



**KEY STATISTICS IN ELECTRICITY SUB-SECTOR AS OF  
JUNE 2017**

**Prepared by:  
Economic Regulation Unit**

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## **SUMMARY**

This report relates to electricity statistics for the period starting from April to June of the year 2017. The total number of electricity subscribers increased from 689,860 recorded in the first quarter 2017 to 745,624 customers recorded in the second quarter of the year 2017 representing an increase of 8.1%. Residential customers connected to the national grid have the largest share of 84.7% followed by the non-residential customers with the share of 15.0%.

In this quarter, national electricity generation increased by 6% from 156,446 MWh recorded in the first quarter 2017 to 165,730.2 MWh recorded in the second quarter of the year 2017.

The imported electricity decreased by 2.1% from 20,027.2 MWh for the first quarter of the year 2017 to 19,610.1 MWh for the second quarter of the year 2017.

Exported electricity in this quarter under review decreased by 2.8% from 1,018.3 MWh recorded in the first quarter 2017 to 990.0 MWh recorded in the second quarter 2017.

## 1. ELECTRICITY SUBSCRIPTIONS

**Table 1: Electricity subscribers by customer category as of the second quarter 2017**

Customer Class	On-grid customers		Off-grid customers
	Q1 2017	Q2 2017	
			85,379
<b>Domestic/Residential</b>	<b>529,970</b>	<b>559,419</b>	
<b>Non-Residential</b>	<b>96,476</b>	<b>99,088</b>	
<b>Special customers:</b>			
Water Pumping Station	194	202	
Water Treatment Plant	18	18	
Telecom towers	1,090	1,117	
Hotels	200	205	
Industrial	191	196	
<b>Total</b>	<b>628,139</b>	<b>660,245</b>	

**Source: EUCL-REG, June 2017**

Electricity subscribers connected to the national grid has increased from 628,139 customers recorded in the first quarter 2017 to 660,245 customers recorded in the second quarter of the year 2017 representing an increase of 5.1%. The off-grid subscribers increased from 61,721 customers recorded in the first quarter 2017 to 85,379 customers in the second quarter of the year 2017. The residential customers have the largest share of 84.7% followed by the non-residential customers that represents 15.0%.

## 2. ELECTRICITY PRODUCTION

### 2.1. Domestic generation

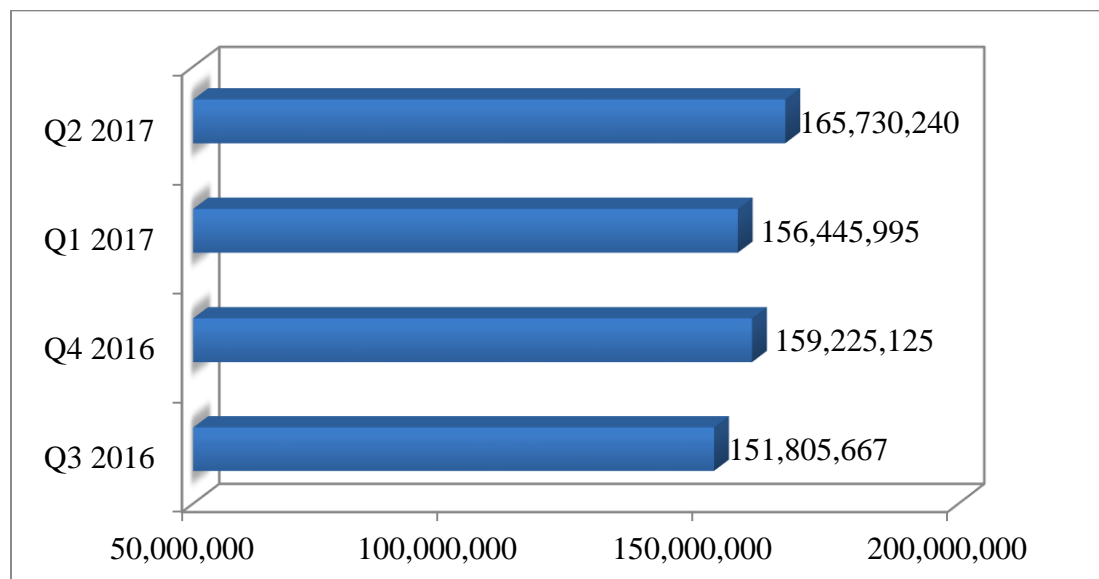
**Table 2: Trend of domestic electricity generation for the last four quarters (kWh) per plant**

