



ELECTRICITY SUPPLY INDUSTRY PERFORMANCE REPORT FOR THE YEAR 2024



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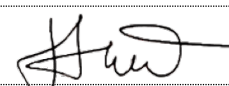
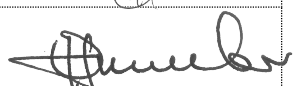
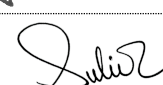
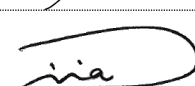
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ACRONYMS

BEL	Bujagali Energy Limited
Bn	Billions
BoU	Bank of Uganda
CPI	Consumer Price Index
EPRC	Economic Policy Research Center
ERA	Electricity Regulatory Authority
EASP	Electricity Access Scale-up Project
ESI	Electricity Supply Industry
GoU	Government of Uganda
GWh	Gigawatt Hours
KCCL	Kasese Cobalt Company Limited
KIL	Kilembe Investments Limited
KRECS	Kyegegwa Rural Electrification Cooperative Society
kWh	Kilowatt Hours
kV	Kilovolt
Ltd	Limited
Mn	Millions
MoFPED	Ministry of Finance Planning and Economic Development
OPEC	Organization of the Petroleum Exporting Countries
PACMECS	Pader Abim Community Multi-Purpose Electric Cooperative Society
PPI	Producer Price Inflation
PV	Photovoltaics
RETF	Rural Electrification Trust Fund
SAIL	Sugar & Allied Uganda Limited
Shs	Uganda Shilling
UBOS	Uganda Bureau of Statistics
UEDCL	Uganda Electricity Distribution Company Limited
UEGCL	Uganda Electricity Generation Company Limited
UETCL	Uganda Electricity Transmission Company Limited
USD	United States Dollar
WENRECO	West Nile Rural Electrification Company

THE 2024 ESI PERFORMANCE AT A GLANCE

Parameter	Units	2023	2024	Variation (%)
Installed Generation Capacity	MW	1,847.5	2052.7	11%
Hydro Electricity	MW	1,510.9	1,715.1	14%
Bagasse Electricity	MW	147.9	148.9	1%
Thermal Electricity	MW	100.0	100.0	0%
Solar PV	MW	88.3	88.3	0%
Biomass	MW	0.4	0.4	0%
Energy generated	GWh	6,032.3	6,788.5	13%
Hydro	GWh	5,633.6	5,981.4	6%
Bagasse	GWh	234.3	609.0	160%
Solar PVC	GWh	99.2	120.9	22%
Thermal	GWh	65.1	65.1	0%
Maximum Peak demand (Domestic + Exports)	MW	987.8	1,117.9	13%
Domestic Peak Demand	MW	867.9	972.9	12%
UETCL Energy Purchases	GWh	6,027.8	6,622.6	10%
UETCL Energy sales	GWh	5,739.5	6,301.1	10%
Transmission Losses	%	4.8%	4.9%	2%
Transmission Network Length	km	4,518.7	5,139.7	14%
Grid connected customers	Customers	2,107,906	2,430,489	15%
Distribution route length	km	65,129	71,346	10%
Energy sales at Distribution	GWh	4,329.8	4,838.4	12%
Umeme Limited	GWh	4,211.4	4,672.5	11%
Others	GWh	118.4	165.9	40%

EXECUTIVE SUMMARY

This Report reviews the performance of Uganda's Electricity Supply Industry (ESI) in 2024 across the value chain, generation, transmission, distribution, import, and export, against established targets and indicators. Industry performance was shaped by macroeconomic trends such as exchange rates and inflation, alongside government initiatives like the free connection policy and tariff reforms.

Electricity remains central to Uganda's socio-economic transformation, with national targets to raise access from 53.4% in 2024 to 70% by 2030, expand clean cooking access from 25% to 50%, and increase per capita consumption from 218 kWh to 1,090 kWh (NDP IV 2025/26–2029/30). In March 2024, the Ministry of Energy and Mineral Development, supported by the World Bank, launched the Electricity Access Scale-up Project (EASP), aiming to connect 1.5 million households, including refugee and host communities, within five years.

To address affordability, the government has continued implementing the hybrid customer connection scheme introduced in 2022. By December 2024, this initiative, supported by ERA and development partners, had enabled 42,487 new connections in Umeme and UEDCL territories by reducing upfront costs through shared financing.

The Report thus details generation, transmission, and distribution performance on both main grid and off-grid systems, and provides projections for the ESI's continued role in driving Uganda's energy access, industrialization, and inclusive growth.

1 ELECTRICITY GENERATION

1.1 Installed Generation Capacity

Uganda's Installed Electricity Generation Capacity in 2024 reached 2,052.7 MW, marking a significant increase of 443.6 MW added to the National Grid (see Table 1). Of this total, grid-connected generation plants contributed 2,049 MW, accounting for 99.8% of the country's installed capacity during the year. Furthermore, 93.7% of the total capacity was dedicated to grid supply, as detailed in Table 2.

Table 1: Growth in Electricity Generation Installed Capacity

Year	Units	Installed Capacity by Purpose			
		On-Grid	Off-grid	Grand Total	Variation
2013	MW	956		956	
2014	MW	892	3.5	895.5	-60.5
2015	MW	892	3.5	895.5	0
2016	MW	892	3.5	895.5	0
2017	MW	932.4	5.5	937.9	42.4
2018	MW	976.4	7.5	983.9	46
2019	MW	1,245.7	5.9	1,251.6	267.7
2020	MW	1,254.2	14	1,268.2	16.6
2021	MW	1,347.7	14.1	1,361.8	93.6
2022	MW	1,387.6	16.3	1,403.9	42.1
2023	MW	1,830.7	16.8	1,847.5	443.6
2024	MW	2,049.0	3.7	2,052.7	205.2

By the end of 2024, own use and grid generation accounted for 5.0% of the installed capacity, while Own use accounted for 1.1% and off-grid generation 0.2%.

