



**MINISTRY OF INFRASTRUCTURE  
B.P 24 KIGALI**

Permanent Secretary and Secretary to the Treasury  
Ministry of Finance and Economic Planning  
P.O.Box: 158  
KIGALI

Dear Madam,

**Subject: Submission of the final report of the Forward Looking Energy JSR  
2014-2015**

We are pleased to forward to your office a final report of the Forward Looking Joint Sector Review Report of the FY 2014-2015 for the Energy Sector.

The report summarizes sector performance progress against targets and Policy Actions for FY2013-14 and the proposed targets and policy actions for FY 2014-15.

Yours Sincerely,

  
**Christian RWAKUNDU**  
Permanent Secretary



CC:

- Hon. Minister of Infrastructure
  - Hon. Minister of State in Charge of Energy and Water/MININFRA
  - Hon. Minister of State in Charge of Transport/MININFRA
  - Director General/EWSA Ltd.
  - Deputy Director General/EWSA Ltd.
- KIGALI

## FORWARD LOOKING ENERGY JOINT SECTOR REPORT 2014/15

### 1. Introduction

Access to safe, reliable and cost effective energy is essential to achieve the levels of growth defined under the Economic Development and Poverty Reduction Strategy (EDPRS II). Energy sector is one of the priority sectors bearing systemic impact to the entire economy and the decisions taken now will influence the direction of growth for the rest of other key growth sectors.

### Energy Sector objectives

The overall goal of Energy Sector is to ensure that all residents and industries can access energy products and services that are sufficient, reliable, affordable, and sustainable. The core objectives are as follows:

- Increasing the supply of power generation in line with expected demand;
- Creating an enabling environment for increased private sector participation in energy supply and service provision;
- Increasing access to and affordability of energy services, particularly for productive uses;
- Encouraging and incentivizing more rational and efficient use of energy in public institutions, and amongst industrial and household end-users;
- Promoting efficient production, procurement, transportation, and distribution of energy.
- Ensuring the sustainability of energy exploration, extraction, supply, and consumption so as to prevent damage to the environment and habitats.

### EDPRSII Sector objectives

- Increasing electricity generation capacity
- Increasing access to electricity
- Maintaining an economic and competitive tariff
- Sustainable and efficient use of biomass energy solutions
- Maintaining security of supply and stability of petroleum products' prices
- Strengthening institutional, legal and regulatory framework and capacity building



## 2. Performance progress on 2013/14 priorities

This section highlights the progress against 2013/14 energy priorities including policy actions and targets.

### 2.1. Electricity generation capacity

Electricity generation capacity increased from 110.8 MW in June 2013 to 119.5 MW by June 2014; additional 8.7 MW from Mukungwa II (2.5), Rukararall (2.2) and Giciye (4) Micro Hydro Power Plants (MHPPs) were injected to the national grid. The progress on other ongoing projects that are expected to be completed before December 2014 is summarized in the table below:

	Project	Progress
1.	Nyabarongo I HEP (28MW)	- Overall civil works is at 98.8% and Electro-Mechanical Works at 94%. - The commissioning of the two turbines (28MW) is scheduled for July 2014.
2.	KivuWatt (25MW)-methane gas	- Overall progress of pipe welding is at 80% and progress of the gas extraction facility (barge) is currently at about 70%. - KivuWatt is planning to start testing and commissioning by the end of July 2014 and COD is estimated to be early November 2014
3.	GIGAWATT (8.5MW)-Solar	- PPA and Concession Agreements signed in July 2013, the project finance close attained on 18 January 2014 and generation license granted by RURA on 3 February, 2014. - The shipment of equipments is in progress, construction activities started on 28 May 2014 and the plant COD is end August 2014.
4.	Gishoma Peat to Power (15MW)	- Construction of Peat power plant is ongoing: civil works are estimated at 53% and installation of equipments is at 37%, construction to be completed by 31 October, 2014. - Interim peat supply agreement was signed on 08/05/2014 between EWSA and PEC to supply 20,000 tons by end August 2014 for testing and commissioning of the plant.

