



**STATISTICS IN ENERGY SECTOR AS OF SEPTEMBER OF
THE YEAR 2017**

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SUMMARY

This report relates to electricity statistics for the period starting from July to September of the year 2017. The total number of on-grid subscribers increased from 660,245 customers recorded in the second quarter 2017 to 683,817 customers recorded in the third quarter of the year 2017 representing an increase of 3.6%. Residential customers connected to the national grid have the largest share of 84.9% followed by the non-residential customers with the share of 14.8%

The number of off-grid customers increased from 85,379 customers recorded in the second quarter 2017 to 142,194 customers in the third quarter of the year 2017 representing an increase of 67%.

In this quarter, national electricity generation increased by 4.9% from 165,730.2 MWh recorded in the second quarter 2017 to 173,810.07 MWh recorded in the third quarter of the year 2017.

The imported electricity decreased by 1.9% from 19,610.1 MWh for the second quarter of the year 2017 to 19,246.8 MWh for the third quarter of the year 2017.

Exported electricity in this quarter under review increased by 5.4% from 990.0 MWh recorded in the second quarter 2017 to 1,043.6 MWh recorded in the third quarter 2017.

1. ELECTRICITY SUBSCRIPTIONS

1.1. On-grid subscribers

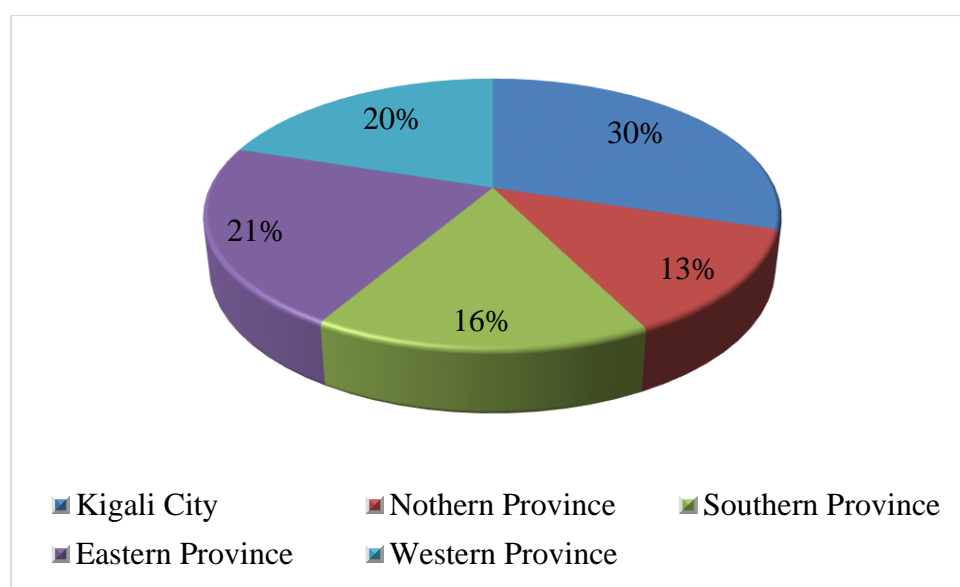
Table 1: Trend of on-grid subscribers by customer category as of the third quarter 2017

Customer Class	Q1 2017	Q2 2017	Q3 2017
Domestic/Residential	529,970	559,419	580,705
Non-Residential	96,476	99,088	101,340
Special customers:			
Water Pumping Station	194	202	209
Water Treatment Plant	18	18	18
Telecom towers	1,090	1,117	1,140
Hotels	200	205	205
Industrial	191	196	200
Total	628,139	660,245	683,817

Source: EUCL-REG, September 2017

Electricity subscribers connected to the national grid has increased from 660,245 customers recorded in the second quarter 2017 to 683,817 customers recorded in the third quarter of the year 2017 representing an increase of 3.6%. The residential customers have the largest share of 84.9% followed by the non-residential customers that represents 14.8%.

Figure 1: Distribution of customers across provinces and Kigali City as of September 2017



Source: EUCL-REG, September 2017

The 30% of on-grid customers are located in Kigali City, 21% in Eastern province, 20% in Western province, 16% in Southern province, and 13% in Northern province.