<b>Plant Name</b>	<b>Q3 2016</b>	<b>Q4 2016</b>	<b>Q1 2017</b>	<b>Q2 2017</b>
Agatobwe	43,219	37,701	37,414	35,780
CIMERWA	7,274,619	22,217	4,357	-
Gaseke	-	-	145,875	366,527
Giciye 1	1,964,150	3,181,743	2,849,706	3,389,505
Giciye 2	1,973,324	2,755,038	2,793,765	3,259,942
Giga Watt	3,965,383	3,343,380	3,437,520	3,598,820
Gihira	1,642,004	1,745,853	2,297,835	1,604,118
Gisenyi	1,527,780	1,468,113	1,841,253	1,923,519
Gishoma	-	3,937,890	3,381,760	6,975,120
Jabana	2,107,794	1,163,840	888,530	985,940
Jabana II	19,675,180	19,519,048	19,787,204	18,350,928
Jali Solaire	54,954	47,904	42,880	44,009
Janja	102,608	231,760	56,680	-
Keya	1,202,218	1,782,560	1,539,560	2,017,982
Kimbiri	104,574	87,376	149,709	141,711
Kivu Watt	48,068,631	51,562,722	47,654,557	50,284,074
Ksez	13,917,920	13,032,506	11,262,660	1,571,173
Mazimeru	419,868	620,765	670,567	599,534
Mukungwa	11,585,873	10,407,739	8,708,071	14,880,969
Mukungwa II	2,977,057	2,998,591	2,817,150	4,128,967
Murunda	130,354	149,497	127,759	147,136
Musarara	575,292	606,158	444,711	177,324
Mutobo	25,145	90,708	291,725	365,942
Nkora	212,005	360,052	406,246	102,915
Ntaruka	489,000	1,055,000	2,521,000	7,163,000
Nyabahanga	32,704	577,556	201,744	134,668
Nyabarongo	21,001,700	27,836,300	29,414,400	30,379,800
Rugezi	-	135,888	-	1,209,951
Rukarara	8,131,309	8,712,752	9,380,800	9,133,700
Rukarara II	2,601,003	1,754,468	3,290,557	2,707,785
SO Energy Mukungwa	-	-	-	49,400
SO Energy Masoro	-	-	-	-
<b>Total</b>	<b>151,805,668</b>	<b>159,225,125</b>	<b>156,445,995</b>	<b>165,730,240</b>

**Source: EUCL-REG, June 2017**

In this quarter, national electricity generation increased by 6% from 156,446 MWh recorded in the first quarter 2017 to 165,730.2 MWh recorded in the second quarter of the year 2017.

**Figure 1: Trend of domestic electricity generation (kWh) for the last four quarters**



**Source: EUCL-REG, June 2017**

### **3. IMPORTED AND EXPORTED ELECTRICITY**

#### **3.1. Import and export**

**Table 3: Imported and exported Electricity (kWh) as of the last four quarters**

<b>Electricity</b>	<b>Q3 2016</b>	<b>Q4 2016</b>	<b>Q1 2017</b>	<b>Q2 2017</b>
<b>Imports</b>	20,159,978	19,116,561	20,027,202	19,610,063
<b>Exports</b>	1,033,494	964,616	1,018,338	990,008
<b>Net imports</b>	19,126,484	18,151,945	19,008,864	18,620,055

**Source: EUCL-REG, June 2017**

The total electricity imported in the quarter under review showed a decline trend whereby they went down ward from 20,027.2 MWh recorded in the first quarter of the year 2017 to 19,610.1 MWh recorded in the second quarter of the year 2017 representing a decrease of 2.1%.

