and selected parts in KwaZulu-Natal, for example, Dundee, thus becomes expensive as the distance to the markets increases.

#### 4.3.1 Advantages

Coal is readily available in areas where the distribution channels are well developed. Coal is a long burning energy source and has a high calorific value (heat content) fuel compared to other source of energy.

Coal is the most efficient energy source in addressing thermal requirement such as cooking and particularly space heating.

#### 4.3.2 Disadvantages

Coal has a high content of air borne particulates and poisonous volatile organic compounds. Utilisation of coal is associated with respiratory diseases.

In the absence of adequate ventilation, coal can be responsible for carbon dioxide and carbon monoxide poisoning.

Coal does not have electrical energy applications for media access.

4.3.3 Delivery Mechanism and Pricing

The nationwide delivery channel of coal is pervasive.

#### 4.3.4 Opportunities for SMMEs and BEEs

In areas where distribution channels are pervasive, opportunities for SMMEs and BEEs exist. There are niche markets existing where price and service competition is possible.

#### 4.3.5 Appliances

Commercial appliances are expensive. Homemade appliances are easily manufactured. There are no formal maintenance programmes for commercial appliances.

## 4.4 Firewood

#### 4.4.1 Applications

Firewood is used predominantly in the domestic sector as a thermal fuel for cooking and space heating. It is used in formal and homemade stoves. Firewood is available both freely in the forests and commercially.

#### 4.4.2 Advantages

In some areas firewood is readily available and is cheap.

4.4.3 Disadvantages

The use of wood in rural areas leads to deforestation. Unventilated

combustion of firewood results in airborne particulate and poisonous velatile organic substances, which are responsible for respiratory diseases.

In some cases, the calorific value of certain types is low, thus encouraging intensive unsustainable harvesting.

Firewood does not have electrical energy applications for media access.

4.4.4 Delivery Mechanisms and Pricing

Non-commercial woodlots are readily available and are free. Save for labour costs.

Commercial woodlots are readily available in areas where forests (commercial) are remote, but are expensive where the distances between the forests and markets are large.

4.4.5 Opportunities for SMMEs and BEEs

In areas where distribution channels are pervasive opportunities for SMMEs and BEEs or in existing markets where price and service competition is

# 4.5 Firegel

Firegel is an organic energy source, used for cooking and space heating. It can also find application in disaster management and camping.

#### 4.5.1 Advantages

Firegel is 100% organic, non-spilling (high viscosity), portable even in small quantities, non-explosive, odourless, long and cold burning, non polluting relative to other fuels and affordable and has a high calorific value Firegel is also environmentally friendly.

#### 4.5.2 Disadvantages

Currently, there is only one supplier of this product. Mechanisms for distributing firegel throughout the country need to be explored. It is a newly developed product in the market and its application is not yet proven on the ground. Like all other energies of its type, firegel does not have electrical energy application for media access.

#### 4.5.3 Delivery Mechanism and Pricing

The current delivery mechanism of firegel is currently not pervasive since it is a newly established product.

Firegel is well priced for the poor household market.

#### 4.5.4 Opportunities for SMMEs and BEEs

Firegel distribution has potential for large scale SMMEs, BEE and community based organization applications.

There are opportunities also for sale of appliances and accessories.

#### 4.5.5 Appliances

Firegel appliances are available from the manufactures of firegel and are relatively inexpensive.

4.6 Candles

4.6.1 Application

Candles are primarily used in un-electrified households for lighting.

4.6.2 Advantages

Candles are readily available and can be supplied through all available retailers,

4.6.3 Disadvantages

Usage of candles is limited to lighting only and cannot be used for thermal application (heating and cooking).

The application for candles is associated with burning of houses and informal settlements.

Candles do not have electrical energy applications for media access.

4.6.4 Delivery Mechanism Pricing

There is a well-developed delivery mechanism for candles. Candles are well priced.

4.6.5 Opportunities for SMMEs and BEEs

There are not many opportunities for candle distribution.

# 4.7 Car Batteries

4.7.1 Application

Car batteries are used to power electronic appliances such as television and radios for media access.

4.7.2 Advantages

Car batteries are generally available and can be used repeatedly.

#### 4.7.3 Disadvantage

Car batteries do not have thermal application for heating and cooking. Car batteries require proper handling and improper care may lead to acid spillage and shorter lifespan (than expected) if handled (or charged) negligently.

Electricity is required for recharging the battery.