Table 2: Installed Electricity Generation Capacity by Purpose per Technology

Purpose	Hydro	Thermal	Solar PV	Bagasse	Biomass	Total	%Share
Grid	1,714.5	100.0	85.6	23.0		1,923.1	93.7%
Own Use and Grid				103.5		103.5	5.0%
Own use			0.0	22.4		22.4	1.1%
Off-grid	0.6	0.0	2.7		0.4	3.7	0.2%
Grand Total	1,715.1	100.0	88.3	148.9	0.4	2,052.7	100.0%

1.2 2024 Installed Electricity Generation Capacity by Technology

Hydro power plants accounted for the largest share (84%) of the installed generation capacity, contributing a total of 1,715.1 MW during the year (See Figure 1). Other technologies included Solar PV, contributing 4.8% (88.3 MW), Thermal energy, contributing 5.4% (100 MW), and Bagasse/Cogeneration, contributing 7% (148.9 MW).

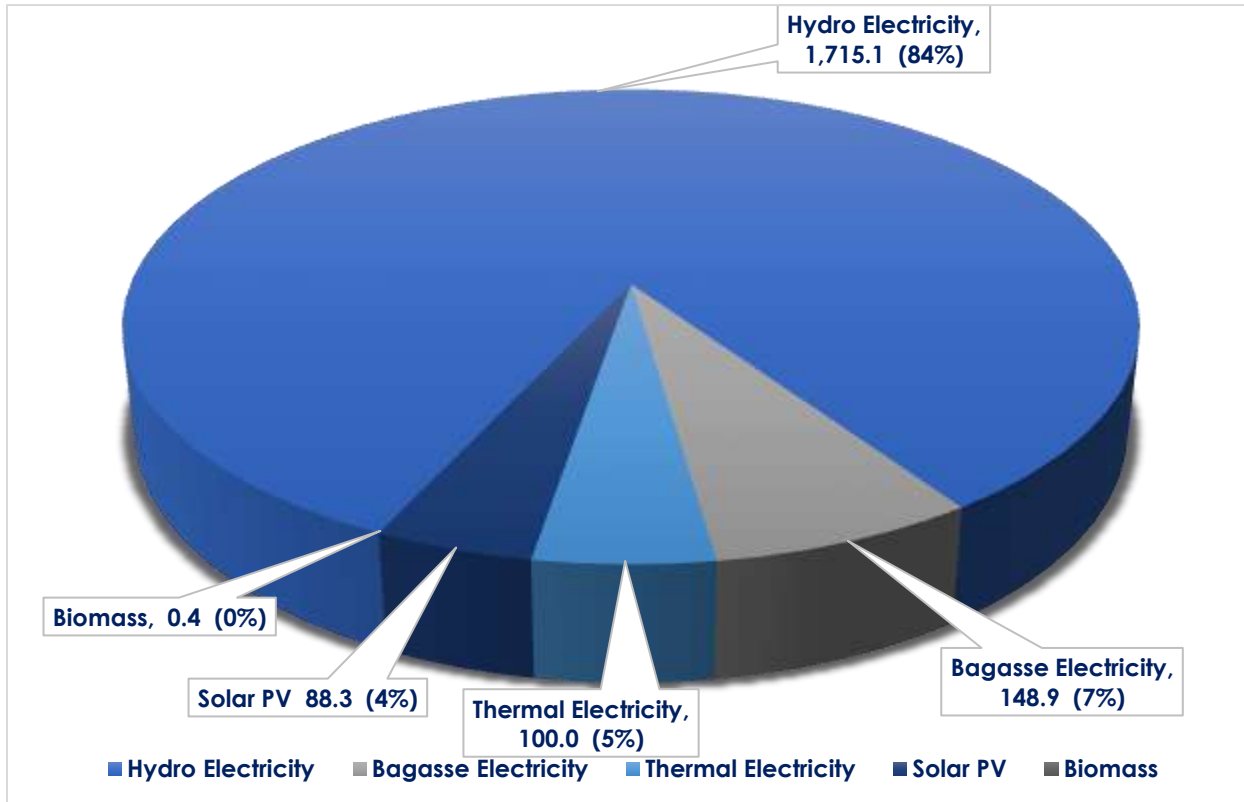


Figure 1: The 2024 Electricity Generation Installed Capacity (MW) by Technology

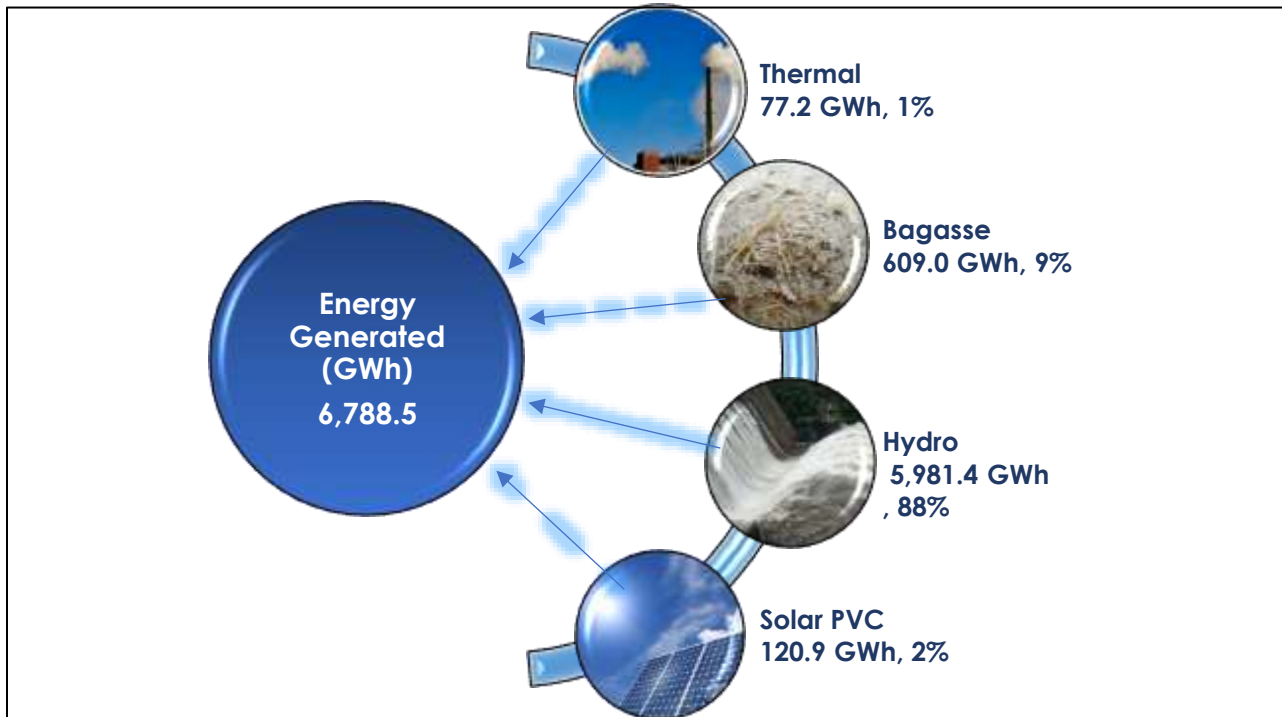
1.3 Energy Generation Mix

During 2024, a total of 6,788.5 GWh was generated to the grid, representing a 12.5% increase compared to the 6,032.3 GWh generated in 2023. Over the last five (5) years, energy generation has grown at an average annual growth rate of 9%, with the highest growth rate (15.8%) registered in 2022. Refer to Annex 2 for details of the energy generated by each of the power generation plants.

Table 3: Energy Generation by Technology Over the Years

Year	Units	Energy Generated by Technology					% Variation
		Bagasse	Hydro	Solar PVC	Thermal	Grand Total	
2020	GWh	188.3	4,082.7	89.6	58.1	4,418.8	0.1%
2021	GWh	281.7	4,334.3	100.7	52.3	4,769.1	7.9%
2022	GWh	363.2	4,982.9	99.3	74.9	5,520.3	15.8%
