



**ELECTRICITY STATISTICS REPORT AS OF THE FIRST
QUARTER (JANUARY-MARCH) OF THE YEAR 2023**

Disclaimer: Information provided in this report is subject to alteration in case of any revision or update deemed necessary.

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1. ELECTRICITY PRODUCTION

1.1. Domestic generation, regional shared and imports

Table 1: Domestic generation, regional shared and imports (kWh) from Q1 2022 to Q1 2023

Pant name	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023
Nyabarongo HPP	33,534,500	35,115,600	21,614,700	28,305,800	32,099,100
Ntaruka HPP	5,782,000	4,542,100	9,941,900	12,946,000	8,488,674
Mukungwa HPP	16,321,233	15,052,606	16,184,752	17,327,570	16,924,380
Jabana 1 TPP	89,890	103,900	329,970	924,410	1,989,310
Jabana 2 TPP	23,244,480	24,365,664	21,686,496	31,004,992	22,038,400
Nasho solar	1,045,845	1,148,008	1,296,332	1,171,882	1,133,127
Nyabahanga MHPP	100,988	181,580	128,878	216,750	197,124
Jali Solar	27,830	28,744	31,829	29,751	28,281
Gisenyi MHPP	2,528,977	2,156,060	1,911,557	2,376,871	2,484,803
Gihira MHPP	2,782,555	2,452,765	2,009,696	2,365,805	2,236,321
Rukarara 1 HPP	12,961,319	14,285,371	10,402,605	13,717,643	14,083,908
Rukarara 2 MHPP	3,559,654	3,863,849	3,068,415	3,643,082	3,941,919
Murunda MHPP	148,584	169,645	130,509	154,579	164,537
Rugezi MHPP	3,564,439	5,106,230	3,224,541	3,083,228	2,475,858
Keya MHPP	3,144,426	3,050,217	2,701,620	328,104	0.0
Cymbili MHPP	453,480	471,160	394,770	458,890	457,820
Mazimeru MHPP	788,235	756,361	600,105	748,029	715,638
Nkora MHPP	771,510	821,950	666,200	899,420	891,120
Musarara MHPP	783,139	784,281	676,722	797,373	827,617
Mukungwa 2 HPP	5,263,100	4,989,362	5,212,712	6,208,197	5,697,125
Giciye I HPP	3,998,022	4,223,413	2,891,134	3,922,563	2,973,734
GigaWatt Global	3,022,410	3,184,960	3,367,950	3,179,390	3,169,110
Janja MHPP	254,330	289,908	300,311	297,550	220,622
Kivuwatt	51,731,515	54,833,262	55,986,650	46,870,313	50,055,287
Giciye II HPP	4,655,095	4,515,756	3,175,870	4,214,329	3,260,368
Mutobo MHPP	398,214	405,979	403,522	409,026	409,439
Gaseke MHPP	323,668	225,241	189,687	480,878	230,086
So Energy Mukungwa 1	6,384,170	12,928,750	11,713,380	10,307,680	8,961,060
So Energy Masoro	5,004,510	10,337,760	6,657,330	7,269,400	11,137,340
So Energy Birembo	1,389,600	5,009,610	2,465,280	2,405,040	7,369,160
Gashashi	333,447	294,071	232,169	0.0	237,658
Rwaza-Muko MHPP	4,508,879	4,369,480	4,594,469	5,426,699	5,054,111
Rukarara V-Mushishito	4,574,729	7,557,945	6,128,387	7,922,572	8,206,448
Rubagabaga MHPP	508,437	470,463	88,642	388,711	437,516
Agatobwe MHPP	426,143	474,802	365,073	456,107	497,248
Nyirantaruko MHPP	1,619,564	1,537,606	626,500	356,074	1,290,242
Kigasa MHPP	263,231	279,607	222,841	283,836	293,503
Giciye III	11,048,392	10,317,571	7,222,952	9,005,015	6,948,966

Pant name	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023
Nyirabuhombohombo	794,351	660,537	834,337	677,630	751,559
Hakan QP	27,515,500	11,949,959	38,539,181	34,388,635	28,666,305
Gishoma PPP	0.0	2,783,825	16,156,800	2,947,230	18,728,820
Kavumu Mwange	-	-	-	-	68,560
Shema Power	-	-	-	-	248,490
Ntaruka A HPP	-	-	-	-	25,411
Total domestic generation	245,650,391	256,095,958	264,376,775	267,917,054	276,116,106
Regional shared HPP	14,500,000	15,300,000	16,990,000	18,610,000	18,452,000
Imports	8,553,589	8,221,250	7,606,607	7,492,371	7,353,011
Total	268,703,980	279,617,208	288,973,382	294,019,425	301,921,117

Source: EUCL-REG

Electricity generated during the first quarter of the year 2023 were 301,921.117 MWh which shows a positive trend of 12.4% as compared to the generation of the first quarter of 2022. The total electricity generated by domestic power plants, Regional shared power plants, and imports during the last five quarters were 1,433,235.111 MWh. The 91.45% of electricity generated in the first quarter 2023 were from domestic power plants, 6.11% from Regional Shared plants, and 2.44% were imported.

