



**ELECTRICITY STATISTICS REPORT AS OF THE FOURTH
QUARTER (OCTOBER-DECEMBER) OF THE YEAR 2023**

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

TABLE OF CONTENTS

1. ELECTRICITY GENERATION	2
1.1. Domestic generation, regional shared and imports	2
1.2. Electricity generation mix	3
1.3. System peak demand.....	4
2. ELECTRICITY SUPPLIED TO THE NATIONAL GRID	5
3. ELECTRICITY SOLD.....	6
4. EXPORTED ELECTRICITY	7
5. ELECTRICITY END USER TARIFF	8
1.1. Tariffs for non-industrial customer category	8
1.2. Tariffs for Industrial Customer Categories	8

LIST OF FIGURES

Figure 1: Trends of system peak demand (MW) from Q4 2022 to Q4 2023	4
Figure 2: Trends of electricity supplied to the national grid (kWh) from Q4 2022 to Q4 2023	5
Figure 3: Trends of exported electricity (kWh) from Q4 2022 to Q4 2023	7

LIST OF TABLES

Table 1: Domestic generation, regional shared and imports (kWh) from Q1 2023 to Q4 2023	2
Table 2: Trends of energy mix per electricity generation from Q1 2023 to Q4 2023	3
Table 3: Trends of electricity sold (kWh) from Q1 2023 to Q4 2023	6
Table 4: Tariffs for non-industrial customer category.....	8
Table 5: Categorization of industrial customers	8
Table 6: Tariffs for industrial customers with smart meters.....	9
Table 7: Flat rates for industrial customers without smart meters.....	9

1. ELECTRICITY GENERATION

1.1. Domestic generation, regional shared and imports

Table 1: Domestic generation, regional shared and imports (kWh) from Q1 2023 to Q4 2023

Plant name	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Total (2023)
Nyabarongo HPP	32,099,100	36,537,200	17,035,400	27,262,300	112,934,000
Ntaruka HPP	8,488,674	8,186,000	6,233,000	4,858,000	27,765,674
Mukungwa HPP	16,924,380	17,302,150	18,265,527	17,004,242	69,496,299
Jabana 1 TPP	1,989,310	479,300	-	-	2,468,610
Jabana 2 TPP	22,038,400	8,408,982	3,957,920	1,881,280	36,286,582
Nasho solar	1,133,127	1,229,807	1,301,855	1,031,865	4,696,654
Nyabahanga MHPP	197,124	246,462	200,320	176,997	820,903
Jali Solar	28,281	26,171	29,999	25,077	109,528
Gisenyi MHPP	2,484,803	2,062,717	1,785,411	2,040,343	8,373,274
Gihira MHPP	2,236,321	2,283,408	1,602,329	1,966,370	8,088,428
Rukarara 1 HPP	14,083,908	15,549,032	11,321,436	14,948,920	55,903,296
Rukarara 2 MHPP	3,941,919	4,301,104	3,232,681	3,934,988	15,410,692
Murunda MHPP	164,537	52,984	-	-	217,521
Rugezi MHPP	2,475,858	3,735,744	1,630,647	2,464,319	10,306,568
Keya MHPP	0.0	1,873,686	2,419,869	2,908,168	7,201,723
Cymbili MHPP	457,820	437,200	345,850	391,010	1,631,880
Mazimeru MHPP	715,638	889,192	783,553	889,858	3,278,241
Nkora MHPP	891,120	887,420	641,980	762,410	3,182,930
Musarara MHPP	827,617	830,286	518,038	911,108	3,087,049
Mukungwa 2 HPP	5,697,125	6,175,521	5,503,292	5,614,542	22,990,480
Giciye I HPP	2,973,734	3,722,410	2,449,990	4,019,743	13,165,877
GigaWatt Global	3,169,110	3,164,800	3,568,790	3,130,010	13,032,710
Janja MHPP	220,622	291,598	314,456	306,935	1,133,611
Kivuwatt	50,055,287	55,025,413	56,544,338	48,455,536	210,080,575
Giciye II HPP	3,260,368	4,159,300	2,584,571	4,538,264	14,542,503
Mutobo MHPP	409,439	410,742	406,937	415,020	1,642,138
Gaseke MHPP	230,086	223,081	-	-	453,167
So Energy Mukungwa 1	8,961,060	5,911,100	384,560	-	15,256,720
So Energy Masoro	11,137,340	8,247,830	315,650	-	19,700,820
So Energy Birembo	7,369,160	5,126,200	298,380	-	12,793,740
Gashashi	237,658	357,962	210,465	270,097	1,076,182
Rwaza-Muko MHPP	5,054,111	4,953,769	4,823,455	4,251,384	19,082,719
Rukarara V-Mushishito	8,206,448	9,089,132	6,562,542	8,677,529	32,535,651
Rubagabaga MHPP	437,516	255,036	12,623	229,219	934,394
Agatobwe MHPP	497,248	473,399	257,783	427,570	1,656,000
Nyirantaruko MHPP	1,290,242	1,921,096	1,168,980	1,706,133	6,086,451
Kigasa MHPP	293,503	329,948	263,974	307,238	1,194,663
Giciye III	6,948,966	8,637,052	6,336,386	12,407,105	34,329,509