2023	GWh	234.3	5,633.6	99.2	65.1	6,032.3	9.3%
2024	GWh	609.0	5,981.4	120.9	77.2	6,788.5	12.5%

Hydropower continued to dominate Uganda's energy mix in 2024, contributing 88% of total generation, followed by bagasse at 9%, solar PV at 2%, and thermal at 1% (Figure 2). Notably, energy generation from bagasse more than doubled compared to 2023, largely driven by Mayuge Sugar's expansion to 23 MW, which significantly boosted production.

**Figure 2: Uganda's Electricity Generation Mix for 2024**

2 ELECTRICITY TRANSMISSION

Until recently, Uganda Electricity Transmission Company Limited (UETCL) has been the sole buyer of electricity in Uganda. UETCL holds four licenses: Bulk Power Supply, Import and Export of Electricity, System Operation, and High Voltage Transmission Grid. However, the Electricity (Amendment) Act, 2022 restructured this arrangement, introducing opportunities for Independent Power Transmission and Direct Purchases by eligible customers. Since then, several companies have expressed interest in participating in transforming Uganda's market into a Modified Single-Buyer Model. UETCL's energy purchases continue to be demand-driven. This Section presents Uganda's 2024 peak demand, UETCL's energy purchases, and corresponding sales.

2.1 The Electricity Demand and Supply Nexus

Uganda's annual peak electricity demand, including both domestic consumption and exports, was recorded in December 2024 at 1,118 MW, reflecting a 13% increase from the 988 MW registered in December 2023.

Figure 3 illustrates the trend in domestic peak demand alongside the combined peak demand inclusive of exports over the reporting period.