#### **Feasibility Studies (FS):**

Within the context of increasing generation capacity, EWSA Ltd. has undertaken a number of FS among which are completed 38 FS of potential micro hydro power sites. The list of the sites with their respective estimated capacity and location is in **Appendix 1**.

Feedback Infra has been contracted to undertake the Feasibility Study of Nyabarongo II multipurpose project; a draft inception report has been submitted to EWSA and data collection process is ongoing.

## 2.2 Access to electricity

The total number of connections to the national grid has increased from 364,409 at end of June 2013 to 429,051 by May 2014. In addition, over the same period, the National electricity grid had been extended with the construction of 27 kms of HV lines (Nyabarongo-Kilinda), 652.45 kms of MV lines and 1,369.68 kms of LV lines. About 500 Households were electrified by solar PV (Solar kits by Government of China and Mobisol). The project "Increase Rural Energy Access in Rwanda through Public Private Partnership" funded by the GoR in partnership with European Union is implementing the Supply and Installation of PV Solar equipment in 300 rural schools which are beyond 5 km far from national grid. So far 150 schools have completed and the project is expected to be completed by December 2014.

Regional power trade - There is progress on various activities to facilitate regional power interchanges; the Rwanda-Uganda interconnection line is at the design stage whereas the contracts for the construction of the Rwanda-DRC interconnector have been signed with detailed engineering ongoing.

**Policy related Analytical Assessments:** The *National Electrification Plan* second phase for 2012/13-2017/18 was finalized and presented to energy stakeholders on 23<sup>rd</sup> July 2013 at Lemigo Hotel. The target of EARP is to increase electricity access rate to 70% by 2017(Grid and off-grid), and 100% connection to health centers, schools and main administrative offices. The revised Electrification Plan has incorporated connection to planned productive centres such as; industrial parks and other productive enterprises i.e. tea factories, mines, irrigation, planned market centers, integrated craft production centers and water pumping stations. To improve the service delivery and reduce connection cost for industries, a new connection procedure was initiated in June 2013, discussed and approved by the National Leadership Retreat of 8-10 March 2014 and published at EWSA website in April 2014. Details are in **Appendix 2**.

## 2.3 Economic and competitive tariff

RURA has concluded a tariff review and proposed new customer categories based on the connection voltage level: medium voltage (MV) and low voltage (LV). MV customers include industrial customers, while LV customers include residential customers and small businesses. Further differentiation based on LV customer type (residential or non-residential) or on household income is foreseen for fiscal year 2015/16. The proposed MV tariff is derived based on the following components: (i) Demand (in RWF/kW/month, payable monthly based on the



demand measured at peak time); (ii) Energy (in RWF/kWh, payable for every kWh of energy consumed); and (iii) Standing charge (in RWF/month, associated with the meter costs and equal for all customers). The LV tariff is characterized by an energy component only (in RWF/kWh, payable for every kWh of energy consumed). Discussions about tariff levels and subsidies are ongoing between MINECOFIN and MININFRA and expected to be adopted by end July 2014.

#### **2.4 Sustainable and efficient use of biomass energy solutions.**

The objective of the activities being undertaken is to promote sustainable use of biomass fuels, whilst supporting transition to best alternatives to mitigate social and health impacts of traditional use of biomass resources. Activities undertaken during the period FY13/14 include: (i) the National Biogas program (domestic and institutional); and (ii) Improved Cook Stoves (ICS).

In addition, a cross sectoral National Joint Taskforce composed of MINALOC, MININFRA, EWSA, REMA, MIDMAR, National Police, NISS and MINADEF was initiated to beef up public awareness and education on the significance of use of alternative sources of energy. Achievements include the following;

**2.4.1 Biogas Program:** Memorandums of understanding were signed between district authorities and village-based SACCOs to facilitate easy access to credit and the government biogas subsidies channelled through these micro lending institutions. 29 out of 30 Districts have signed cooperation agreements with 28 districts already having received subsidies from EWSA Ltd and deposited to respective Umurenge SACCOs.

Since 1<sup>st</sup> July 2013 up to June 2014, 1,088 domestic biogas digesters were constructed against the annual target of 1,5000, 8/15 institutional biogas were completed and 586 masons were trained countrywide on Biogas construction during the same period.

