



**ELECTRICITY STATISTICS REPORT AS OF THE FOURTH
QUARTER (OCTOBER-DECEMBER) OF THE YEAR 2022**

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: Trends of domestic generation, regional shared and imports (kWh) from Q1 to Q4 2022

Pant name	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Total (2022)
Nyabarongo HPP	33,534,500	35,115,600	21,614,700	28,305,800	118,570,600
Ntaruka HPP	5,782,000	4,542,100	9,941,900	12,946,000	33,212,000
Mukungwa HPP	16,321,233	15,052,606	16,184,752	17,327,570	64,886,161
Jabana 1 TPP	89,890	103,900	329,970	924,410	1,448,170
Jabana 2 TPP	23,244,480	24,365,664	21,686,496	31,004,992	100,301,632
Nasho solar	1,045,845	1,148,008	1,296,332	1,171,882	4,662,068
Nyabahanga MHPP	100,988	181,580	128,878	216,750	628,196
Jali Solar	27,830	28,744	31,829	29,751	118,154
Gisenyi MHPP	2,528,977	2,156,060	1,911,557	2,376,871	8,973,465
Gihira MHPP	2,782,555	2,452,765	2,009,696	2,365,805	9,610,821
Rukarara 1 HPP	12,961,319	14,285,371	10,402,605	13,717,643	51,366,938
Rukarara 2 MHPP	3,559,654	3,863,849	3,068,415	3,643,082	14,135,000
Murunda MHPP	148,584	169,645	130,509	154,579	603,317
Rugezi MHPP	3,564,439	5,106,230	3,224,541	3,083,228	14,978,438
Keya MHPP	3,144,426	3,050,217	2,701,620	328,104	9,224,367
Cymbili MHPP	453,480	471,160	394,770	458,890	1,778,300
Mazimeru MHPP	788,235	756,361	600,105	748,029	2,892,730
Nkora MHPP	771,510	821,950	666,200	899,420	3,159,080
Musarara MHPP	783,139	784,281	676,722	797,373	3,041,515
Mukungwa 2 HPP	5,263,100	4,989,362	5,212,712	6,208,197	21,673,371
Giciye I HPP	3,998,022	4,223,413	2,891,134	3,922,563	15,035,132
GigaWatt Global	3,022,410	3,184,960	3,367,950	3,179,390	12,754,710
Janja MHPP	254,330	289,908	300,311	297,550	1,142,098
Kivuwatt	51,731,515	54,833,262	55,986,650	46,870,313	209,421,741
Giciye II HPP	4,655,095	4,515,756	3,175,870	4,214,329	16,561,050
Mutobo MHPP	398,214	405,979	403,522	409,026	1,616,741
Gaseke MHPP	323,668	225,241	189,687	480,878	1,219,474
So Energy Mukungwa 1	6,384,170	12,928,750	11,713,380	10,307,680	41,333,980
So Energy Masoro	5,004,510	10,337,760	6,657,330	7,269,400	29,269,000
So Energy Birembo	1,389,600	5,009,610	2,465,280	2,405,040	11,269,530
Gashashi	333,447	294,071	232,169	0.0	859,687
Rwaza-Muko MHPP	4,508,879	4,369,480	4,594,469	5,426,699	18,899,527
Rukarara V-Mushishito	4,574,729	7,557,945	6,128,387	7,922,572	26,183,633
Rubagabaga MHPP	508,437	470,463	88,642	388,711	1,456,253
Agatobwe MHPP	426,143	474,802	365,073	456,107	1,722,125
Nyirantaruko MHPP	1,619,564	1,537,606	626,500	356,074	4,139,744
Kigasa MHPP	263,231	279,607	222,841	283,836	1,049,515
Giciye III	11,048,392	10,317,571	7,222,952	9,005,015	37,593,930

Pant name	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Total (2022)
Nyirabuhombo	794,351	660,537	834,337	677,630	2,966,855
Hakan QP	27,515,500	11,949,959	38,539,181	34,388,635	112,393,275
Gishoma PPP	0.0	2,783,825	16,156,800	2,947,230	21,887,855
Total domestic generation	245,650,391	256,095,958	264,376,775	267,917,054	1,034,040,177
Regional shared HPP	14,500,000	15,300,000	16,990,000	18,610,000	65,400,000
Imports	8,553,589	8,221,250	7,606,607	7,492,371	31,873,817
Total	268,703,980	279,617,208	288,973,382	294,019,425	1,131,313,994