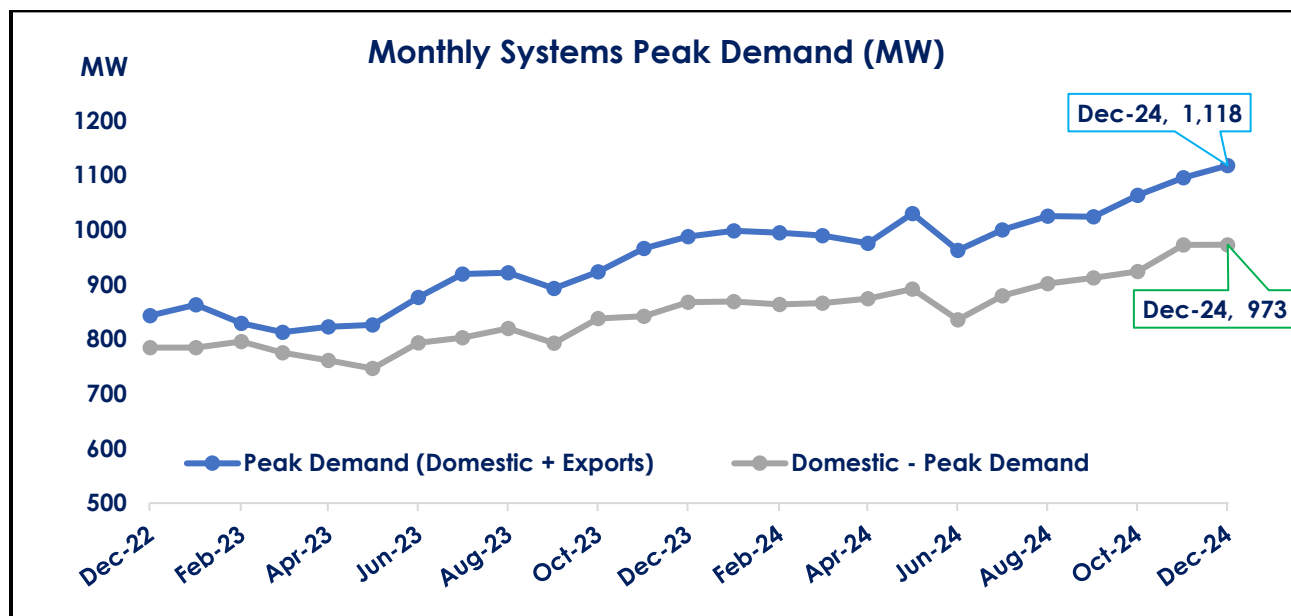


Figure 3: Monthly System Peak Demand, December 2022 to December 2024

2.2 UETCL Energy Purchases and Sales

UETCL Energy Purchases and Sales in 2024 are presented in Figure 4. The Company purchased power from local electricity generation plants and neighboring countries. Overall, UETCL purchased 6,622.6 GWh in 2024. Energy Purchases were from various technologies, including large and Small Hydropower Plants, Thermal Power Plants, Solar PV, Cogeneration, and imports from neighboring countries (Kenya and Rwanda).



Figure 4: Sources of the UETCL Energy Purchases and Sales in 2024

A total of 6,301.1GWh was sold in 2024 compared to 5,739.4 GWh in 2023, representing a 9.8% annual growth. The trend is further illustrated in Figure 5 below.

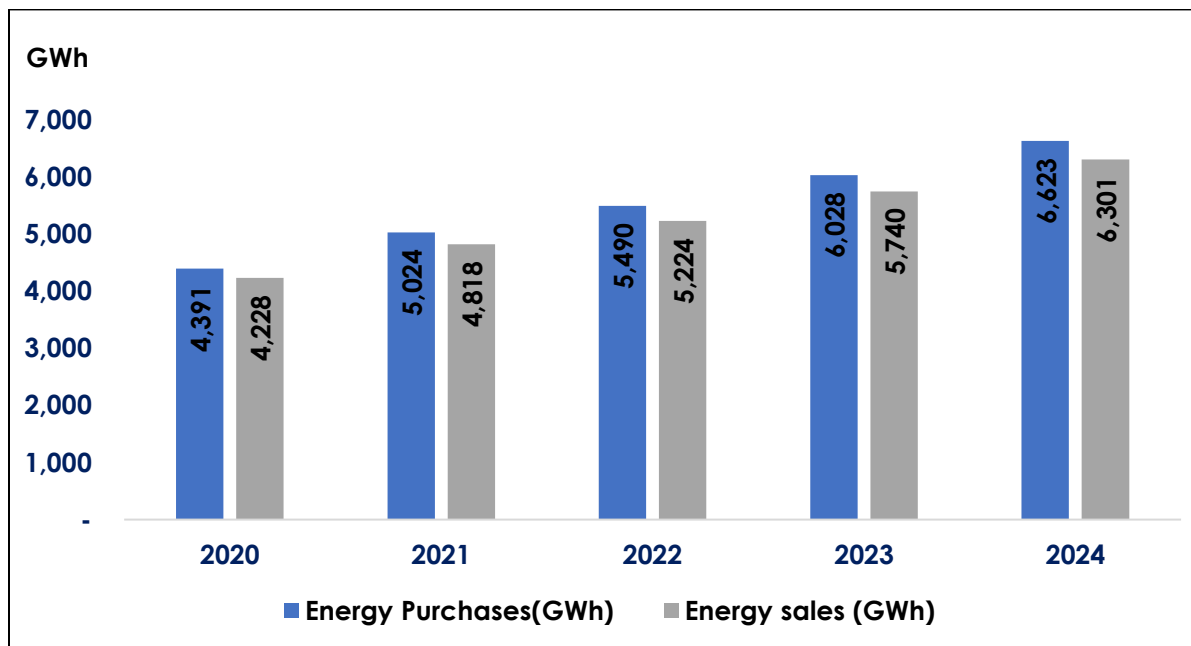


Figure 5: Trend of UETCL Energy Purchases and Sales (2020 - 2024)

2.3 Trend of Electricity Transmission Losses

Electricity transmission losses slightly increased to 4.85% in 2024 from 4.8% in 2023. These Transmission losses remain slightly above ERA's annual target of 4.6% for 2024. This is illustrated in the following Figure 6 below.