Cognisant that new biogas technologies have emerged in the market, such as the flexi-biogas, Fibre Glass Reinforced Biogas Technology, etc. RURA is to develop guidelines and regulations for these emerging technologies.

**2.4.2 Improved Cook Stoves (ICS):** Since July 2013, a total of 548,960 ICS was disseminated country-wide by different ICS companies, NGOs etc. The consultancy firm for construction of 15 production units in the 15 Districts (Rubavu, Nyabihu, Kicukiro, Nyarugenge, Rwamagana, Kayonza, Ngoma, Gicumbi, Gakenke, Huye, Gisagara, Nyamagabe, Nyaruguru, Rusizi and Karongi) has been recruited and the activities (construction of production units and training) are ongoing. Six new production units were also constructed since July 2013 in six districts of Rubavu, Nyamagabe, Huye, Nyaruguru, Kayonza, Rwamagana. Additional production units are under construction in

Gicumbi, Nyabihu and Gisagara Districts. Over the same period, 90 ICS potters and 120 village ICS promoters were trained countrywide and trainings will continue within the new production units.

## **2.5 Petroleum, oil and gas**

**2.5.1 Increase Security of supply:** Government objective is to have a strategic reserve of 4 months' supply by the construction of fuel storage facilities. Currently two new fuel depots are under construction: one by "Societe Petroliere" (SP) of 32 million liters at Rusororo with 16 million liters in phase 1 and the second of 19 million liters at Jabana by OILCOM. A contract was also signed between EWSA and EXERT ENGINEERING GROUP for the rehabilitation of Rwabuye fuel storage.

**2.5.2 Oil pipeline Eldoret-Kampala-Kigali:** The Contract for the feasibility study (FS) of the Kigali-Kampala section was signed on 8 January, 2014; an interim report has been submitted and engineering design, economic analysis and Socio-environmental assessments are ongoing.

## **2.6 Strengthening institutional, legal and regulatory framework**

**2.6.1 Policy and legal framework** – MININFRA initiated a process to update the National Energy Policy in 2014, to better align with new priorities and to meet sector challenges. After consultations with different stakeholders, the draft final energy policy was presented for validation on 10<sup>th</sup> June, 2014. The final policy document is expected to be submitted to Cabinet for approval by end June 2014.

The draft Gas Law has been reviewed by MININFRA and submitted to MINIJUST for legal opinion and cleaning. It will be then submitted by MININFRA for Cabinet approval by July 2014.

**2.6.2 EWSA reform** - The Cabinet meeting of 23<sup>rd</sup> October 2013 approved the reform and transformation of EWSA into two public companies: Power and Energy Holding Company and Water and Sanitation Company, to operate as commercial companies in order to improve performance and financial sustainability.

The Cabinet meeting of 28<sup>th</sup> April 2014 took decision that the new energy and water companies should be operational with the new fiscal year (1<sup>st</sup> July 2014).

Consultancy services required for the smooth implementation of the reform are ongoing i.e. organization restructuring, MIS scoping, Legal consultant, Asset separation, Least Cost Power Development Plan (LCPDP) and business plan for Water and Sanitation.



## 2.7 Cross-cutting issues

Environment is a cross-cutting issue that is predominantly addressed in the Energy Sector. The replacement of biomass energy with other sources such as biogas reduces the reliance on firewood and the pressure exerted on the natural environment. The dissemination of improved carbonization techniques and improved cook stoves across the country as well as promotion of biogas use for domestic and institutions are also strategies implemented by energy sector to reduce the pressure on biomass.

The focus on the development of local and renewable sources of energy such as micro-hydropower, solar or geothermal energy reduces the amount of carbon dioxide emitted into the atmosphere and thus contributes to the global protection of the environment. Environment Impact Assessment (EIA) is also a precondition to all power projects and the protection of rivers near Micro Hydro projects is done in coordinated way with all concerned institutions.

Gender is another key cross-cutting issue that will be always considered during the implementation phase of energy projects. All projects under implementation are encouraged to consider women in the recruitment of workers. A considerable number of women have then access to jobs and incomes contributing to the welfare of the entire family.