1.2. Off-grid subscribers

The most cost effective means for increasing access to electricity is through the use of off-grid solutions that have wide range of technologies such as a basic solar lantern that can charge a phone or radio to a solar home system that can light an entire house and power appliances such as a television and mini-grids that can provide higher levels of electricity.

Table 2: Trend of off-grid subscribers as of the third quarter 2017

Quarter	Customers
Q ₁ 2017	61,721
Q ₂ 2017	85,379
Q ₃ 2017	142,194

Source: EUCL-REG, September 2017

The number of off-grid customers increased from 85,379 customers recorded in the second quarter 2017 to 142,194 customers in the third quarter of the year 2017.

2. ELECTRICITY PRODUCTION

2.1. Domestic generation

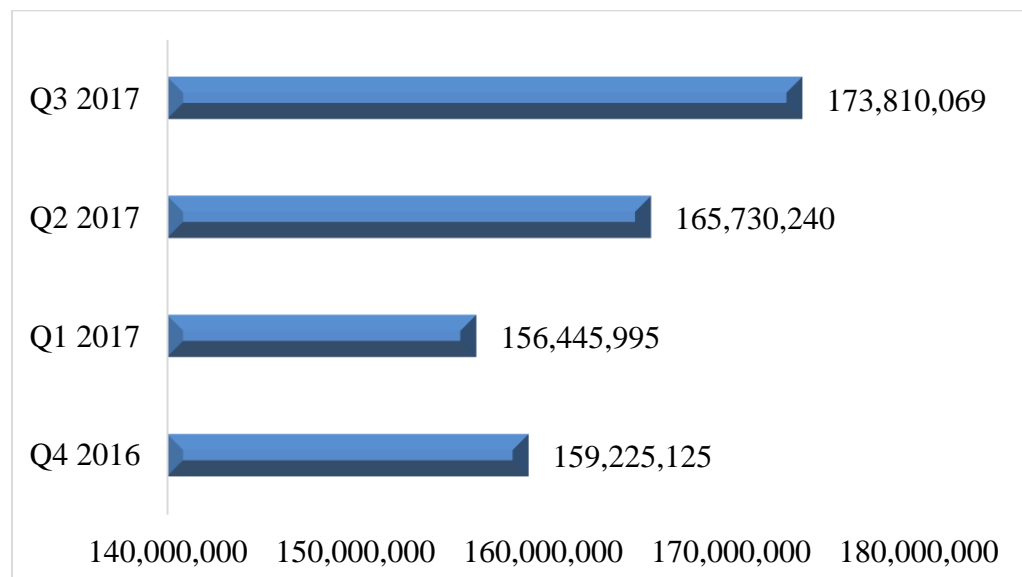
Table 3: Trend of domestic electricity generation for the last four quarters (kWh) per plant

Plant Name	Q4 2016	Q1 2017	Q2 2017	Q3 2017
Agatobwe	37,701	37,414	35,780	29,078
Cimerwa	22,217	4,357	-	-
Gaseke	-	145,875	366,527	191,506
Giciye 1	3,181,743	2,849,706	3,389,505	2,262,852
Giciye 2	2,755,038	2,793,765	3,259,942	2,283,825
Giga Watt	3,343,380	3,437,520	3,598,820	3,369,120
Gihira	1,745,853	2,297,835	1,604,118	422,386
Gisenyi	1,468,113	1,841,253	1,923,519	685,170
Gishoma	3,937,890	3,381,760	6,975,120	15,002,075
Jabana	1,163,840	888,530	985,940	3,753,730
Jabana II	19,519,048	19,787,204	18,350,928	26,973,568
Jali Solaire	47,904	42,880	44,009	42,864
Janja	231,760	56,680	-	-
Keya	1,782,560	1,539,560	2,017,982	1,168,944
Kimbiri	87,376	149,709	141,711	11,586
Kivu Watt	51,562,722	47,654,557	50,284,074	51,749,364
Ksez	13,032,506	11,262,660	1,571,173	-
Mazimeru	620,765	670,567	599,534	465,843
Mukungwa	10,407,739	8,708,071	14,880,969	18,362,332
Mukungwa II	2,998,591	2,817,150	4,128,967	4,584,922
Murunda	149,497	127,759	147,136	91,912
Musarara	606,158	444,711	177,324	-
Mutobo	90,708	291,725	365,942	312,373
Nkora	360,052	406,246	102,915	219,984
Nshiri	-	-	-	194,760
Ntaruka	1,055,000	2,521,000	7,163,000	13,169,000
Nyabahanga	577,556	201,744	134,668	76,356
Nyabarongo	27,836,300	29,414,400	30,379,800	13,688,800
Rugezi	135,888	-	1,209,951	1,434,093
Rukarara	8,712,752	9,380,800	9,133,700	6,638,421
Rukarara II	1,754,468	3,290,557	2,707,785	3,121,511
SO Energy Mukungwa	-	-	49,400	1,920,224
SO Energy Masoro	-	-	-	1,583,470
Total	159,225,125	156,445,995	165,730,240	173,810,069