Plant name	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Total (2023)
Nyirabuhombo	751,559	1,045,370	862,281	1,051,092	3,710,303
Hakan QP	28,666,305	14,096,726	38,595,150	36,547,200	117,905,380
Gishoma PPP	18,728,820	21,324,270	12,771,990	-	52,825,080
Kavumu Mwange	68,560	443,147	272,058	469,423	1,253,188
Shema Power	248,490	16,851,110	23,485,420	48,590,080	89,175,100
Ntaruka A HPP	25,411	181,071	4,053,838	4,605,739	8,866,060
Total domestic generation	276,116,106	277,735,928	243,353,725	269,477,114	1,066,682,874
Regional shared HPP	18,452,000	21,268,000	20,820,844	37,683,425	98,224,269
Imports	7,353,011	15,387,690	61,000,830	26,049,663	109,791,194
Total	301,921,117	314,391,618	325,175,399	333,210,202	1,274,698,336

Source: EUCL-REG

The 83.7% of electricity generated during the year 2023 were from domestic power plants, 7.7% from Regional Shared plants and 8.6% were imported. The total electricity generated by domestic power plants, Regional shared power plants and imports in 2023 were 1,274.7 GWh.

1.2. Electricity generation mix

The electricity generated 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 2023 to Q4 2023

Electricity generation mix	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Year 2023
Hydro	46.72%	50.61%	37.80%	50.27%	46.33%
Methane	16.66%	22.86%	24.61%	29.12%	23.48%
Peat	15.70%	11.27%	15.80%	10.97%	13.39%
Thermal (Fuel Oil)	17.06%	8.96%	1.52%	0.56%	6.79%
Solar	1.43%	1.41%	1.51%	1.26%	1.40%
Imports	2.44%	4.89%	18.76%	7.82%	8.61%