1.2. Electricity generation mix

The electricity produced in Rwanda is generated using different source of energy namely hydro, methane gas, peat, solar, 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 2022 to Q1 2023

Electricity generation mix	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023
Thermal (Fuel Oil)	13.44%	18.86%	14.83%	17.66%	17.06%
Hydro	52.36%	51.76%	42.61%	49.67%	46.72%
Methane	19.25%	19.61%	19.37%	15.94%	16.66%
Peat	10.24%	5.27%	18.93%	12.70%	15.70%
Solar	1.52%	1.56%	1.63%	1.49%	1.43%
Imports	3.18%	2.94%	2.63%	2.55%	2.44%

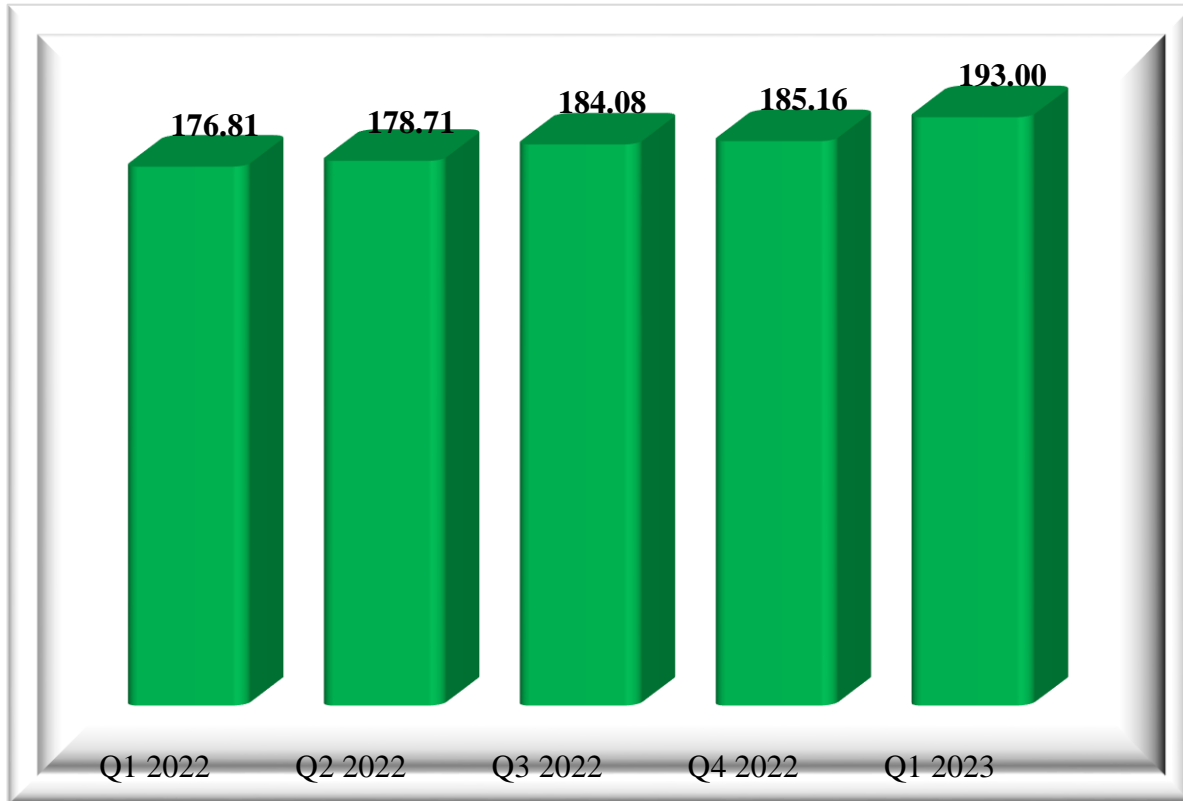
Source: EUCL-REG

The 46.72% of electricity generation during the first quarter of 2023 are from Hydro, 17.06% from Thermal, 16.66% from Methane Gas, 15.70% from Peat, 1.43% from Solar energy and 2.44% are the imports. In general, the 48.15% of electricity generation in Q1 2023 are from renewable resources and 49.41% are from non-renewable resources whereas 2.44% are imported electricity.

1.3. System peak demand

The system peak demand increased by 9.2% in the 1st quarter of the year 2023 compared to the 1st quarter 2022. The peak quarter over the last five quarters was quarter One of 2023 with a system peak demand of 193 MW as shown per Figure 1.