Source: EUCL-REG, September 2017

The total domestic electricity generation increased by 4.9% from the second quarter to the third quarter of the year 2017.

Figure 2: Trend of domestic electricity generation (kWh) for the last four quarters



Source: EUCL-REG, September 2017

3. IMPORTED AND EXPORTED ELECTRICITY

Table 4: Imported and exported electricity (kWh) as of the last four quarters

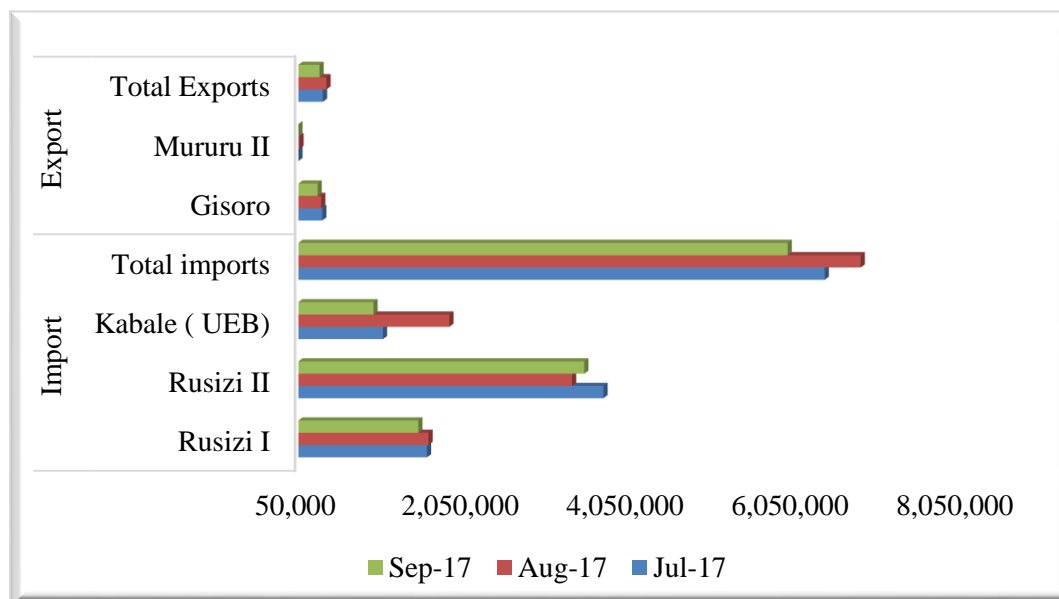
Electricity	Q4 2016	Q1 2017	Q2 2017	Q3 2017
Imported	19,116,561	20,027,202	19,610,063	19,246,767
Exported	964,616	1,018,338	990,008	1,043,572
Net import	18,151,945	19,008,864	18,620,055	18,203,195

Source: EUCL-REG, September 2017

The total electricity imported in the quarter under review showed a decline trend whereby they went down ward from 19,610,063 kWh recorded in the second quarter of the year 2017 to 19,246,767 kWh recorded in the third quarter of the year 2017 representing a decrease of 1.9%.

Net electricity imports are the difference between electricity exports and imports. In this quarter under review, net imported electricity for payment decreased by 2.2% from 18,620,055 kWh recorded in the second quarter of the year 2017 to 18,203,195 kWh recorded in the third quarter of the year 2017.