Transport is required to transport the batteries from one place to another for recharging.

4.7.4 Delivery Mechanism and Pricing

Car batteries are relatively available in motor spare outlets in urban areas and in selected rural outlets.

The car batteries are relatively expensive and its recharging is also expensive due to its unregulated nature and transport cost.

4.7.5 Opportunities for SMMEs and BEEs

There are not many opportunities for battery distribution.

There are opportunities for recharging batteries in selected areas.

# CHAPTER 5

- 5. Free Basic Alternative Energy Implementation
- 5.1 Challenges facing FBAE Implementation

Alternative sources of energy are available through a number of supply chains such as retail stores, petrol stations, garages, chain stores, local stores, non-grid electricity Service Providers, integrated energy centers (established by the DME) etc, each with its own way of dispensing such energy

It needs to be noted that some of the challenges facing the implementation of the Basic Alternative Energy sources will be:

- high cost of procurement
- long supply chains with many middlemen
- little or no SMME or BEE participation thus leading to the "consumer" and customer scenario with minimal impact on rural job creation
- limited choice of energy supply options
- unregulated (market) prices, which lead to price distortion along the supply chain
- little or no capacity of municipalities to influence the supply chain and hence the prices of basic energy services.

## 5.2 FBAE Implementation Supply

#### 5.2.1 Chain Implementation

In cases where the Basic Alternative Energy sources, supply chains are now existent; it will become imperative for municipalities to provide for such' through its Integrated Development Programme.

# 5.2.2 Supply chain management

In order to facilitate the implementation of FBAE, it is essential for the supply chain to be adequately managed without negatively affecting innovation cost reduction and efficiency initiatives The supply chain can be managed by the municipality participating as a Service Provider or entering into Service Delivery Agreements of FBAE services on its behalf.

#### 5.2.3 Free Basic Alternative Energy Delivery Model

The following model is proposed to guide municipalities as service authorities in delivering an effective FBAE service to deserving households.

#### 5.2.4 Indigent policies

Due to limited allocation of the free basic energy grant from the **dplg**, it is essential for municipalities to provide for accounts targeting the deserving households

## 5.2.5 Data Integrity

The success of any Free Basic Services programme depends on the extent to which Service Authorities and providers can accurately identify the beneficiary. This is particularly so when funds are limited and the extent of poverty is pervasive. In this regard, the degree to which the indigent Policy of the Local Government identifies the poorest of the poor and provides (for) persons that ensure that such targeted households are distinctly identified from the rest for the sake of receiving targeted poverty alleviation interventions is crucial.

#### 5.2.6 Capacity of Municipalities to Provide and Procure Services

Municipalities are Service Authorities and are 9onstitutionally expected to provide or procure the provision of basic services to inhabitants in their jurisdictions.

Basic Alternative Energy Service is not naturally in the domain of municipalities. In this regard, municipalities must provide for the procurement of pre-determind energy services through the utilization of external Service, Providers.

#### 5.2.7 External Service Providers

There will be a number of External Service Providers at play. One or more Service Providers can provide basic alternative energy service to a municipality. The following are envisaged disaggregated Service Providers to support Municipalities with the FBAE.

#### (a) Service Administrator

The Service Administrator's (SA) role is that of providing an enabling environment for the FBAE service to be provided. The SA receives and manages information received from all stakeholders namely identified households, municipal Service Authorities and Service Providers to provide for the end customer (household) a traceable set of transactions that will enable the Service Authority to pay for the FBAE, the Service Provider to provide energy source and be paid, the energy sold to the indigent household.

The relationship between the Service Administrator, Municipal Service Authority and the Service Provider will be covered by a Service Delivery Agreement.

#### (b) Energy Service Provider

The Service Provider interacts with a number of energy sources (producers) in terms of procurement, payment inventory requirements, credit agreements, etc.

The Service Provider also enters into Service Delivery Agreements with the Municipal Service Authority in terms of the type of fuel, amount of tariffs for the energy sources sold, methodology and other applicable conditions.

#### (c) Energy Producers, Wholesalers, Retailers and Agents

Energy Producers, Wholesalers, Retailers and their Agents will enter into Energy Source Supply Agreements with the Service Providers on commercial terms.

