



**STATISTICS IN ELECTRICITY SUB-SECTOR AS OF
DECEMBER OF THE YEAR 2020**

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1. ELECTRICITY PRODUCTION

1.1. Domestic generation, regional shared and imports

Table 1: Trends of domestic generation and imported electricity (kWh) from Q1 to Q4 2020

Plant Name	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Total (2020)
Agatobwe	112,611	440,889	248,863	550,753	1,353,116
Cymbili MHPP	418,041	459,679	303,160	422,090	1,602,970
Gaseke MHPP	392,627	376,946	40,272	33,553	843,398
Gashashi MHPP	257,696	336,107	175,661	288,804	1,058,268
Gicye III	-	-	-	2,789,640	2,789,640
Gigawatt Global	2,997,900	3,316,300	3,484,640	3,178,910	12,977,750
Gihira MHPP	3,120,673	3,225,107	2,914,940	3,109,131	12,369,851
Gisenyi MHPP	2,898,962	2,744,478	2,328,502	2,931,628	10,903,570
Gishoma PPP	-	-	24,718,650	1,585,100	26,303,750
Jabana 1 TPP	3,133,500	28,700	-	-	3,162,200
Jabana 2 TPP	21,518,592	6,797,536	16,776,000	21,249,856	66,341,984
Jali Solar	29,471.2	28,890.4	32,614.4	29,031.2	120,007.2
Keya HPP	3,130,947	2,840,504	3,190,449	2,845,421	12,007,321
Kigasa MHPP	-	103,425.3	99,582	249,514	452,521.3
Kivuwatt	52,199,575.7	53,828,138.7	53,431,535.4	46,233,802.8	205,693,052.6
Mazimeru MHPP	786,192.2	1,015,397.0	897,388.1	856,510.6	3,555,487.9
Mukungwa 1 HPP	4,242,594	11,211,803	19,363,077	20,245,991	55,063,465
Mukungwa 2 HPP	1,912,906	5,029,860	5,766,915	6,103,259	18,812,940
Murunda MHPP	157,111	141,529	166,624	155,663	620,927
Musarara MHPP	851,802	391,818	691,036	609,698	2,544,354
Mutobo MHPP	376,072	349,959	368,692	389,936	1,484,659
Nasho Solar	1,123,554.7	1,252,684.8	1,318,921.4	1,248,932.1	4,944,093.0
Nkora MHPP	881,544	962,635	606,270	965,980	3,416,429
Nshili MHPP	212,808	181,928	-	-	394,736
Ntaruka HPP	916,700	4,824,000	10,050,000	12,420,000	28,210,700
Nyabahanga MHPP	215,416	239,150	144,116	171,722	770,404
Nyabarongo HPP	44,630,500	38,785,100	21,350,900	35,350,300	140,116,800
Nyirabuhombohombu	-	-	-	55,555	55,555
Nyirantaruko	1,377,755	2,146,969	1,113,820	1,779,761.8	6,418,305.8
Rubagabaga	176,154	289,925	338,865	444,381	1,249,325
Rugezi HPP	4,183,533	4,478,734	2,182,261	3,460,993	14,305,521
Rukarara 1 HPP	14,861,458	14,867,464	11,254,492	13,360,908	54,344,322
Rukarara 2 HPP	4,031,402	4,429,234	3,386,576	3,887,102	15,734,314
Rukarara V-Mushishito	3,536,287	3,948,517	2,659,712	2,981,241	13,125,757
Rwaza –Muko HPP	1,547,648	3,378,996	5,234,907	5,228,514	15,390,065
So Energy Masoro	2,764,670	34,330	413,930	2,126,070	5,339,000
So Energy Mukungwa 1	6,114,990	393,780	2,421,000	5,614,330	14,544,100
So Energy Birembo	569,070	6,330	31,980	180,470	787,850

Plant Name	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Total (2020)
Giciye I HPP	4,273,477	4,081,288	3,314,296	3,896,691	15,565,752
Giciye II HPP	4,438,343	2,972,253	3,776,567	4,212,601	15,399,764
Total domestic generation	194,392,582.8	179,940,384.2	204,597,214.3	211,243,843.5	790,174,024.7
Regional shared HPP	17,968,000	18,298,000	20,210,000	20,676,000	77,152,000
Imports	7,107,125.2	6,437,178.4	6,901,192.3	7,155,680.9	27,601,176.7
Total generation	219,467,708	204,675,562.5	231,708,406.5	39,075,524.3	894,927,201.4

Source: EUCL-REG, 2020

The total electricity generated in the year 2020 was 894,927,201.4 kWh whereas the 88.3% were from domestic power plants, 8.6% from Regional Shared plants, and 3.1% were imported.