Net electricity imports are the difference between electricity exports and imports. In this quarter under review, net imported electricity for payment decreased by 2.0% from 19,009 MWh recorded in the first quarter of the year 2017 to 18,620.1 MWh recorded in the second quarter of the year 2017.

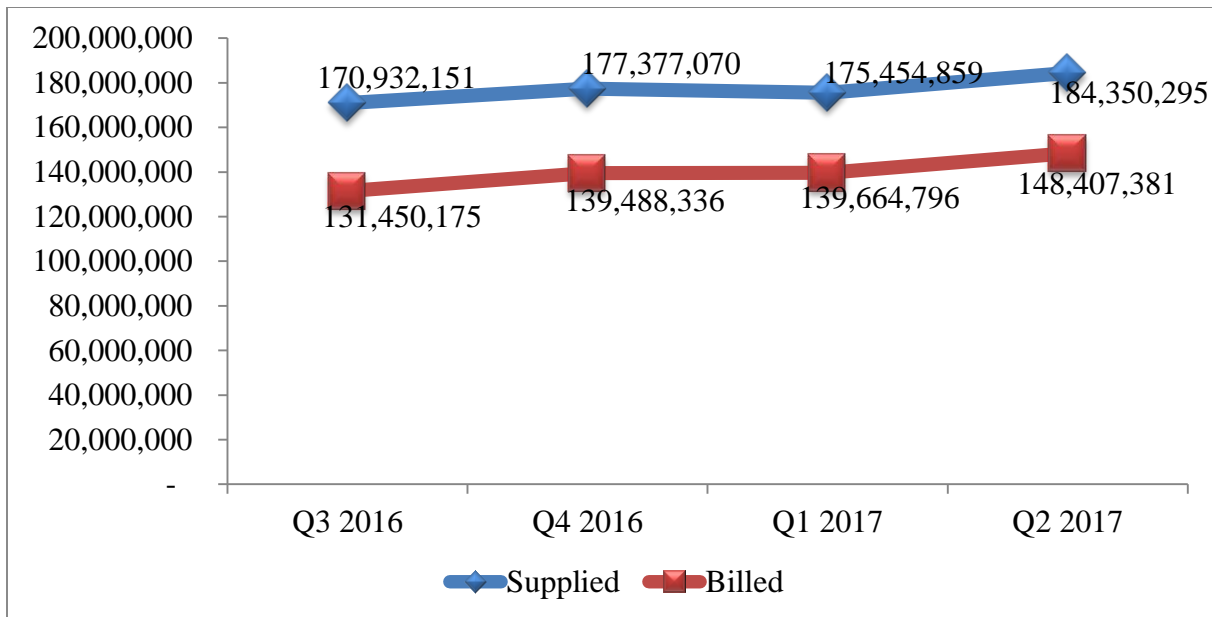
**Table 4: Total electricity (kWh) supplied, sold and billed for the second quarter 2017**

Electricity	Q1 2017	Q2 2017
Supplied	175,454,859	184,350,295
Sold and billed	139,664,796	148,407,381
Difference	35,790,062	35,942,914

Source: EUCL-REG, June 2017

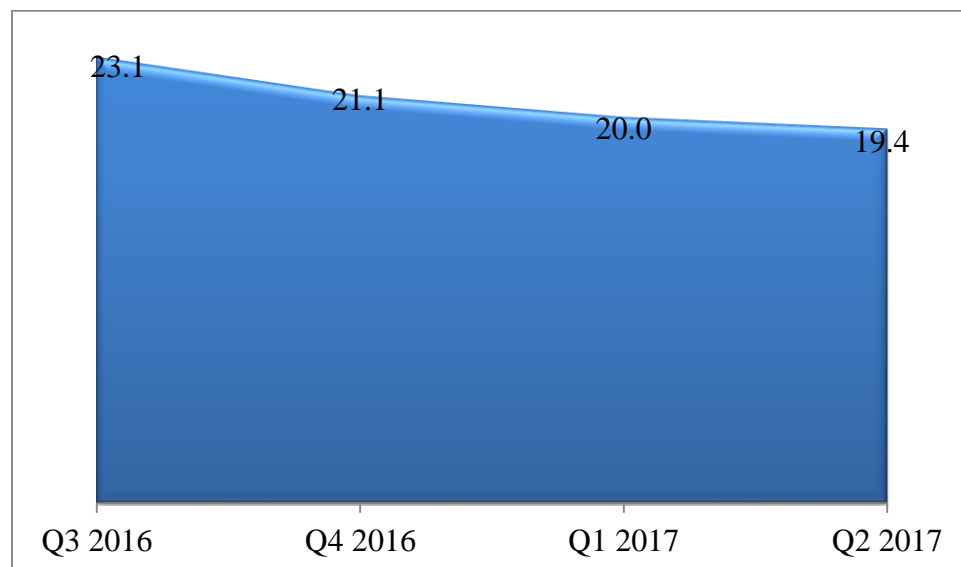
The total generated electricity within the second quarter of 2017 was 184,350,295 MWh. The 81% of electricity generated was sold and billed during this quarter under review whereas 19% were recorded as technical and non-technical losses.