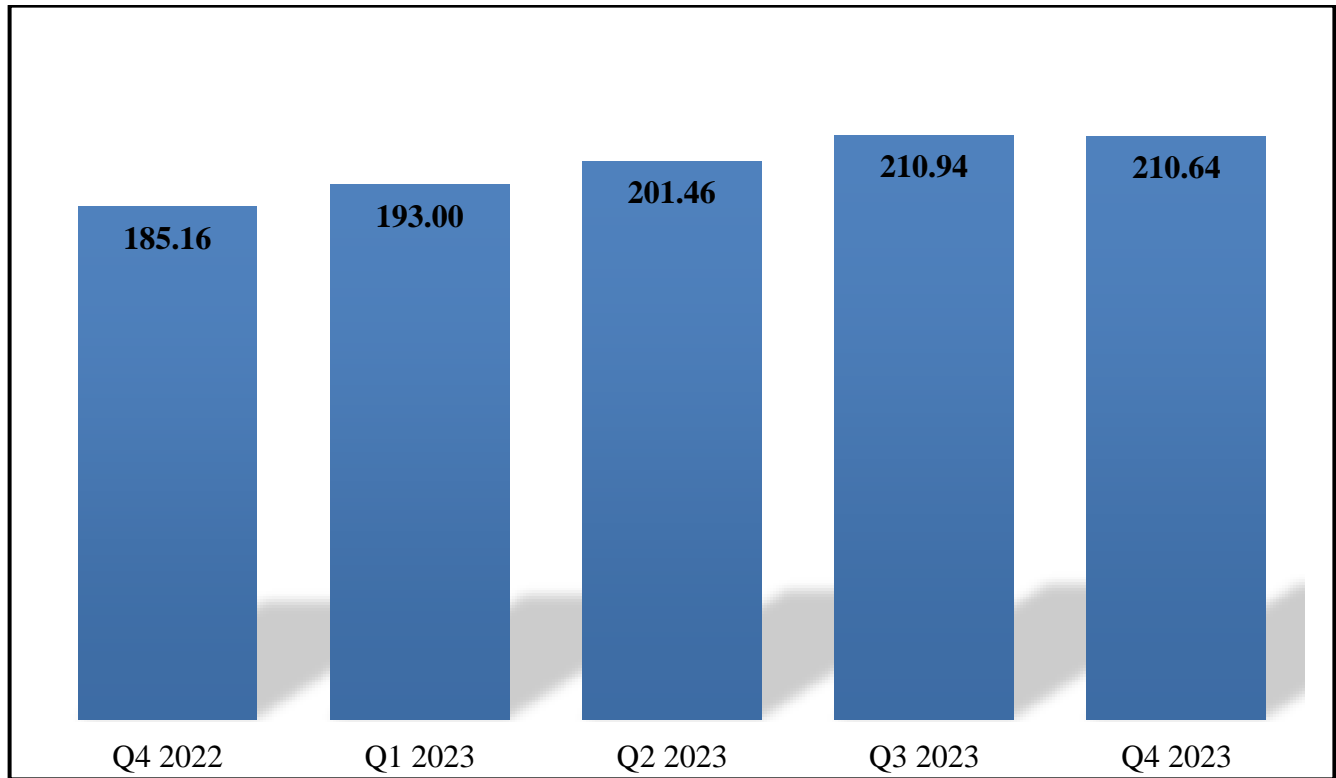
Source: EUCL-REG

The 46.33% of electricity generation in the year 2023 are from Hydro, 23.48% from Methane Gas, 13.39% from Peat, 6.79% from Thermal, 1.40% from Solar energy and 8.61% are the imports. In general, the 47.73% of electricity generated during 2023 are from renewable resources and 43.66% are from non-renewable resources whereas the 8.61% are imported electricity.

1.3. System peak demand

The system peak demand increased by 13.8% during the fourth quarter of the year 2023 in comparison to the 4th quarter 2022. The peak quarter over the last five quarters was quarter Three of 2023 with a system peak demand of 210.94 MW as shown per Figure 1.