## 3. Linkage between EDPRSII, Policy outcome and 2014/15 policy actions.

### 3.1. Energy Sector outcomes.

Energy sector outcomes are linked to 2 main thematic areas of EDPRS i.e. Economic transformation and rural development.

EDPRS thematic area	Sector outcome	2014/15 Policy Action
Economic transformation	Increased electricity generation capacity leveraging large scale private investments and business productivity.	Increased electricity generation capacity by 76.5 MW in 2014/15
	Increased access to basic infrastructure for households and enterprises	Increase number of connections by 50, 000 based on the budget available for 2014/15. Due to budget deficit this target may not lead the sector to achieve EDPRS II target of 48% access to electricity grid.
Rural Development	Increased use of domestic biogas digesters	Construction of 3500 domestic

		biogas digesters and new 15 institutional ones.
	Increased use of efficient cooking methods	Construction of 15 production units; Dissemination of Improved Cook Stoves (ICSs) to achieve the target of 100% use by June 2015.

### 3.3 Summary of the budget allocated to energy priorities for FY 2014/15.

The table below summarizes the budget allocated to energy sector program and subprograms by the source of funds i.e. domestic and external financing. The recurrent budget for energy, water and sanitation is about 16,735.23 million RWF.

ENERGY PROGRAM AND SUBPROGRAM	Domestically financed Project (Million RWF)	Externally financed Project (Million RWF)	2014/15 Budget (Million RWF)	Total (Million RWF)
<b>FUEL AND ENERGY</b>	<b>88,252.08</b>	<b>60,358.77</b>		<b>148,611.85</b>
ELECTRICITY GENERATION	57,888.55	25,305.00		83,193.55
ELECTRICITY TRANSMISSION AND DISTRIBUTION	27,858.45	35,053.76		62,912.22
ALTERNATIVE ENERGY SOURCES PROMOTION	1,818.80	0		1,818.80
ENERGY EFFICIENCY AND SUPPLY SECURITY	686.27	0		686.27

#### Energy sector challenges

Several challenges continue to impact the implementation of the priority actions sector performance. The following paragraphs highlight some of the challenges and proposed actions to address the same.

- (i) **Supply shortfalls:** Rapid economic growth, coupled with ambitious targets to expand electricity access, has resulted in robust demand projections for the coming years. The development of a pipeline of generation investments seeks to respond to these presumptive needs through 2018. This pipeline of investments will diversify the technology mix, moving away from costly diesel-based power generation and to developing Rwanda's unique mix of resources, including methane, peat, geothermal, and hydropower to meet its domestic energy demand. In the long-term, plans are to integrate into the East African Power Pool, thus opening the potential to tap into the

region's diverse energy resource base and benefit from the complementarities of electricity exchanges;

- (ii) Increased electricity access.** Despite impressive gains, access rates remain low at about 20% nationwide. Significant investment is required in transmission and distribution in order to maintain the high connection rates - to increase the national access rate to about 48% by 2018 would be about \$1.2 billion. Other cheaper energy sources options will need to be explored to supply part of the population which will not be covered by grid connection in the short-medium term. In this regard, the sector is to prepare an Off-grid electrification strategy and Implementation Program to supplement the EARP program.
- (iii) High power supply costs.** The lack of adequate generation and low levels of energy access in Rwanda result from under-investment in energy sector infrastructure. Due to insufficient generation, the use of emergency thermal generation has led to high electricity costs. Rwanda has the highest tariff in the EAC at about \$0.21/kWh. The sector plans to reduce the underlying cost of generation during 2014/18 as less costly alternatives are brought online. The room for tariff reductions is however limited considering the sources of energy that can be locally commercially exploited. To address this challenge, a least cost expansion plan is being prepared that not only focuses on the core objectives of increasing generation and access but also exploiting regional complementary so as to attain the regional average tariff. The plan once adopted will help increase Rwanda's competitiveness in the East African markets, and will also ensure more affordable access at the household level.
- (iv) Institutional Set-up and Increased Private Sector Investments.** The energy sector, like most other sectors in Rwanda, lacks adequate experienced personnel to manage it. To facilitate efficient and effective performance of the energy sector, the energy business is being restructured in such a manner that will in the medium term provide confidence about its creditworthiness and as such to attract increased private sector investments.
- (v) Sector Coordination-** There are several challenges faced by the SWG secretariat, among which is being engaged into the roles of the entire Ministry exacerbated by the fact that the MININFRA has had staffing challenges in the recent past. This, overall, has constrained the effectiveness of the SWG. There are ongoing discussions with MININFRA Management to have clarity of on the role of the SWG Secretariat, and subsequently support the SWG effectiveness by addressing some of the current key challenges especially those related to enhanced engagement and contribution of various stakeholders. The enhanced performance of the Secretariat will support the