Figure 3: Imported and exported electricity (kWh) as of September 2017



Source: EUCL-REG, September 2017

4. ELECTRICITY SUPPLIED, SOLD, AND BILLED

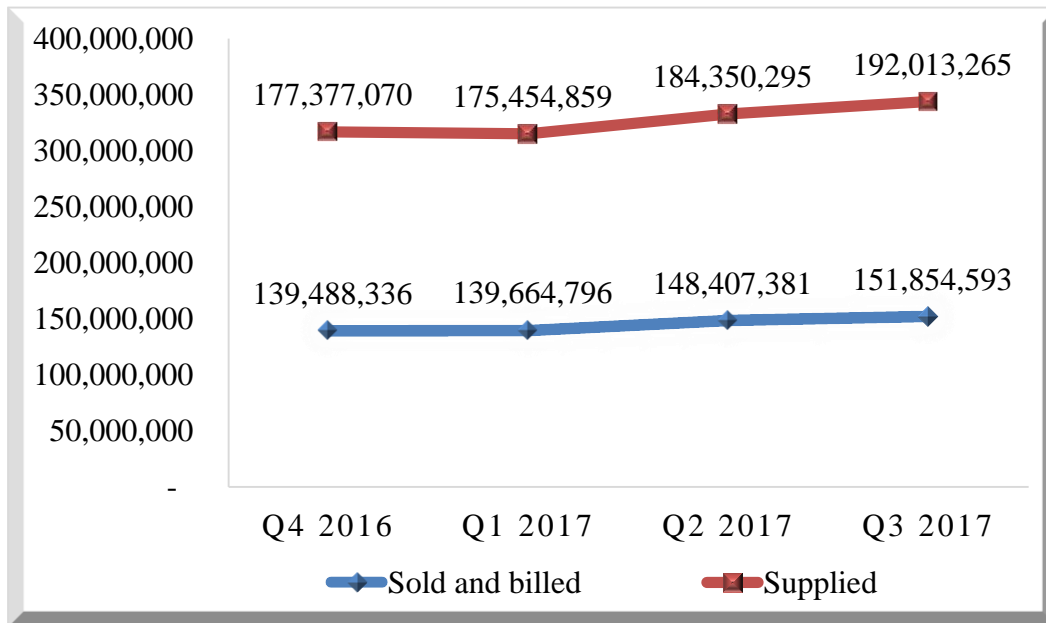
Table 5: Trend of electricity (kWh) supplied, sold and billed for the first three quarter 2017

Electricity	Q ₁ 2017	Q ₂ 2017	Q ₃ 2017
Supplied	175,454,859	184,350,295	192,013,265
Sold and billed	139,664,796	148,407,381	151,854,593
Difference	35,790,062	35,942,914	40,158,672

Source: EUCL-REG, September 2017

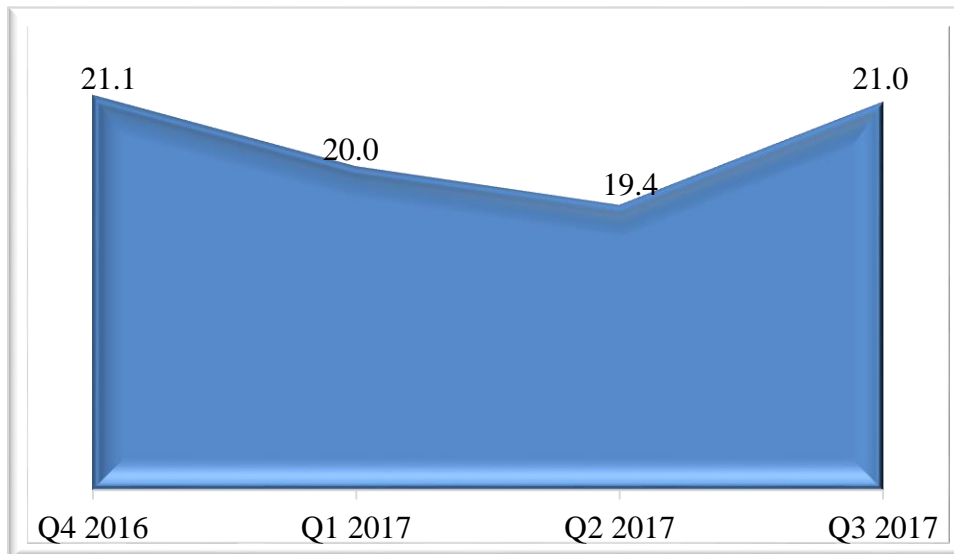
The total supplied electricity within the third quarter of 2017 was 192,013,265 kWh. The 79% of electricity supplied was sold and billed during this quarter under review whereas 21% were recorded as technical and non-technical losses.