Source: EUCL-REG

Electricity generated during the fourth quarter of the year 2022 was 294,019.425 MWh which shows a positive trend of 9.4% in comparison to the first quarter of 2022. The annual electricity generated by domestic power plants, Regional shared power plants, and imports was 1,131,313.994 MWh. The 91.4% of electricity generated in 2022 were from domestic power plants, 5.8% from Regional Shared plants, and 2.8% 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 to Q4 2022

Electricity generation mix	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022
Thermal (Fuel Oil)	13.44%	18.86%	14.83%	17.66%	16.23%
Hydro	52.36%	51.76%	42.61%	49.67%	49.02%
Methane	19.25%	19.61%	19.37%	15.94%	18.51%
Peat	10.24%	5.27%	18.93%	12.70%	11.87%
Solar	1.52%	1.56%	1.63%	1.49%	1.55%
Imports	3.18%	2.94%	2.63%	2.55%	2.82%

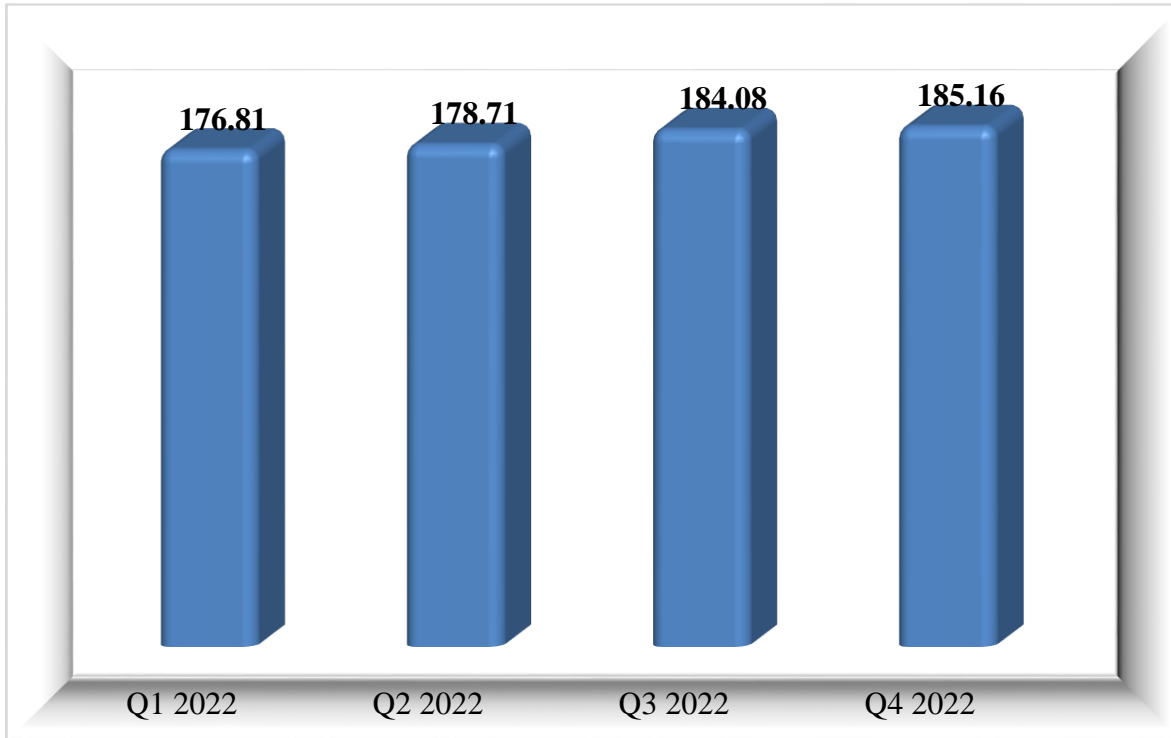
Source: EUCL-REG

The 49.02% of electricity generation during the year 2022 is from Hydro, 18.51% from Methane Gas, 16.23% from Thermal, 11.87% from Peat, 1.55% from Solar energy and 2.82% is the imports. In general, the 50.6% of electricity generation in 2022 are from renewable resources and 46.6% are from non-renewable resources whereas 2.82% are imported electricity.

1.3. System peak demand

The system peak demand increased by 4.7% from the 1st quarter 2022 to the 4th quarter of the year 2022. The peak quarter over the year 2022 was quarter Four of 2022 with a system peak demand of 185.16 MW as shown in the Figure 1.