1.2. Electricity generation mix

The electricity produced in Rwanda is generated using different sources namely hydro, methane gas, peat, solar and heavy and light fuel oil used to run generators while another portion is imported.

Table 2: Trends of energy mix per electricity generation from Q1 to Q4 2020

Electricity generation mix	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020
Hydro	55.5%	64.8%	52.7%	62.9%	58.9%
Methane Gas	23.8%	26.3%	23.1%	19.3%	23.0%
Thermal (Fuel oil)	15.5%	3.5%	8.5%	12.2%	10.1%
Peat	0.0%	0.0%	10.7%	0.7%	2.9%
Solar	1.9%	2.2%	2.1%	1.9%	2.0%
Imports	3.2%	3.1%	3.0%	3.0%	3.1%

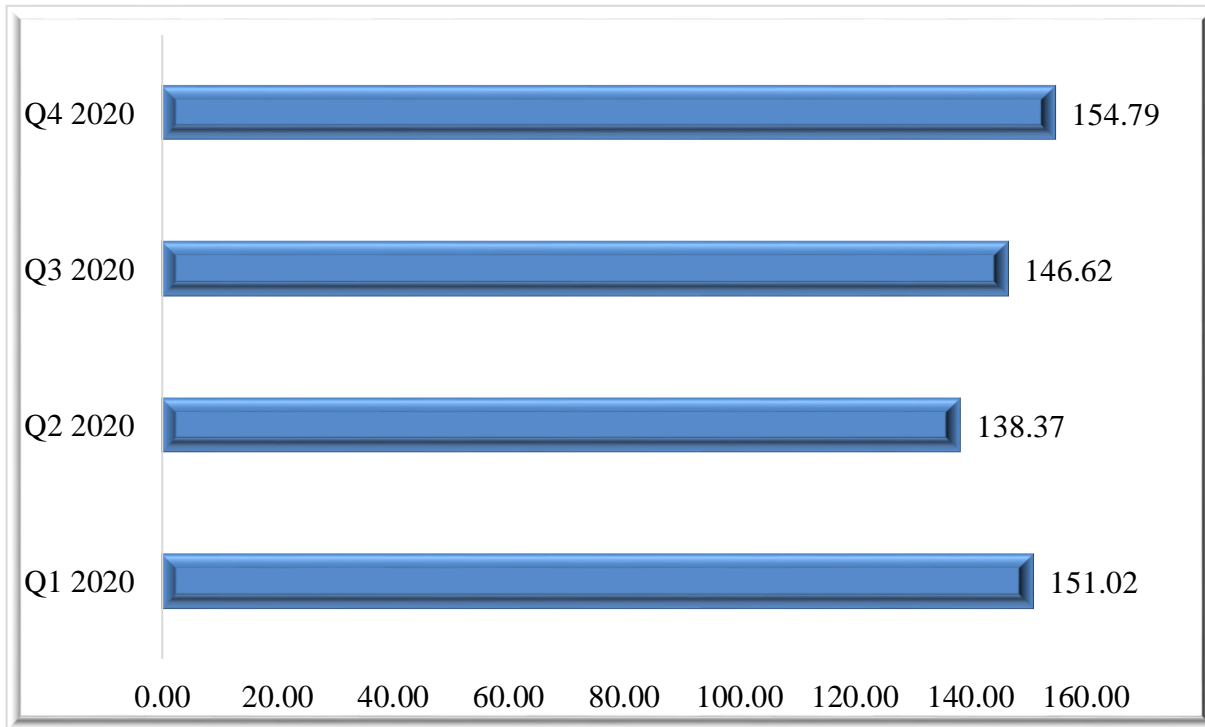
Source: EUCL-REG, 2020

The 58.9% of electricity generation in the year 2020 is from Hydro, 23.0% from Methane Gas, 10.1% from Thermal, 2.9% from Peat, 2.0 from Solar energy and 3.1% is the Imports. In general, the 60.9% of electricity generation is from renewable resources, 36.0% from non-renewables whereas 3.1% is imported electricity.

1.3. System peak demand

The system peak demand increased by 2.5% from the first quarter to the fourth quarter of the year 2020 and the peak quarter over this year was quarter four with a peak demand of 154.79 MW as presented in the Figure 1.