## (d) National Government

The government may invoke the Energy Charter Agreement and BEE/SMME Guidelines for the manufactures, Producers, Traders and their agents as mutually agreed in terms of

- Pricing
- SMME development
- BEE capacity development
- BEE support and
- Partnership and shareholding, inter alia



## 6. Financial Analysis for FBAE

# 6.1 Cost of Basic Energy options.

The table below outlines cost associated with a particular source of energy per month and its application thereafter. This table will assist in selecting a better energy for a particular service. However, the advantages and advantages; of these energy carriers as outlined in chapter 4 should be noted in this regard.

Service	Cost	Regulation	Benefit	Service Provider
Grid connection: 50	=R 20	Regulated	The 50kWh is limited to	Eskom /
Kwh at 34, c/KWh			Lighting and basic	municipalities
			electronics. The system can	
			provide for basic thermal	
			needs	
Non-Grid	R 48	Partly regulated	The whole service is limited	Non-grid service
			to basic lighting electronics	Providers
Mini Grid	ROAT	Not yet	The system could provide for	?
		regulated	basic lighting and thermal	
			needs	
Hybrids	ROAT	Not yet	The system could provide for	?
		regulated	basic lighting and thermal	
			needs	
Paraffin 20L	R 70	Partly regulated	Lighting, thermal	Variety of
				commercial service
				providers
LPG 18L	R 180	Partly regulated	Thermal	Variety of
				commercial service
				providers
Candles (6* packets)	R 50	Not regulated	Lighting	Variety of
				commercial service
				providers
Firegel	R40/month	Not regulated	Thermal	One energy source
Commercial Fire	R 48	Not regulated	Thermal	
Wood				
Coal (2x Bag)	R 70	Not regulated	Thermal	Variety of
				commercial service
				providers
Batteries (Capital)	R 200 once of	Not regulated		Variety of
	payment			commercial service
				providers
Battery (recharge)	3 hrs per day for	Not regulated	Limited to basic Electronics	Variety of
	3 days is about			commercial service
	R30			providers
Low smoke fuels				

#### TABLE 6.1

From Table 6.1 above, there is a multitude of Service Providers rendering service to indigent households in say one municipal area. The signing of Funding Agreements and Service Level Agreements becomes administratively difficult. A token or voucher to the indigent households is recommended.

6.2 Proposed Tariff structure including subsidies and VAT.

The table 6.2 below indicates cost due to the consumer after a subsidy of R20. This table

Includes both the needs for estimate for thermal and other energy related cost such as

Portable radio and lighting.

Tariff Poverty	Estimated Actual Cost		Subsidy	Estimated total cost to consumer	
	Energy cost	20	20	80	
Grid electrification	Non-energy cost	50			
(Conventional meters)	Thermal cost	30			
Grid electrification (Prepaid	Energy cost	20	R20	R30	
meters)	Thermal cost	40			
	( this cost might be equivalent to firegel in				
	other areas)				
Non-grid electrification and	Operation cost for non grid	58	R40	R68	
Thermal	Paraffin or firegel for thermal needs	50			
Un-electrified	Candles cost	50	N/A (R90 id	60	
	Paraffin cost or woods	70	proposed)		
	Battery for Electronics	30			
Electrified (mini grid)/		IRR =	TBE	TBE	
Hybrid energy cost		20%			
		IRR =			
		20%			

#### Table 6.2

It should be noted that the cost of the above energy carries varies from one place to another depending on the distance from town. Therefore, is not easy to determined the exact of the above energy carries.

## **CHAPTER 7**

#### 7. Recommendations

In order to ensure that all poor households receive free basic energy, it is recommended that poor households not connected to grid or non-grid be subsidized through other options of energy carriers.

There are different options in which households could be subsidized, ranging from prescriptive to voluntary. The single Service Provider model with a menu of energy sources within a pre-determined FBAE price range would be preferred.

Considering the variety of Service Providers available for different services which are not necessarily regulated, it will be fair to give households tokens to provide a value of R90 per month based on the cost associated with these energy carriers.

Poor customers receiving FBE could be for the differential between the FBE tariff and the R90-00 if circumstances warrant.

#### 7.1 Conclusion

- There are many possible energy options available to indigent households
- There are many possible energy suppliers available to indigent households
- Households can make use of any combination of their choice based on availability and ease of use.
- It will be difficult for municipalities to prescribe outlets of choice, unless Integrated Energy Centers (When established).
- A maximum of about R90 is proposed as a subsidy to un-electrified poor households subject to number of qualifying households.
- Electronic and unique e- Voucher system through a Service Administrator could be a fraud abating alternative to FBAE vending, technology permitting.