SWG in being more effective as related to its main objective of joint dialogue, ownership and accountability by all sector stakeholders.

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Annex 1. Progress of 2013/14 Policy Actions

No.	EDPRS II OUTCOME	INDICATORS	BASELINE (2012) VALUE	2013/14 Targets/ Progress	Policy Actions	Responsibility for Reporting	Progress against Policy Actions ( Are fully achieved or partial achieved)
ECONOMIC TRANSFORMATION							
1	Increased electricity generation capacity	1. Electricity generated	110.8 MW	<p><u>Target:</u> 196.7 MW</p> <p><u>Progress:</u> 119.5 (8.7 MW added by June 2014)</p>	<p>1.Complete Construction of key generation project: - 6 Micro Hydro plants and RUKARARA II (6.2 MW);</p> <p>- Giciye (4MW);</p> <p>- Nyabarongo I &amp; II (28MW);</p> <p>- KIVUWATT (25 MW), GIGAWATT (8.5 MW), Gishoma Peat (15 MW)</p>	Energy Department (MININFRA)	<p>Policy Action partially achieved</p> <p>Mukungwa 2 (2.5) was commissioned in December 2013.</p> <p>Rukarara II (2.2MW) - commissioned 31 March 2014.</p> <p>Giciye MHPP (4MW) commissioned on 04/06/2014 and inaugurated on 05/06/2014 by the President. It is currently generating 2.5MW.</p> <p>Nyabarongo I (28MW) - Overall progress is about 97%. Commissioning tests to start July 2014.</p> <p>KivuWatt (25MW) - overall progress is about 75%.</p> <p>Commissioning tests to start end of July 2014 and COD is expected November 2014.</p> <p>GIGAWATT (8.5MW Solar) - PPA and Concession Agreements signed in July 2013, the financial close attained on 18 January 2014 and generation license granted by RURA on 3</p>

No.	EDPRS II OUTCOME	INDICATORS	BASELINE (2012) VALUE	2013/14 Targets/Progress	Policy Actions	Responsibility for Reporting	Progress against Policy Actions ( Are fully achieved or partial achieved)
							February, 2014. The shipment of equipments is in progress and construction activities started on 28 May 2014 are expected to be completed by August 2014. .  Gishoma Peat to Power (15MW): overall construction is about 40% and is expected to be completed by end October 2014. Interim peat supply agreement was signed on 08/05/2014 between EWSA and PEC to supply 20,000 tons by end August 2014 for testing and commissioning of the plant.
<b>RURAL DEVELOPMENT</b>							
8	Increased access to basic infrastructure for households and enterprises	1.1. Households with access to grid electricity	18 (17 on grid, 1 Off-grid)	<u>Target:</u> 25% (20 on grid, 5 off-grid)  <u>Progress:</u> 21% (438,112 connections and 1.5% off-grid)	1. Electricity connections increased by 90,000.  2. Extend the scope of the electrification program to enterprises include connections of small and medium	Energy	Policy action fully achieved National Electrification Plan second phase for 2012/13-2017/18 was finalized and presented to stakeholders on 23 July 2013. The updated plan has incorporated connections to planned industrial parks and other productive consumers i.e. tea factories, mines, irrigation, planned market centers, integrated craft production centers and water pumping stations.