Figure 4: Total electricity (kWh) supplied, sold, and billed for the last four quarters



Source: EUCL-REG, September 2017

Figure 5: Trend of technical and non-technical losses (%) from Q4-2016 to Q3-2017



Source: EUCL-REG, September 2017

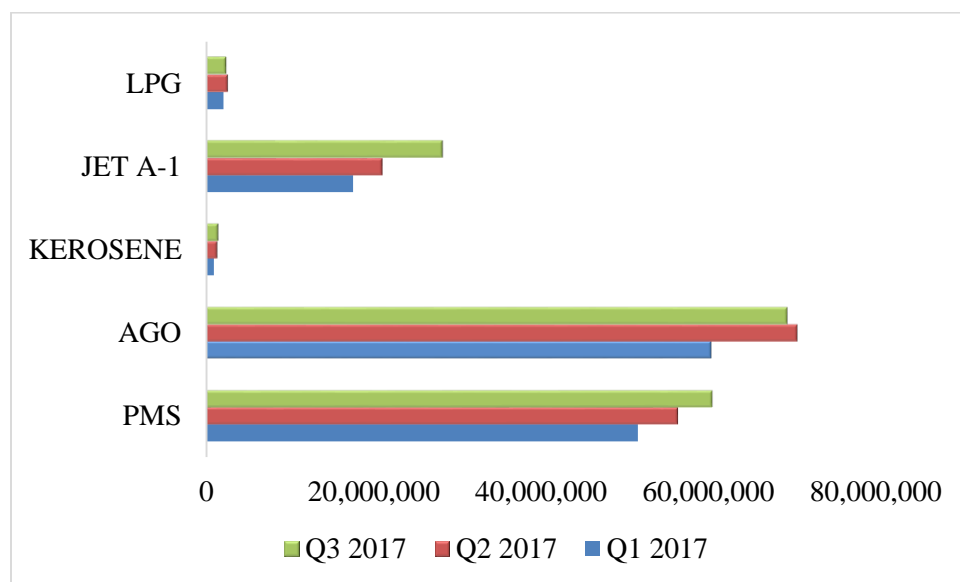
Table 6: Trend of electricity consumption (kWh) for the first three quarters 2017

Customer categories	Q1 2017	Q2 2017	Q3 2017	Consumption share (Q3-2017) in %
Domestic/Residential:	58,178,072	27,894,750	28,252,166	19
Non-Residential:	17,867,128	50,504,396	53,401,942	35
Water Pumping Station	5,252,430	5,827,893	5,997,142	4
Water Treatment Plant	6,097,825	6,557,842	7,119,297	5
Telecom towers	11,289,442	11,833,113	11,946,721	8
Hotels	7,665,615	8,532,533	8,409,064	6
Industrial	33,314,268	37,256,855	36,728,262	24
Total	139,664,780	148,407,381	151,854,593	100

Source: EUCL-REG, September 2017

The 35% of electricity supplied by EUCL in this quarter under review were used by non-residential customers, 24% by industries, and 19% by residential customers while the remaining (22%) were consumed by water pumping station, water treatment plan, telecom towers, and hotels.