**Figure 2: Total electricity (kWh) supplied, sold and billed for the last four quarters**



Source: EUCL-REG, June 2017

**Figure 3: Technical and non-technical losses (%) from Q3-2016 to Q2-2017**



**Source: EUCL-REG, June 2017**

**Table 5: Electricity consumption (kWh) per customer category for the second quarter 2017**

Customers	Q1 2017	Q2 2017	Share (%)
Domestic/Residential	58,178,072	27,894,750	19
Non-Residential	17,867,128	50,504,396	34
Water Pumping Station	5,252,430	5,827,893	4
Water Treatment Plant	6,097,825	6,557,842	4
Telecom towers	11,289,442	11,833,113	8
Hotels	7,665,615	8,532,533	6
Industrial	33,314,268	37,256,855	25
<b>Total</b>	<b>139,664,780</b>	<b>148,407,381</b>	<b>100</b>

**Source: EUCL-REG, June 2017**

The 34% of electricity supplied by EUCL in the second quarter were used by non-residential customers, 25% by industries, and 19% by residential customers while the remaining (22%) were consumed by water pumping station, water treatment plan, telecom towers, and hotels.



**Table 6: Applicable electricity end user tariffs**

Consumption block per month	RWF / kWh (VAT exclusive)	
<b>Residential Customers</b>		
[0-15] kWh		89
]15-50] kWh		182
>50 kWh		189
<b>Non-Residential Customers</b>		
[0-100] kWh		189
>100 kWh		192
<b>Industrial Customers</b>		
<b>Small industries including Water Treatment Plant, Water Pumping Stations and Telecom Towers</b>		
Flat Rate	RWF/kWh	126
<b>Medium Industries: 0.4 kV &lt; V ≤ 15kV</b>		
Energy charge	RWF/kWh	90
Max. Demand Charge (Peak)	RWF/KVA/month	10,469.55
Max. Demand Charge (Shoulder)	RWF/KVA/month	5,588.41
Max. Demand Charge (Off-Peak)	RWF/KVA/month	1,891.54
Customer Service Charge	RWF/Customer/month	3,125
<b>Medium Industries: 15 kV &lt; V ≤ 33kV</b>		
Energy charge	RWF/kWh	83
Max. Demand Charge (Peak)	RWF/KVA/month	7,184.44
Max. Demand Charge (Shoulder)	RWF/KVA/month	4,004.16
Max. Demand Charge (Off-Peak)	RWF/KVA/month	1,085.86
Customer Service Charge	RWF/Customer/month	3,125

**Source: Board Decision N° 05/BD/ER-LER/RURA/2016**

#### **4. INDEPENDENT POWER PRODUCERS (IPPs)**

There are 26 licensed independent power producers operating in this quarter under review; 13 of them got full license whereas other 13 operators have provisional license as shown in the tables below:

**Table 7: Licensed operators with full licenses as of the 2<sup>nd</sup> quarter 2017**

SN	Name of licensed company	Name of plant	Capacity ( MW)	Issuance date	Expiry date
1	Ngali Energy Ltd	Rukarara Hpp	9	27/09/2013	27/09/2033
2	Gigawatt Global Ltd	Rwamagana Solar	8.5	5/2/2014	5/2/2039
3	Regrepower Ltd	Kavumu Mhhp	0.38	16/04/2014	16/04/2029
4	Yumn Ltd	Akanyaru Peat	80	15/09/2014	15/09/2039
5	Kivuwatt Ltd	Kibuye Methane Gas	25	30/07/2015	30/07/2040
6	Rwanda Mountain Tea	Giciye I	4	1/11/2016	30/10/2041
		Giciye II	4		
7	Repro	Mutobo Hydropower	0.2	30/11/2016	30/11/2041
8	Rwaza Hydro Power Ltd	Rwaza-Muko	2.6	7/12/2016	6/12/2041
9	Refad Rwanda Ltd	Rukarara V Hydro Power Plant	7	27/3/2017	26/4/2042
10	Rubagabaga Hydro Power Limited	Rubagabaga Hydro Power Plant	2.8	5/4/2017	4/4/2042
11	Energie Nyaruguru (Enny) Ltd	Mazimeru Hydro Power Plant	0.5	17/4/2017	17/4/2023
12	Soenergy Rwanda Ltd	Mukungwa, Masoro and Birembo Thermal PP	30	25/5/2017	25/5/2022
13	Spv Nyirahindwe Hpp Ltd	Nyirahindwe I Hydro Power Plant	0.9	2017	2042
		Nyirahindwe II Hydro Power Plant	0.3		

**Source: RURA database**

**Table 8: IPPs with provisional licenses as of the 2<sup>nd</sup> quarter 2017**

S/N	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

**Table 9: List of licensed electricians as of the 2<sup>nd</sup> quarter 2017**

SN	Name of licensed electrician	Category of permit	Issuing date	Expiring date
1	Ukundayezu Jean Marie Vianney	Class A	14/11/2014	2018
2	Musabyimana Frederick	Class A	14/11/2014	14/11/2017
3	Sebasinga Simon	Class B	14/11/2014	14/11/2018
4	Mutangana Jean Claude	Class B	14/11/2014	Oct-17
5	Axar Technical Services Ltd	Class B	14/11/2014	14/11/2017
6	Bimenyimana Jean Bosco	Class B	3/7/2015	3/7/2018
7	Kolitech & Partners	Class B	10/8/2015	10/8/2018
8	Kigali Polytechnical Company Ltd	Class B	24/8/2015	24/8/2018
9	Kayiranga Prosper	Class B	10/11/2015	10/11/2018
10	Bigirimana Yves	Class B	14/12/2015	14/12/2018
11	Munyantore Gasatsi Jean Claude	Class C	28/3/2017	28/3/2020
12	Manirarora Alain Jean Claude	Class C	14/11/2014	23/11/2019
13	Louis De Gonzague Mukerangabo	Class C	28/5/2015	28/5/2018
14	Vision Technologies Company	Class D	16/6/2015	16/6/2018
15	4stin Electronics Ltd	Class D	25/11/2015	25/11/2018
16	Bigirimana Yves	Class B	14/12/2015	14/12/2018
17	Vision Technologies Company	Class Z	16/6/2015	16/6/2018
18	Louis De Gonzague Mukerangabo	Class D	21/10/2016	21/10/2019
19	Bendandakira Irakoze Onesphore	Class D (GEN & SOL)	3/11/2016	3/11/2009
20	Teeccsm Ltd	Class C	2016	2019
21	Metha Electricals Ltd	Class A, Class D (GEN)	7/11/2016	7/11/2019
22	Musabyimana Maurice	CLASS: A	8/3/2017	8/3/2020
23	Animas Satellite Systems Ltd	CLASS: C	11-Apr-17	11-Apr-20
24	Nibamureke Ildephonse	CLASS: C	29-May-17	29-May-20

**Source: RURA database**

There are 24 licensed electricians both individuals and companies operating countrywide where there is only one licensed operator in the second quarter of 2017. METHA ELECTRICALS Ltd has two categories of permit. The different categories of permit are detailed below;

- **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).