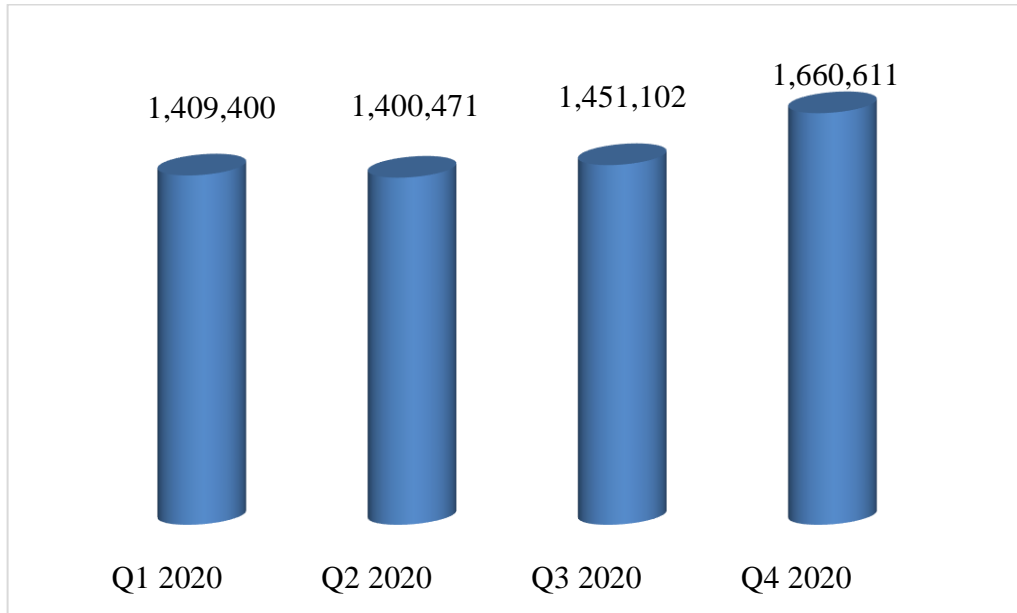
Figure 1: Trends of system peak demand (MW) from Q1 to Q4 2020



Source: EUCL-REG, 2020

2. EXPORTED ELECTRICITY

Figure 2: Trends of exported electricity (kWh) from Q1 to Q4 2020



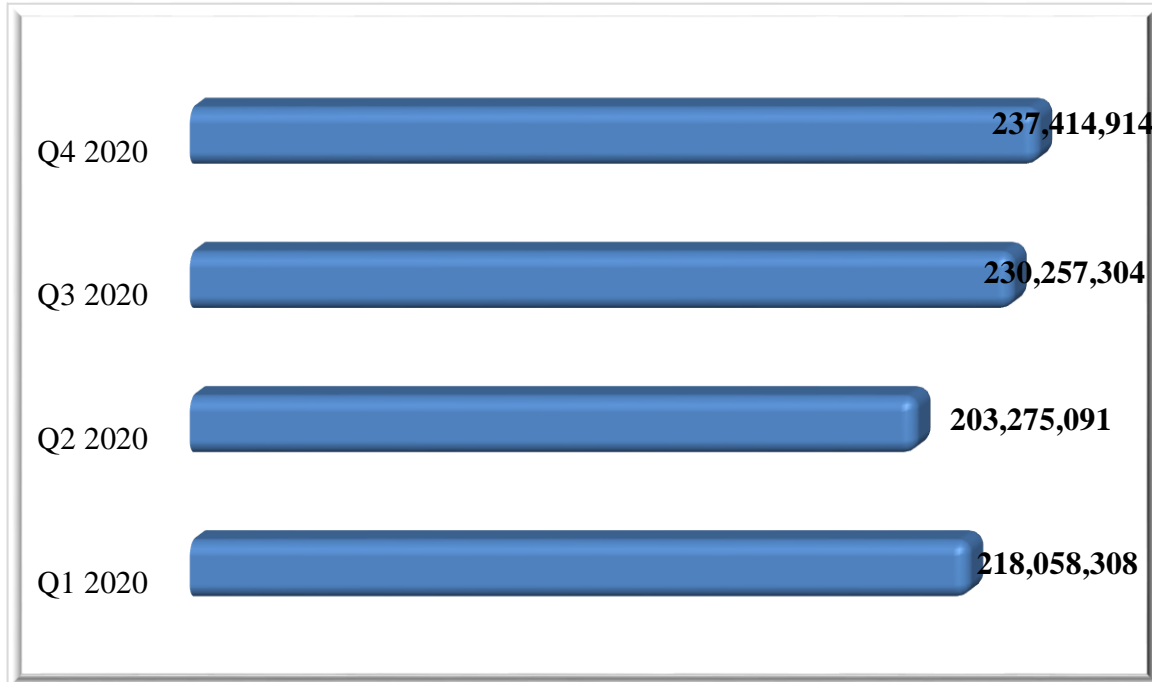
Source: EUCL-REG, 2020

The total exported electricity during the year 2020 was 5,921,584 kWh. The exported electricity increased by 17.8% from the first to the fourth quarter of the year 2020.