Figure 1: Trends of system peak demand (MW) from Q1 2022 to Q1 2023

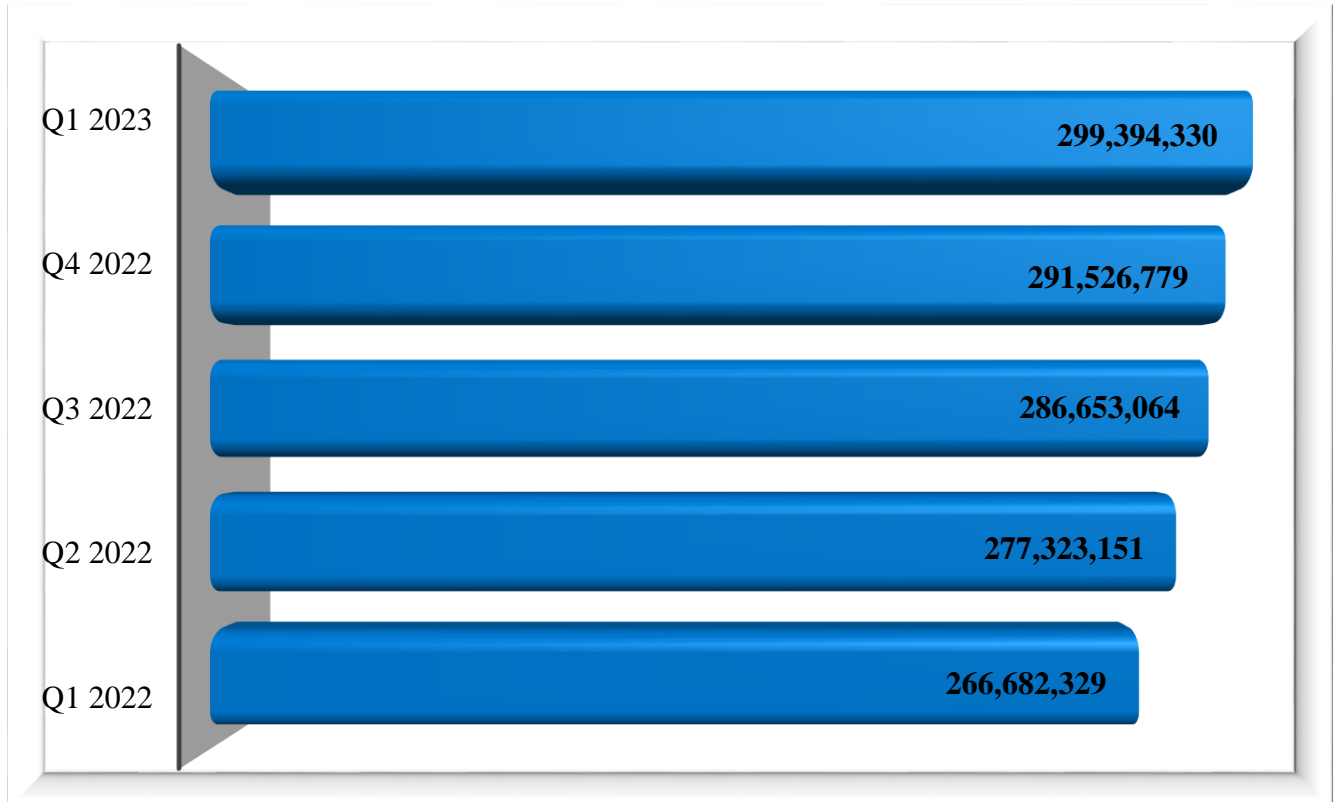


Source: EUCL-REG

2. ELECTRICITY SUPPLIED TO THE NATIONAL GRID

The figure below illustrates the quantity of electricity supplied in each quarter within the county excluding exported electricity.

Figure 2: Trends of electricity supplied to the national grid (kWh) from Q1 2022 to Q1 2023



Source: EUCL-REG

The electricity supplied to the national grid by service provider increased by 12.3% in the 1st quarter 2023 as compared to the 1st quarter of the year 2022. The total electricity supplied to the national grid during the last five quarters were 1,421,579,654 kWh.