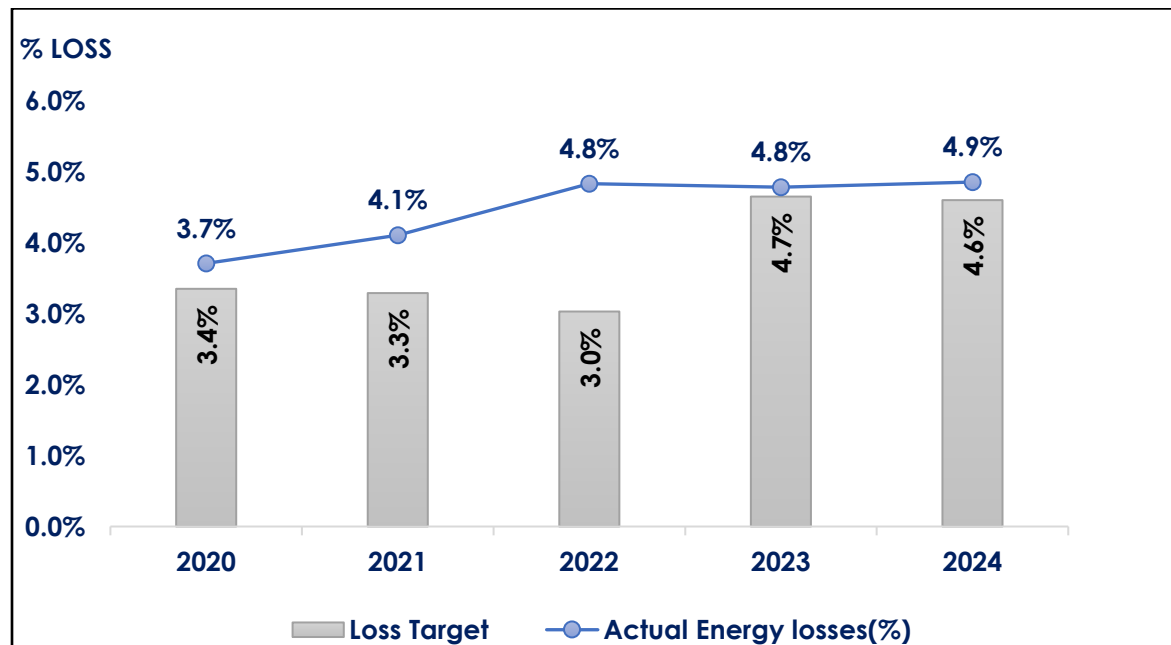


Figure 6: Trend of Transmission Losses

2.4 Energy Purchases by Source

In 2024, hydro power plants, both small and large, contributed 89.8% of the total energy purchased by the Uganda Electricity Transmission Company Limited (UETCL). The remaining 10.2% was sourced from other technologies, including energy imports.

Over the past five years, energy purchases from renewable sources have shown a consistent upward trend, with notable increases in small hydro (57%), large hydro (46%), and solar (32%). In contrast, energy purchases from thermal generation have fluctuated around an average of 6% during the same period, although a significant increase of 17% was recorded between 2023 and 2024.

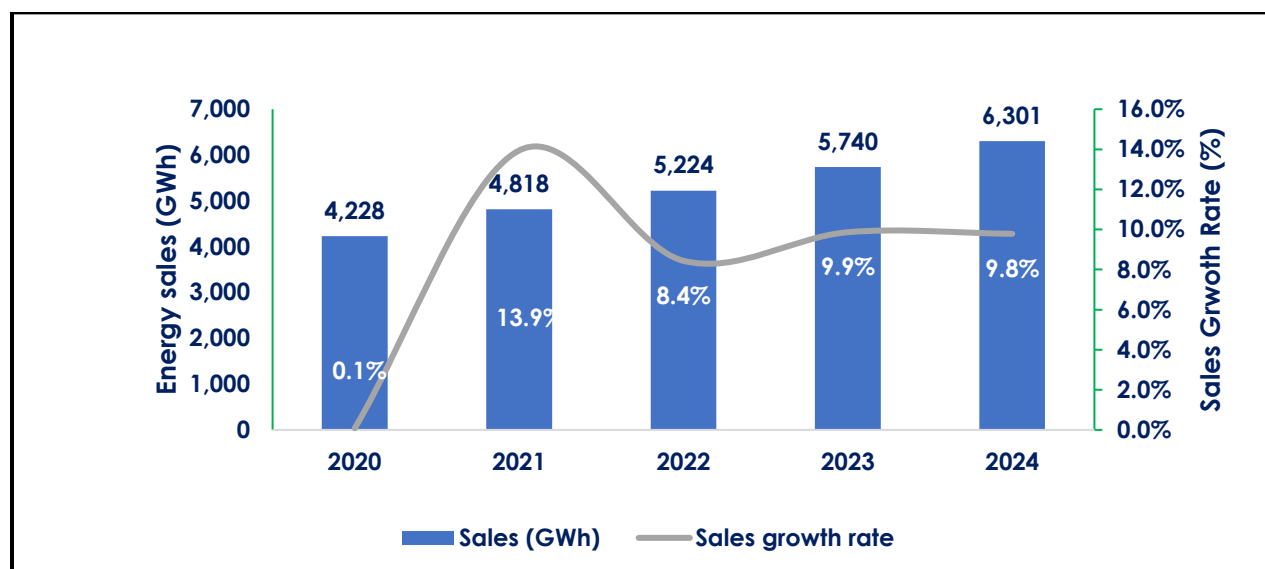
A detailed breakdown of UETCL's energy purchases by generation technology from 2020 to 2024 is presented in Table 4.

Table 4: UETCL Energy Purchases by Technology (GWh)

Technology	Units	Energy Purchases				
		2020	2021	2022	2023	2024
Large hydro	GWh	3,434.8	3,969.7	4,167.4	4,720.0	5,003.6
Small hydro	GWh	601.9	612.0	758.2	870.1	944.9
Bagasse	GWh	188.3	266.5	363.2	234.3	433.8
Thermal	GWh	57.3	51.2	74.9	64.0	74.9
Solar	GWh	87.5	100.9	97.8	98.2	115.4
Imports	GWh	21.4	23.9	28.1	41.2	49.9
Grand Total	GWh	4,391.1	5,024.2	5,489.6	6,027.8	6,622.6

2.5 UETCL Energy Sales

UETCL sold 6,301.1GWh in 2024, maintaining a 10% growth in energy sales as of the end of the year 2024, and this growth has continued to coincide with the growth trend in energy purchases (**Figure 7**).

**Figure 7: The UETCL Electricity Sales Over the Years**

2.5.1 UETCL Energy Sales (GWh) by Destination

In 2024, 92.4% of UETCL's total energy sales were made to local distributors, while exports accounted for the remaining 7.6%. Overall, UETCL recorded a 10% growth in energy sales compared to 2023.

The majority of energy sold in 2024 (88.4%) was supplied to Umeme Limited, whereas the smallest share, 0.4%, was sold to mini-grids (refer to Table 5). Despite the overall growth, UETCL registered a 1.4% decline in export sales in 2024 relative to the previous year.