3. ELECTRICITY SUPPLIED TO THE NATIONAL GRID

Below is shown the quantity of electricity supplied in each quarter, within the county excluding the exported electricity.

Figure 3: Trends of electricity supplied to the national grid (kWh) from Q1 to Q4 2020



Source: EUCL-REG, 2020

The electricity supplied to the national grid by the Utility increased by 8.9% from the first to the fourth quarter of the year 2020. During the year 2020, the total electricity supplied to the national grid was 889,005,617 kWh.

4. ELECTRICITY SOLD DOMESTICALLY

The electricity sold includes both the pre-paid and post-paid electricity.

Table 3: Trends of electricity sold (kWh) per type of customer from Q1 to Q4 2020

Customer category	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020
Residential	32,238,451	32,315,760	34,331,307	35,021,780	133,907,296
Non-residential	53,841,742	44,618,051	49,049,688	52,082,590	199,592,071
Water pumping stations	7,476,566	11,134,684	10,463,935	8,984,277	38,059,463
Water treatment plants	6,948,114	6,861,352	7,518,296	8,977,342	30,305,104
Broadcasters	1,067,477	1,066,072	1,091,253	1,137,579	4,362,381
Health facilities	3,730,834	3,815,653	3,915,074	4,106,220	15,567,782
Telecom towers	10,645,352	11,453,147	11,740,158	11,882,984	45,721,642
Hotels	9,542,411	4,109,677	5,974,954	7,846,432	27,473,474
Commercial data centers	-	337,256	363,269	366,186	1,066,711
Industries	50,721,972	48,323,530	57,804,972	62,094,467	218,944,942
Total	176,212,919	164,035,183	182,252,906	192,499,858	715,000,867

Source: EUCL-REG, 2020

The 27.9% of the total electricity sold by Utility during the year 2020 were sold to non-residential customers, 30.6% to industries, and 18.7% to residential customers and the remaining 22.7% were sold to water pumping stations, water treatment plants, broadcasters, health facilities, telecom towers, hotels, and commercial data centers.

5. ELECTRICITY END USER TARIFF

The electricity tariff charged to EUCL customers since 21st January 2020 was structured as described in the below tables.

5.1. Tariffs for non-industrial customer category

Table 4: Tariffs for non-industrial customer category

Category	Consumption block	Frw/kWh (VAT & Regulatory fee exclusive)
Residential]0-15] per month (kWh)	89
]15-50] per month (kWh)	212
	>50 per month (kWh)	249
Non-residential]0-100] per month (kWh)	227
	>100 per month (kWh)	255
Water Treatment Plants & Water Pumping Stations	All consumed kWh	126
Telecom towers	All consumed kWh	201
Hotels	All consumed kWh	157
Health Facilities	All consumed kWh	186
Broadcasters	All consumed kWh	192
Commercial data centers	All consumed kWh	179

Source: Board Decision N°01/BD/ER-EWS/RURA/2020

5.2. Tariffs for Industrial Customer Categories

Industrial customers are those registered as industries with Rwanda Development Board (RDB). Industrial customers are categorized based on their level of consumption defined as follows:

Table 5: Categorization of industrial customers

Industry category	Annual consumption (kWh/year)
Small	≤ 22,000
Medium]22,000- 660,000]
Large	>660,000

Source: Board Decision N°01/BD/ER-EWS/RURA/2020

Table 6: Tariffs for industrial customers with smart meters

Category	Energy charge (Frw/kWh)	Charges (VAT and regulatory fee exclusive)			Customer service charge (Frw/Month)
		Maximum demand charge (Frw/kVA/month)			
		Off-peak hours (11:00PM-07:59AM)	Shoulder hours (8:00AM-5:59PM)	Peak hours (06:00PM-10:59PM)	
Small	134	1,691	4,008	11,017	10,000
Medium	103	1,292	3,588	10,514	10,000
Large	94	886	2,004	7,184	10,000

Source: Board Decision N°01/BD/ER-EWS/RURA/2020

Table 7: Flat rates for industrial customers without smart meters

Industrial customers without smart meters are charged at flat rates described in table below until the smart meters are installed in their facilities.

Industry category	Flat rate (Frw/kWh, VAT & Regulatory fee exclusive)
Small	151
Medium	123
Large	106

Source: Board Decision N°01/BD/ER-EWS/RURA/2020