3. 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 2022 to Q1 2023

Customer category	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023
Industries	72,548,959	73,024,547	73,645,659	76,641,505	79,722,362
Non-residential	50,308,145	53,986,535	55,425,840	55,708,887	58,208,318
Residential	41,439,354	42,964,053	46,930,009	47,641,702	48,146,169
Telecom towers	12,824,575	13,303,249	13,462,241	13,318,912	13,090,032
Water treatment plants	11,558,127	12,369,768	13,098,140	12,530,956	12,561,267
Hotels	9,655,235	11,032,736	11,997,688	12,681,354	12,034,071
Water pumping stations	8,818,407	9,524,843	10,529,093	9,810,519	10,163,377
Health facilities	5,050,694	5,195,074	5,392,241	5,451,823	5,326,621
Broadcasters	1,170,320	1,186,248	1,197,166	1,182,632	1,144,169
Commercial data centers	489,402	505,685	501,146	523,157	529,723
Exports	2,021,651	2,294,057	2,320,318	2,492,646	2,526,787
Street lights	4,789,493	4,833,620	5,435,291	5,899,943	5,919,436
Total	220,674,362	230,220,416	239,934,831	243,884,035	249,372,331

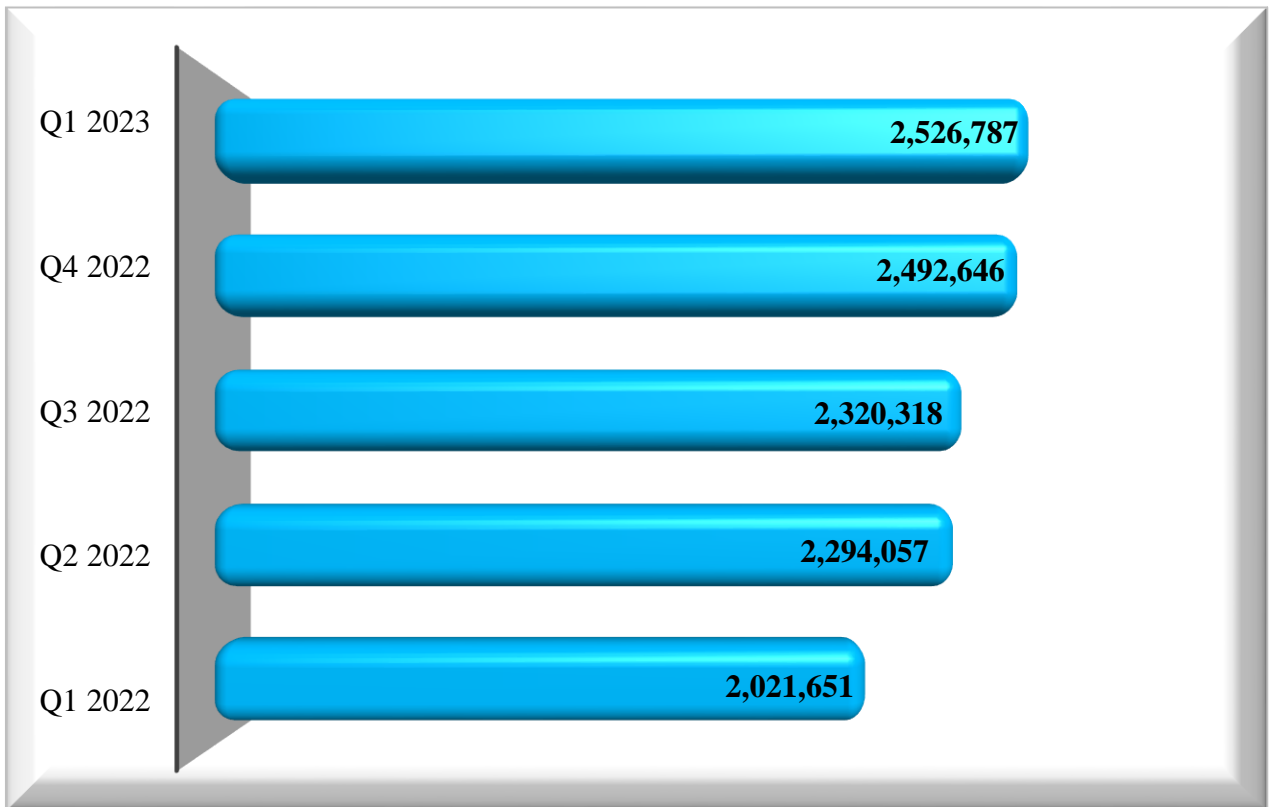
Source: EUCL-REG

During the first quarter of the year 2023, the 31.97% of the total electricity sold by utility were to industries, 23.34% to non-residential customers, 19.31% to residential customers and the remaining 21.99% were sold to water telecom towers, water treatment plants, hotels, pumping stations, health facilities, broadcasters, and commercial data centers. The 2.37% of electricity sold by operator were consumed by public street lights and the 1.01% were the exports.

4. EXPORTED ELECTRICITY

The exported electricity increased by 25.0% in the first quarter of the year 2023 in comparison to the 1st quarter 2022. The highest exports recorded over the last five quarters were 2,526,787 kWh for the quarter One of 2023.

Figure 3: Trends of exported electricity (kWh) from Q1 2022 to Q1 2023



Source: EUCL-REG

5. ELECTRICITY END USER TARIFF

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

1.1. 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

1.2. 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