Table 5: UETCL Energy Sales (GWh) by Destination

Distributor Category	2020	2021	2022	2023	2024	2024 %Share
Umeme Limited	3,883.5	4,277.4	4,626.5	5,042.8	5,572.0	88.4%
Exports	222.2	392.6	425.1	484.8	478.1	7.6%
UEDCL	118.9	141.1	157.3	202.4	223.4	3.5%
Mini-grids ¹	3.6	6.7	15.4	9.4	27.6	0.4%
Grand Total	4,228.3	4,817.8	5,224.2	5,739.5	6,301.1	

2.5.2 UETCL Energy Sales by Time-of-Use (ToU)

UETCL bills electricity distributors based on a Time-of-Use (ToU) Energy Charge structure. The Electricity Regulatory Authority (ERA) defines the ToU periods, which may be revised periodically in response to changes in the national load profile.

Currently, three distinct Time-of-Use periods are in effect:

- **Peak:** 18:00 to 23:00 (5 hours)
- **Shoulder:** 05:00 to 18:00 (13 hours)
- **Off-Peak:** 23:00 to 05:00 (6 hours)

Over the past five years, the majority of UETCL's energy sales have occurred during the Shoulder period, accounting for more than 50% of total sales. Sales during the Off-Peak and Peak periods have averaged 20% and 27%, respectively.

In 2023, this distribution remained consistent, with Shoulder sales comprising 52% of total energy sold, while Peak and Off-Peak sales accounted for 28% and 20%, respectively. These trends are illustrated in Figure 8 below.

¹ Mini-grids include WENRECO and KIS

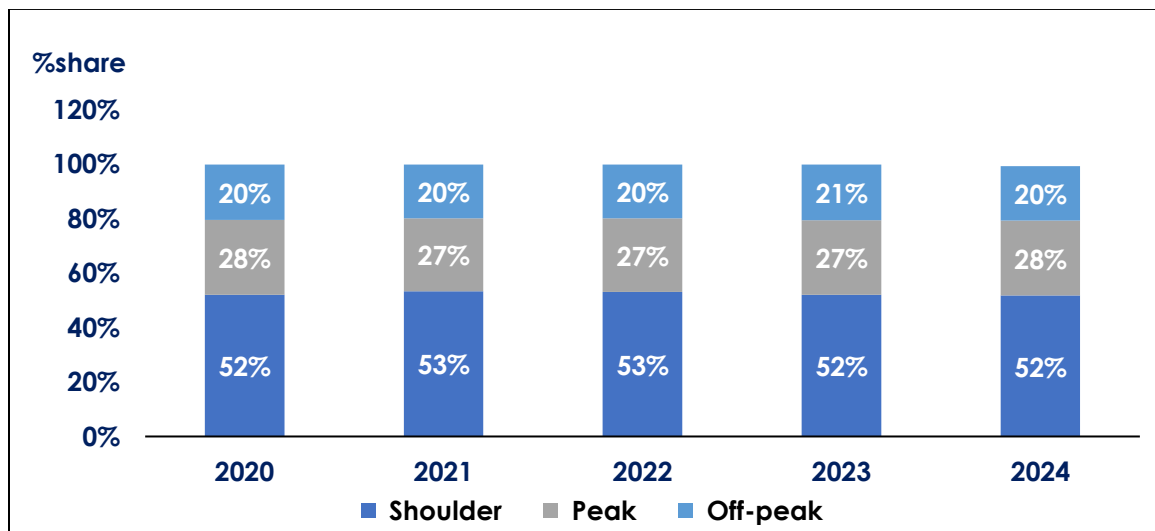


Figure 8: The UETCL Energy Sales by Time-of-Use

2.6 Electricity Transmission Network Assets (Transmission Length and Substations)

Total Transmission Network length grew by 621 km from 4,518.7 km in 2023 to 5,139.7 km by the end of 2024. (See Figure 9).

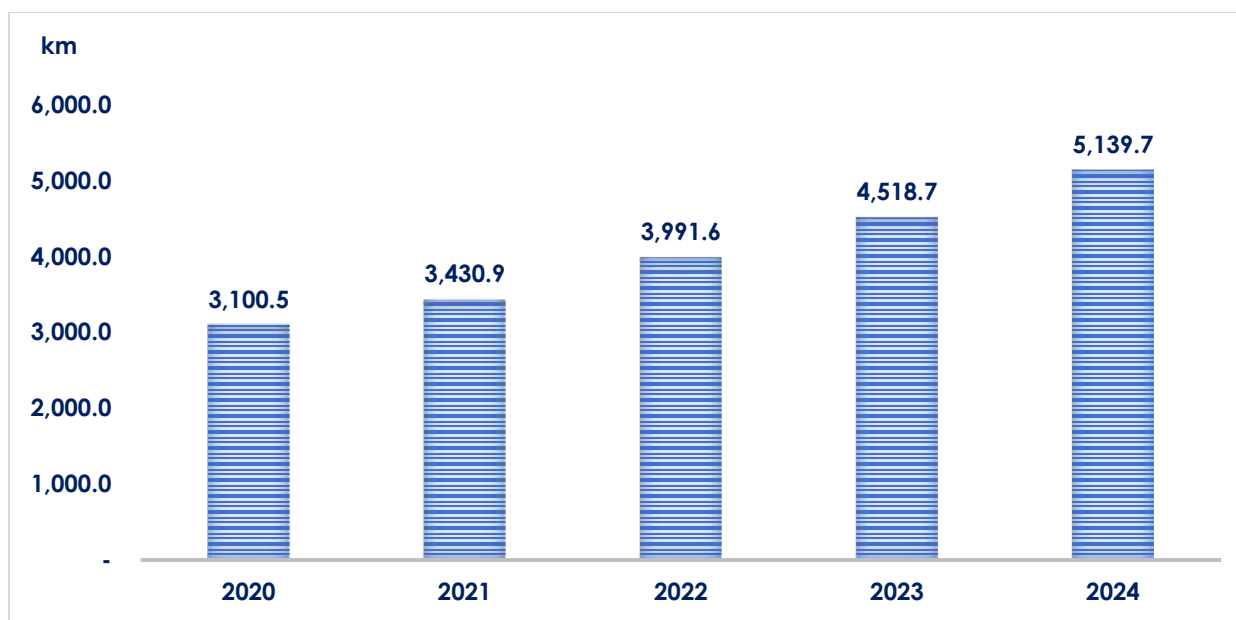


Figure 9: Electricity Transmission Network Length (km)