No.	EDPRS II OUTCOME	INDICATORS	BASELINE (2012) VALUE	2013/14 Targets/ Progress	Policy Actions	Responsibility for Reporting	Progress against Policy Actions ( Are fully achieved or partial achieved)
					enterprises		

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Annex 2: 2014/15 Policy outcomes, budget and analytical works

Sector outcome indicators (not exceeding 10 including EDPRS2 Core indicators)	Baseline	2014/15 Targets	2014/15 Policy Actions/ priority outputs (maximum of 2 per each indicator)	Budget Programme	2014/15 Budget (in million RWF)	Planned Work & Duration (maximum of 5)	Funding Source (GoR, if otherwise, specify, also state the status i.e. Secured/ Still under mobilization)
Increased electricity generation capacity	119.5 MW	196 MW (new 76.5MW)	1.Complete Construction of ongoing generation projects: - Nyabarongo I (28MW); - KIVUWATT (25 MW), -GIGAWATT (8.5 MW), -Gishoma Peat (15 MW)	Fuel and Energy	25,844.78	1. Undertake a study to assess the Socio-Economic Impact of Electricity Tariffs.	-
			2. Feasibility Study and construction of 50MW HFO Power Plant (CIMERWA and KSEZ)			2. Electricity master plan (including Least Cost Power Development Plan)	JICA
Increased access to basic infrastructure for households and enterprises	429,051 connections	50,000 new connections.	Increase number of connections by 50,000.	Fuel and Energy	21,981.179	3.Off-Grid Electrification strategy and Implementation Program  4.Sustainable Energy for All (SE4ALL) Rwanda Program (Action agenda for SE4ALL with targets and investment prospect).	GoR/DPS (WB and EU)

Increased use of domestic biogas digesters	3,929 Domestic Biogas Digesters	New 3,500 domestic biogas	Subsidizing construction of domestic biogas plants and offering requisite technical support	Fuel and Energy	1,204.50	5. Assessment of Energy Capacity needs.	UNECA
Increased Number of institutional biogas digesters	76 institutional Biogas Digesters	15 new Institutional Biogas Digesters	Offering financial and technical support for the construction of domestic biogas plants	Fuel and Energy	450.00		
Increased use of efficient cooking methods	576,460 ICS	175,540 ICS disseminated and construction of 15 production units.	Dissemination of Improved Cook Stoves through the construction of ICSs production units and training of potters.	Fuel and Energy	114.30		
Fuel storage rehabilitated and expanded capacity to 49.6 million litres by 2014/15	30.6 million litres	19 million litres (Oilcom)	Complete rehabilitation of Rwabuye fuel storage, Oilcom storage and Construction of SP fuel facility at 60% completion rate by June 2015	Fuel and Energy	686.27		

### Annex 3: EDPRS2 energy core targets

EDPRS Outcome	Indicators	Baseline( 2012/13)	Targets				
			2013/14	2014/15	2015/16	2016/17	2017/18
Increased electricity installed capacity to 563 MW	MW of electricity installed capacity	110	180	209	280	420	563
Increased access to electricity by 70% (48% on grid and 22% off-grid)	% of households connected to grid electricity	17.6%	22.5% (172,736 new connections)	29.9% (169,187 new connections)	36.6% (164,928 new connections)	42.8% (130,635 new connections)	48% (1,108,882 new connections)
	% of households with access to electricity through off-grid solutions	1%	4.4% (91,483 new off- grid solutions)	8.7% ( 96,565 new off- grid solutions)	13.1% (101,648 new off- grid solutions)	17.3% (106,730 new off- grid solutions)	22% (111,812 new off- grid solutions)