Figure 1: Trends of system peak demand (MW) from Q1 to Q4 2022

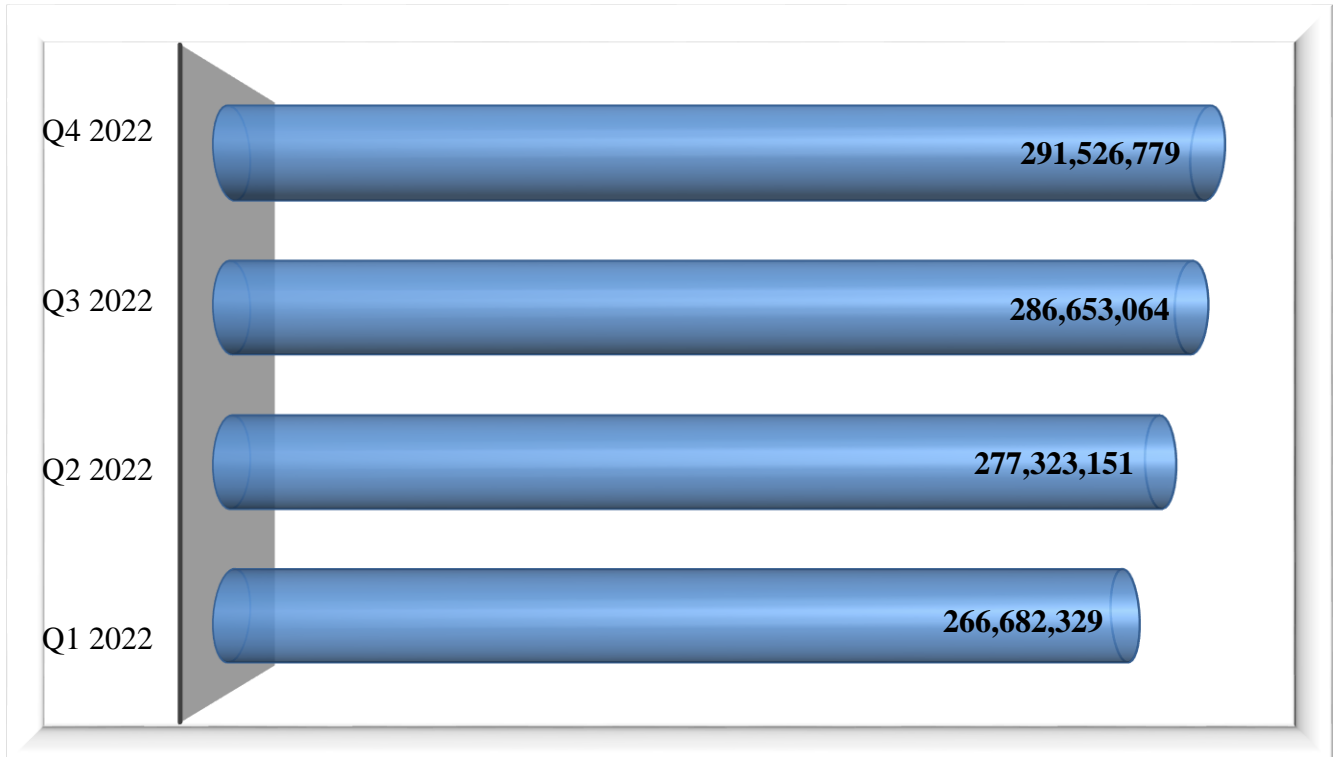


Source: EUCL-REG

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 to Q4 2022



Source: EUCL-REG

The electricity supplied to the national grid by service provider increased by 9.3% from the 1st quarter 2022 to the 4th quarter of the year 2022. The total electricity supplied to the national grid during the year 2022 was 1,122,185,323 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 to Q4 2022

Customer category	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Total (2022)
Industries	72,548,959	73,024,547	73,645,659	76,641,505	295,860,672
Non-residential	50,308,145	53,986,535	55,425,840	55,708,887	215,429,407
Residential	41,439,354	42,964,053	46,930,009	47,641,702	178,975,118
Telecom towers	12,824,575	13,303,249	13,462,241	13,318,912	52,908,977
Water treatment plants	11,558,127	12,369,768	13,098,140	12,530,956	49,556,990
Hotels	9,655,235	11,032,736	11,997,688	12,681,354	45,367,014
Water pumping stations	8,818,407	9,524,843	10,529,093	9,810,519	38,682,861
Health facilities	5,050,694	5,195,074	5,392,241	5,451,823	21,089,832
Broadcasters	1,170,320	1,186,248	1,197,166	1,182,632	4,736,365
Commercial data centers	489,402	505,685	501,146	523,157	2,019,390
Exports	2,021,651	2,294,057	2,320,318	2,492,646	9,128,671
Street lights	4,789,493	4,833,620	5,435,291	5,899,943	20,958,348
Total	220,674,362	230,220,416	239,934,831	243,884,035	934,713,644