3 ELECTRICITY DISTRIBUTION

By the end of 2024, four primary utilities were carrying out electricity distribution on Uganda's National Grid: Umeme Limited, Uganda Electricity Distribution Company Limited (UEDCL), West Nile Rural Electricity Company (WENRECo), and Kalangala Infrastructure Services (KIS). This configuration followed the expiry of distribution licenses for Kilembe Investments Limited (KIL) and Kyegegwa Rural Electricity Cooperative Society (KRECS).

During the reporting period, both WENRECo and KIS were integrated into the National Grid. Umeme Limited remained the largest operator, followed by UEDCL.

As of December 2024, UEDCL's operations spanned twelve Service Territories, namely: Central North Service Territory (CNST), Eastern Service Territory (EST), Mid-West Service Territory (MWST), North East Service Territory (NEST), North-North West Service Territory (NNWST), Southern Service Territory (SST), South-West Service Territory (SWST), North-Western Service Territory (NWST), Rwenzori Service Territory (RST), North-South Service Territory (NST) – formerly PACMECS, Central Service Territory (CST) – formerly KRECS and Western Service Territory (WST) – formerly KIL

For the purposes of this report, all electricity distribution utilities other than Umeme Limited are categorized as Mini-Grids.

3.1 Energy Purchases and Sales by Grid-Connected Distribution Utilities

In 2024, electricity distribution utilities operating on the National Grid purchased a total of 5,822.8 GWh of energy, reflecting an 11% increase from the 5,251.9 GWh purchased in 2023. Approximately 16.9% of the energy purchased was lost across the distribution network. Nonetheless, energy sales to end-users rose by 11% in 2024, reaching 4,802.6 GWh, up from 4,329.8 GWh in the previous year.

During the reporting period, Umeme Limited remained the dominant electricity distribution utility, accounting for 4,672.5 GWh of energy sold, representing 97% of total sales. The remaining 3% was collectively sold by other distribution utilities. Overall, energy purchases increased by 10.9%, while energy sales grew by 11.7% in 2024 compared to 2023.

As illustrated in Figure 10, the majority of energy sold on the National Grid (64.9%) was consumed by industrial customers (Medium, Large, and Extra-large). In contrast, the lowest consumption category was Street Lighting, which accounted for only 0.1% of total energy sales.