Figure 1: Trends of system peak demand (MW) from Q4 2022 to Q4 2023

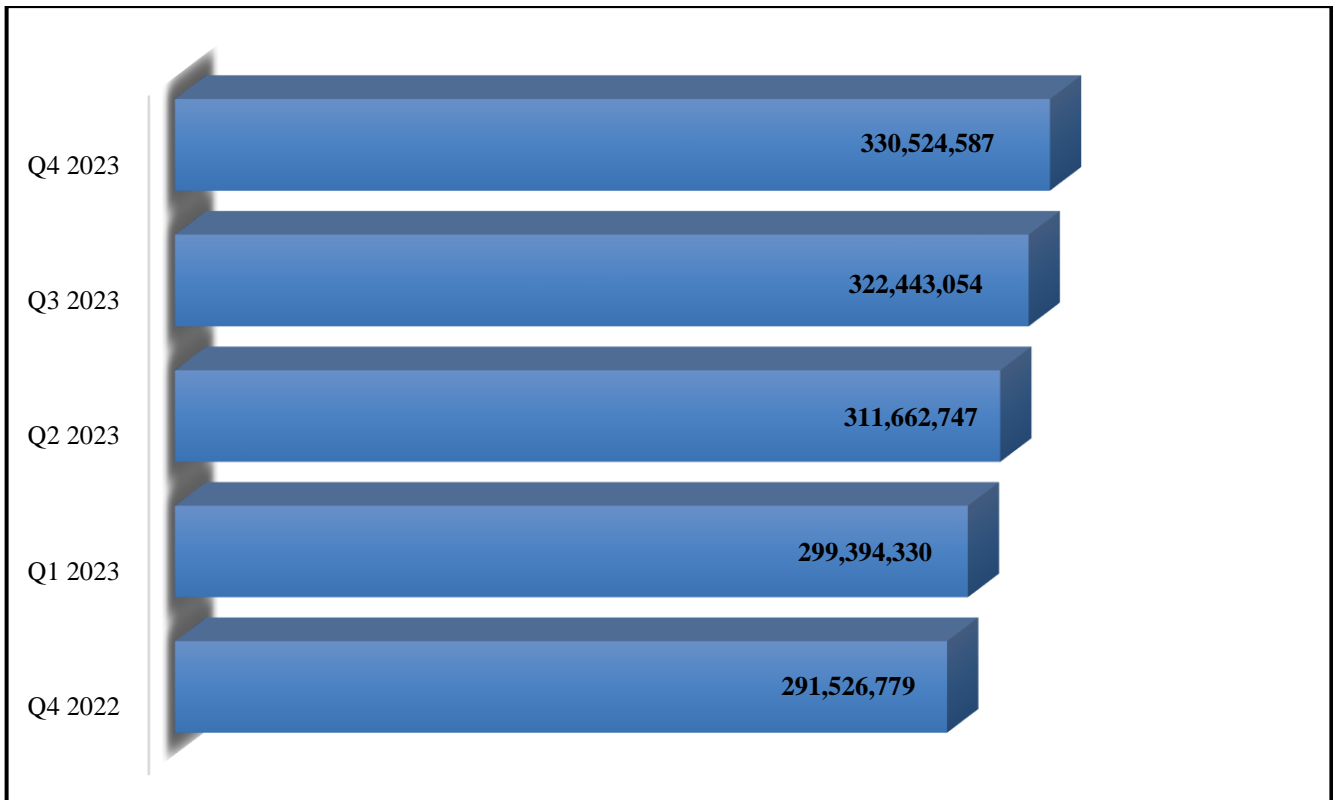


Source: EUCL-REG

2. ELECTRICITY SUPPLIED TO THE NATIONAL GRID

The figure below illustrates the quantity of electricity supplied per quarter within the country excluding exported electricity.

Figure 2: Trends of electricity supplied to the national grid (kWh) from Q4 2022 to Q4 2023



Source: EUCL-REG

The electricity supplied to the national grid by service provider increased by 13.4% in the 4th quarter 2023 in comparison to the 4th quarter of the year 2022. The total electricity supplied to the national grid during the last five quarters were 1,555,551,497 kWh.

3. ELECTRICITY SOLD

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

Table 3: Trends of electricity sold (kWh) from Q1 2023 to Q4 2023

Customer category	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Total (2023)
Residential	48,146,169	50,881,861	55,420,152	56,716,702	211,164,884
Non-residential	58,208,318	58,978,906	60,627,423	60,493,093	238,307,740
Water pumping stations	10,163,377	10,395,276	12,187,530	10,441,416	43,187,599
Water treatment plants	12,561,267	13,110,784	12,853,175	12,834,364	51,359,590
Broadcasters	1,144,169	1,322,395	1,400,808	1,347,760	5,215,133
Health facilities	5,326,621	5,676,452	5,691,932	5,959,688	22,654,693
Telecom towers	13,090,032	13,368,779	13,999,029	14,128,902	54,586,742
Hotels	12,034,071	12,597,106	13,197,207	13,500,633	51,329,016
Commercial data centers	529,723	562,508	591,368	594,926	2,278,525
Industries	79,722,362	87,183,310	82,748,823	88,680,427	338,334,921
Street lights	5,919,436	6,350,357	6,762,253	7,441,047	26,473,093
Nasho Own Use	440,331	827,240	534,494	324,150	2,126,215
Exports	2,526,787	2,728,871	2,732,345	2,685,615	10,673,618
Total	249,812,662	263,983,845	268,746,539	275,148,722	1,057,691,769