Figure 6: Trend of imported petroleum products as of the third quarter 2017



Source: RURA database

5. LICENSEES IN ENERGY SECTOR

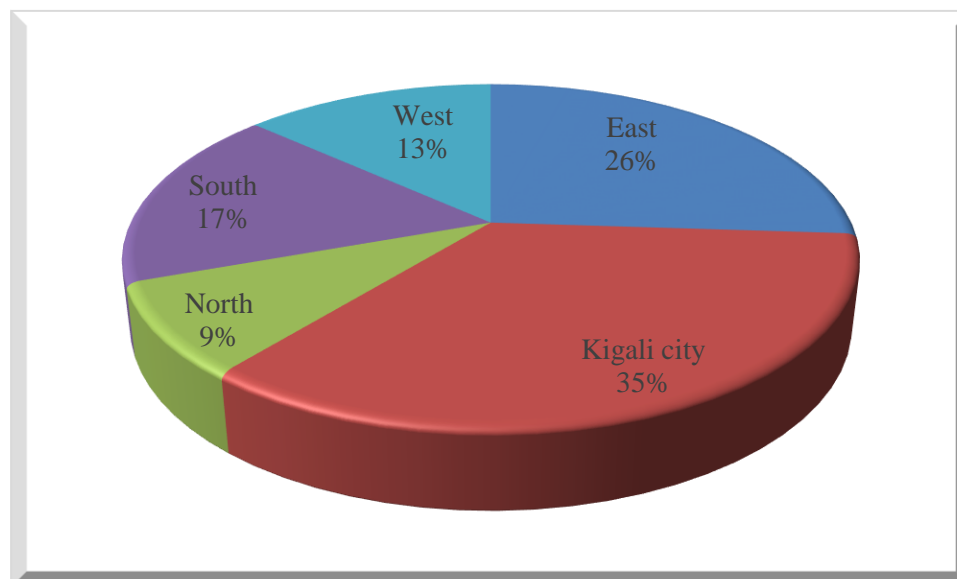
Table 7: Number of licensed operators in energy sector as of September 2017

SN	Category	Number of licensees
1	IPPs with full license	15
2	IPPs with provisional license	13
3	Electricians	26
4	LPG installation, importation, transportation, storage, distribution, wholesale and retail	9
5	Road tankers	7
Total		70

Source: RURA database

There are 28 independent power producers in this quarter under review, 26 electricians both individuals and companies, 9 LPG operators, and 7 road tankers with valid license.

Figure 7: Distribution of Petrol Service Stations per province as of September 2017



Source: RURA database

The 35% of Petrol Service Stations operators are distributed in Kigali City, 26% the Eastern province, 17% in Southern province, 13% in Western province, while 9% in Northern province.

6. ANNEXES

Annex 1: IPPs with full licenses as of the third quarter 2017

SN	Name of licensed company	Name of plant	Installed capacity (MW)
1	Ngali Energy Ltd	Rukarara Hpp	9
2	Gigawatt Global Ltd	Rwamagana Solar	8.5
3	Regrepower Ltd	Kavumu Mhhp	0.38
4	Yumn Ltd	Akanyaru Peat	80
5	Kivuwatt Ltd	Kibuye Methane Gas	25
6	Rwanda Mountain Tea	Giciye I	4
		Giciye II	4
7	REPRO	Mutobo Hydropower	0.2
8	Rwaza Hydro Power Ltd	Rwaza-Muko	2.6
9	Refad Rwanda Ltd	Rukarara V Hydro Power Plant	7
10	Rubagabaga Hydro Power Limited	Rubagabaga Hydro Power Plant	2.8
11	Energie Nyaruguru (Enny) Ltd	Mazimeru Hydro Power Plant	0.5
12	So Energy Rwanda Ltd	Mukungwa, Masoro and Birembo Thermal PP	30
13	SPV Nyirahindwe HPP Ltd	Nyirahindwe I Hydro Power Plant	0.9
		Nyirahindwe II Hydro Power Plant	0.3
14	SPV Nyirahindwe HPP Ltd	Nyirahindwe I Hydro Power Plant	0.9
15	SPV Nyirahindwe HPP Ltd	Nyirahindwe II Hydro Power Plant	0.3