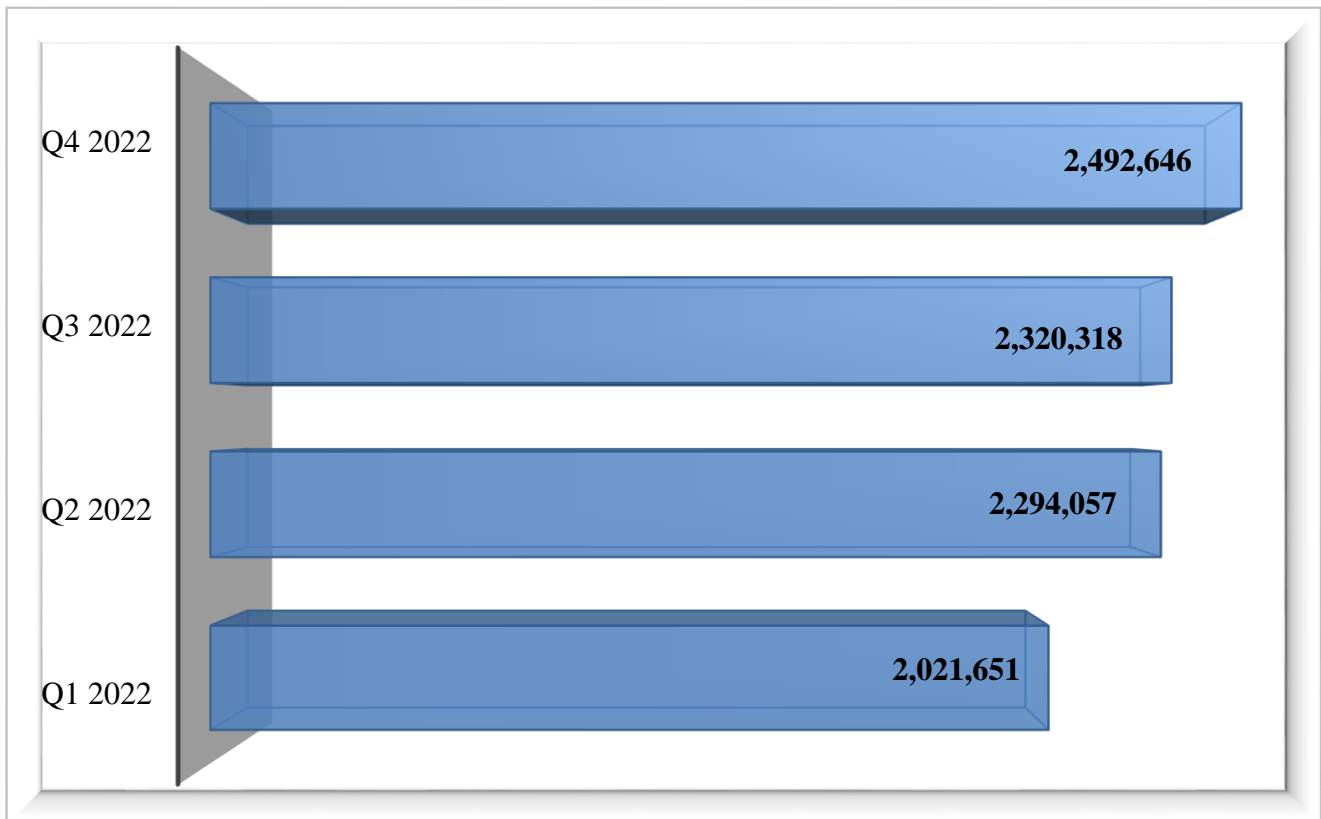
Source: EUCL-REG

During the year 2022, the 31.65% of the total electricity sold by utility were to industries, 23.05% to non-residential customers, 19.15% to residential customers and the remaining 22.93% were sold to water telecom towers, water treatment plants, hotels, pumping stations, health facilities, broadcasters, and commercial data centers. The 2.24% of electricity sold by operator were consumed by public street lights and the 0.98% were the exports.

4. EXPORTED ELECTRICITY

The exported electricity increased by 23.3% in the fourth quarter of the year 2022 in comparison to the 1st quarter 2022. The highest electricity exports recorded over the year 2022 was 2,492,646 kWh for the quarter Four of 2022. The total electricity exports reported during the year 2022 were 9,128,671 kWh.

Figure 3: Trends of exported electricity (kWh) from Q1 to Q4 2022



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