Source: EWSA Planning Department, June 2014

**Appendix 1: MICRO HYDRO SITES WITH FEASIBILITY STUDIES**

NO.	SITE NAME	CAPACITY (kW)	LOCATION
I.	Sites tendered out in collaboration with GIZ		
1	Mbirumbe a	305 kw	Western/Karongi
2	Mbirumbe d	299 kw	Western /Karongi
3	Muhembe	323 kw	Western /Ngororero
4	Satinsi	433 kw	Western /Ngororero
5	Nyarubandwa iv	325 kw	Western /Nyamasheke
6	Kilimbi i	540 kw	Western /Nyamasheke
7	Kilimbi ii&iiii	1,109 kw	Western /Nyamasheke
8	Nyirantaruko	1,283 kw	Western /Nyamasheke
9	Nyirahindwe i	909 kw	Western /Nyamasheke
II	Sites with feasibility studies to be tendered out in the 2 <sup>nd</sup> phase		
1	Musogoro	260	Western /Karongi
2	Nyarubandwe i,ii & iii	251	Western /Nyamasheke
3	Mbirumbe b	225	Western /Karongi
4	Mukondo	252	Western /Rustiro-Rubavu
5	Nyirabanda	223	Western /Nyamasheke
6	Nyirakesha	208	Western /Nyamasheke
7	Secoko	207	Western /Ngororero
8	Biruyi a	158	Western /Rustiro
9	Karumbi	127	Western /Karongi
10	Rukubi	127	Western /Ngororero
11	Cyintiti	117	Western /Muhanga-Ngororero
12	Mbirumbe c	87	Western /Karongi
13	Biruyi b	81	Western /Nyamasheke
14	Mukebero a	54	Western /Rutsiro
15	Nyabugonde	50	Western /Nyamasheke
16	Rubyiro	65	Western /Rusizi-Nyamasheke
17	Kiruli	50	Western /Rutsiro
18	Mukebero b	25	Western /Rutsiro
19	Gasesa	24	Western /Ngororero
20	Magarama	53	Western /Karongi
21	Gisuma	11	Western /Karongi
22	Buhali	111	Western /Karongi
23	Mbirumbe b	225	Western /Karongi
24	Kibilira	42	Western /Ngororero
25	Rungu	22	Western /Ngororero

26	Matyazo	32	Western /Nyamasheke
27	Kigoya	177	Western /Nyamasheke
28	Ntondwe	81	Western /Nyamasheke
29	Nyirahindwe II	399 kW	Western/Nyamasheke

Source: EWSA Investment Unit.

## Appendix 2: Summary of the Connection Procedures

Service offered	Time taken to process	Cost requirements
connection to electricity	1 working days	56.000 Rwf
Industries in Economic zone	15 calendar days	Free of charge
Industries between 1 and 5.3Km to the national grid	15 calendar days, after completion of the line	20,000,000 Rwf. The transformer substation for the industry (factory) is not included in the price
Industries falling beyond 5.3Km to the national grid	15 calendar days, after completion of the line	20,000,000 Rwf, for 1 to 5.3Km and 20,500,000 RWF per Km beyond 5.3Km, excl. transformer substation for the industry
Supplementary meter three phase	1 working day	86,000 Rwf (VAT included)
Supplementary single phase	1 working day	53,300 Rwf (VAT included)
Supplementary water meter	1 working day	47,436 Rwf (VAT included)
Alteration to metering equipment	10 working days	Free
Meter reading	From 15 <sup>th</sup> - 30 <sup>th</sup> of each month	Free
Billing: Bank payment contract service- Payment on EWSA account previous to consumption from 6 months onwards	From 6 months onwards	Free
Correction of errors if any	Immediate	Free
Changing address	Immediate	Free
Ending contract	Immediate	Free
Outsourcing of prepayment cash power	Through SMS MEDIA, etc.	Domestic Company Registration; Non fiscal taxes of local government.
Reconnection	Immediate	1,000 Rwf
Planned power or water interruptions	2 days advance notice via national media	Free
Change of pipe or change of ferrule size	5 working days	Quotation fee
Change of cable size or additional supply phase	5 working days	Quotation fee
Services and products put out to	30 days until	Fee to purchase the tender



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Service offered	Time taken to process	Cost requirements
tender	opening date of the offers	document
Disconnection notice	5 days advance notice	Free

Source: EWSA Ltd, 2014.

**Chair of the Energy SWG**



**Christian RWAKUNDA**  
**Permanent Secretary**  
**Ministry of Infrastructure**



**Chair of the Energy SWG**



**Paul BARINGANIRE**  
**Senior Energy Specialist**  
**World Bank, Rwanda Country Office**