Annex 2: IPPs with provisional licenses as of the third quarter 2017

SN	Name of licensed company	Name of plant	Installed capacity (MW)
1	Ngali Energy Ltd	Base I	2.9
		Base II	2.9
		Ngororero	2.4
		Rwondo	2.6
		Ntaruka A	2
2	Mashyiga Trust Ltd	Mashyiga	0.18
3	Novel Energy Ltd	Nyagatare Biomass	0.07
4	Led Solutions & Green Energy Ltd	Kigasa	0.195
		Muhembe	0.323
5	Mpenge Energy Supply Ltd	Mpenge II	0.36
6	Great Lakes Cement Ltd	Mpenge I	0.2
		Mpenge III	0.775
7	SOLRTEK Rwanda Ltd	Remera Rukoma Hospital Solar	0.05
8	Prime Energy Ltd	Rukarara VI	3.2
9	Minega Energy Ltd	Kabavu	0.128
10	Development Partners At Work	Distributed Solar Power Generation at Nyabihu and Burera	132 kW& 65kW
11	Goldsol Ii Ltd	Rwinkwavu Solar Power Plant	10 MW
12	Nyirantaruko Hydropower Ltd	Nyirantaruko Hydropower Plant	1.263
13	Novel Energy Ltd	Gaseke	0.5

Source: RURA database

Annex 3: Licensed electricians as of the third quarter 2017

SN	Name of licensed electrician	Category of electrical installation permit
1	Ukundayezu Jean Marie Vianney	Class A
2	Musabyimana Frederick	Class A
3	Sebasinga Simon	Class B
4	Mutangana Jean Claude	Class B
5	Axar Technical Services Ltd	Class B
6	Bimenyimana Jean Bosco	Class B
7	Kolitech & Partners	Class B
8	Kigali Polytechnical Company Ltd	Class B
9	Kayiranga Prosper	Class B
10	Bigirimana Yves	Class B
11	Munyantore Gasatsi Jean Claude	Class C
12	Manirarora Alain Jean Claude	Class C
13	Mukerangabo Louis de Gonzague	Class C, Class D
14	Vision Technologies Company	Class D, Class Z
15	4stin Electronics Ltd	Class D
16	Bendandakira Irakoze Onesphore	Class D
17	Teeccsm Ltd	Class C
18	Metha Electricals Ltd	Class A, Class D
19	Musabyimana Maurice	CLASS A
20	Animas Satellite Systems Ltd	CLASS C
21	Nibamureke Ildephonse	CLASS C
22	Buclino Company Ltd	CLASS C
23	Multito Svs Ltd	Class B
24	Habumugisha Placide	Class B, Class D
25	Ngenzi Hervé Gilbert	Class Z, Class D
26	Nzabonimana Eric	Class D

- **Class A:** For electrical installation of residential premises not exceeding five bedrooms and reparations on equipment of up to 230V;
- **Class B:** For electrical installation in multi- storied buildings, other big bungalows and mansions of complex design and commercial buildings, installation of light plants up to a level of 400V and any work under Class A;
- **Class C:** For Low voltage and medium voltage connections up to 30kV and any work under Class B;
- **Class D:** For electrical installation systems designs and Installation in specialized fields like switchgear, centralized heating, refrigeration, and generator sets and solar systems;
- **Class Z:** For installation of any plants up to and including high voltage (70kV and above).

Annex 4: Licensed road tankers s as of the third quarter 2017

SN	Name of licensee	Number of trucks & Trailers
1	GAKIRE George	1
2	GEMECA PETROLEUM Ltd	3
3	MUTAGANDA and SONS Ltd	5
4	PETROCOM Ltd	8
5	RALP Ltd	3
6	TIGER TRUCKS Ltd	1
7	Mr. NKUSI Evariste	1

Annex 5: Licensed LPG operators as of the third quarter 2017

SN	Name of licensee	Date of issuance	Expiring date
LPG importation, transportation, storage, distribution, wholesale and retail			
1	SOCIETE PETROLIERE Ltd	01/10/2016	01/10/2017
2	RWANDA OXYGEN	01/11/2016	01/11/2017
3	SULFO RWANDA INDUSTRIES	24/02/2017	24/02/2018
4	Safe Gas Rwanda Ltd	01/11/2016	01/11/2017
5	LAKE PETROLEUM	01/01/2017	01/01/2018
6	HASHI ENERGY RWANDA Ltd	03/04/2017	03/04/2018
7	RUCSA	01/11/2016	01/11/2017
8	NDOLI GAS Ltd	01/06/2017	01/06/2018
LPG Plants installation			
1	LAKE PETROLEUM RWANDA Ltd	01/02/2017	01/02/2019