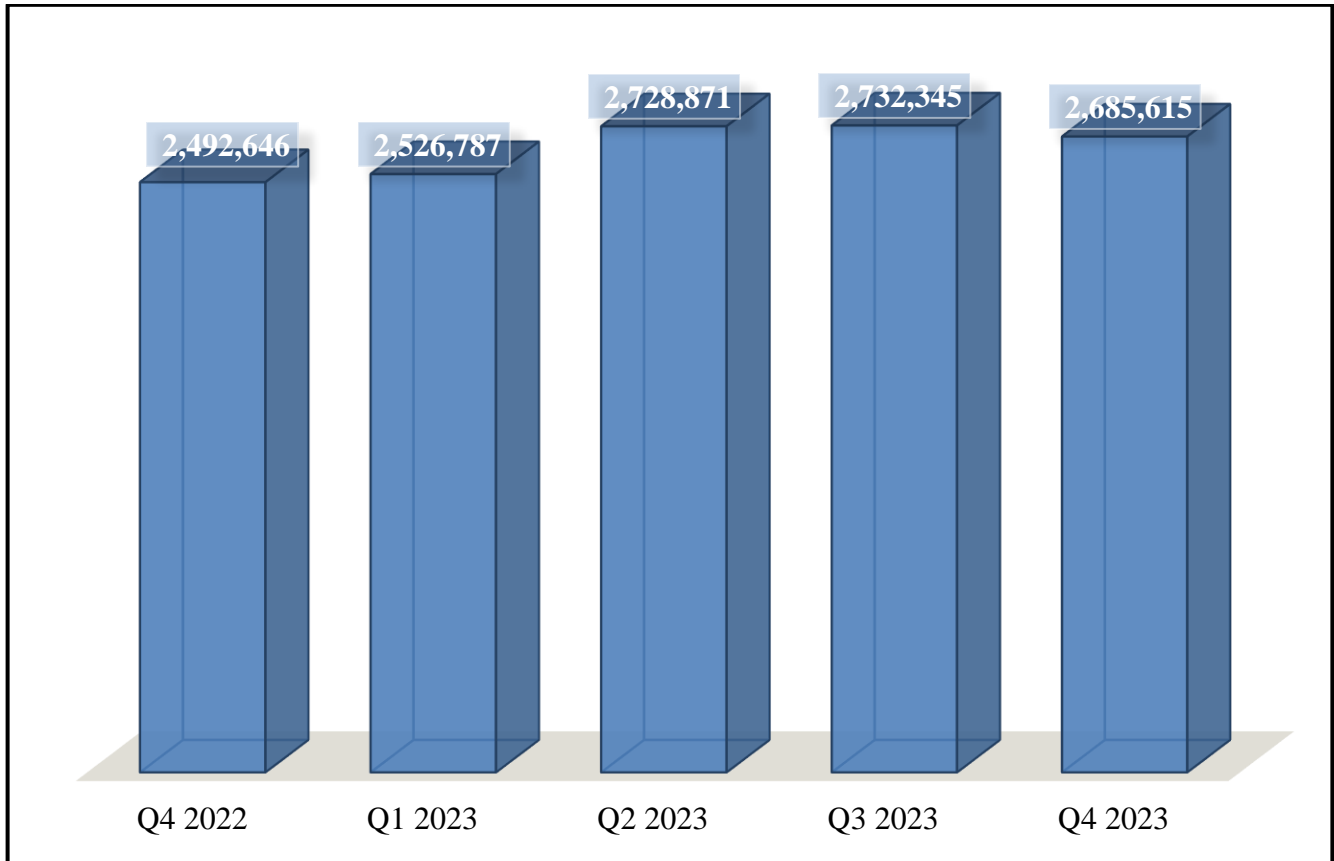
Source: EUCL-REG

During the year 2023, the 32.0% of the total electricity sold by utility were to industries, 22.5% to non-residential customers, 20.0% to residential customers and the remaining 21.8% were sold to telecom towers, water treatment plants, water pumping stations, hotels, health facilities, broadcasters and commercial data centers. The 2.5% of electricity sold by operator were consumed by public street lights, 0.2 were consumed by Nasho irrigation and the 1.0% were the exports.

4. EXPORTED ELECTRICITY

The exported electricity increased by 7.7% from 2,492,646 kWh as of the 4th quarter 2022 up to 2,685,615 kWh for the 4th quarter 2023. The highest exports recorded over the last five quarters were 2,732,345 kWh for quarter Three of 2023.

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