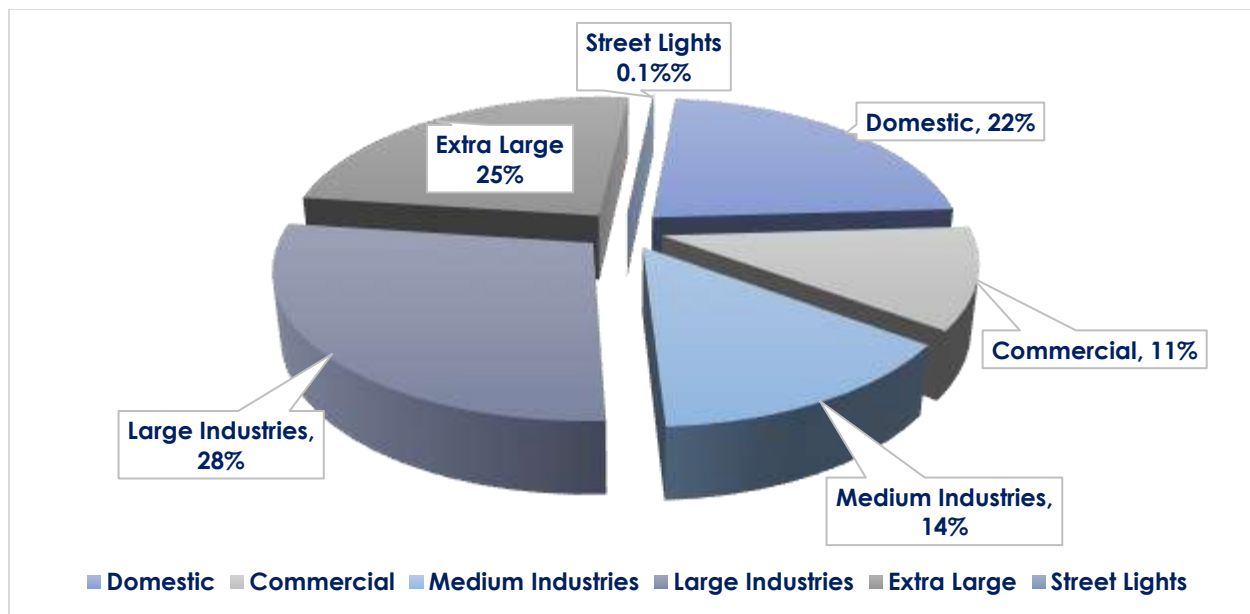


Figure 11: Umeme Limited's Energy Sales by Customer Category in 2024

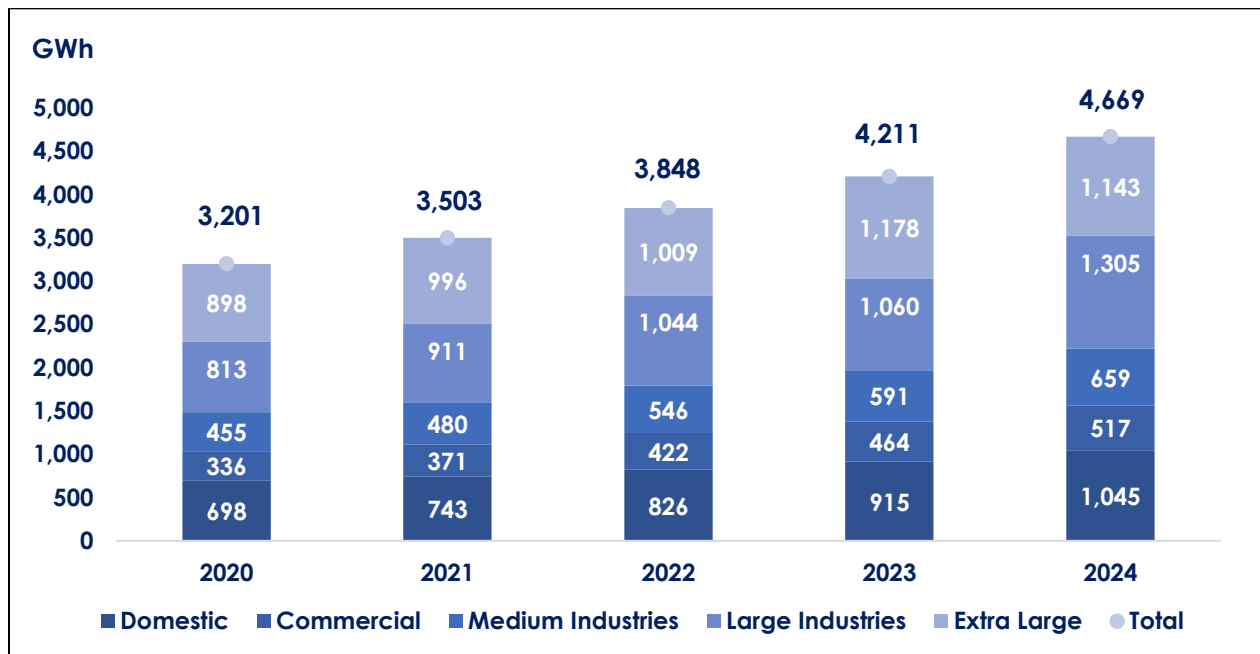


Figure 122: Umeme Limited's Energy Sales (GWh) by Customer Category

3.1.1.3 Rate of Growth of Energy Sales in 2024 Compared to 2023

Overall, Umeme Limited registered a 10.9% growth in energy sales across all the customer categories in 2024 compared to 2023. Domestic Customers registered the highest increment (14.1%) in energy consumption, while Extra-Large Industrial Customers performed the lowest at 7.8% growth.

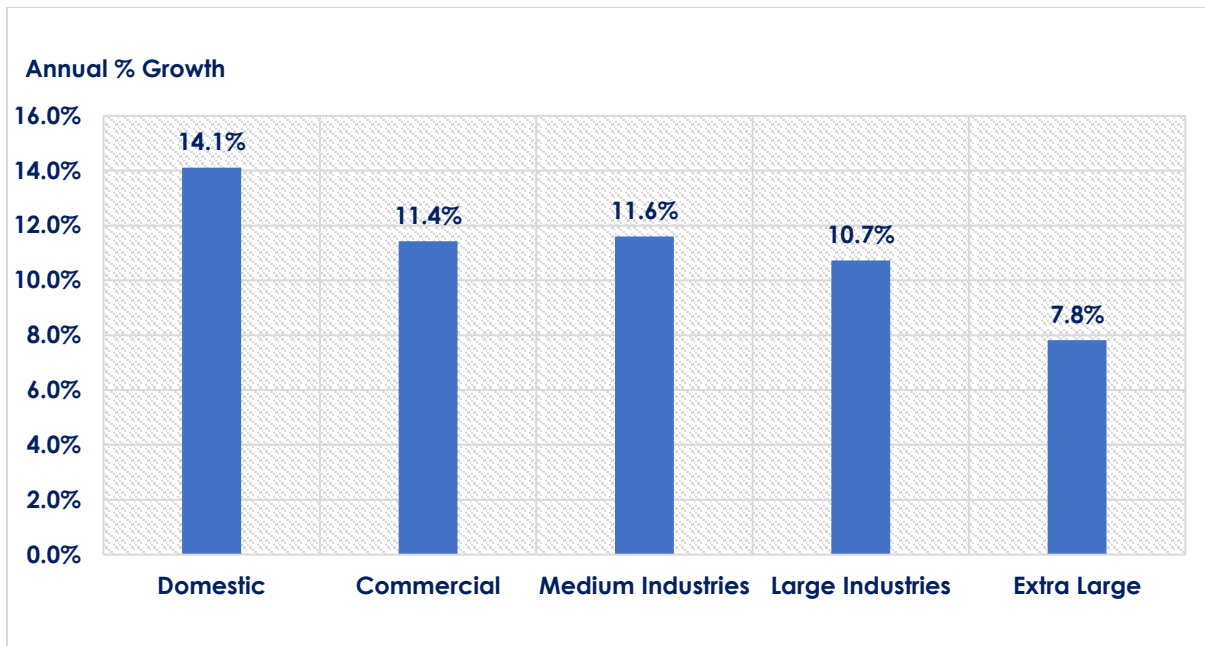


Figure 13: Rate of Growth of Energy Sales in 2024 Compared to 2023

3.1.1.4 Umeme Limited's Electricity Distribution Losses

Umeme Limited recorded fluctuations in energy losses from 2020 to 2024 (see Figure 14). The company recorded distribution losses of 16.0% in 2024, which was 2.8% higher than the 13.24% target set by the Authority for the year 2024.

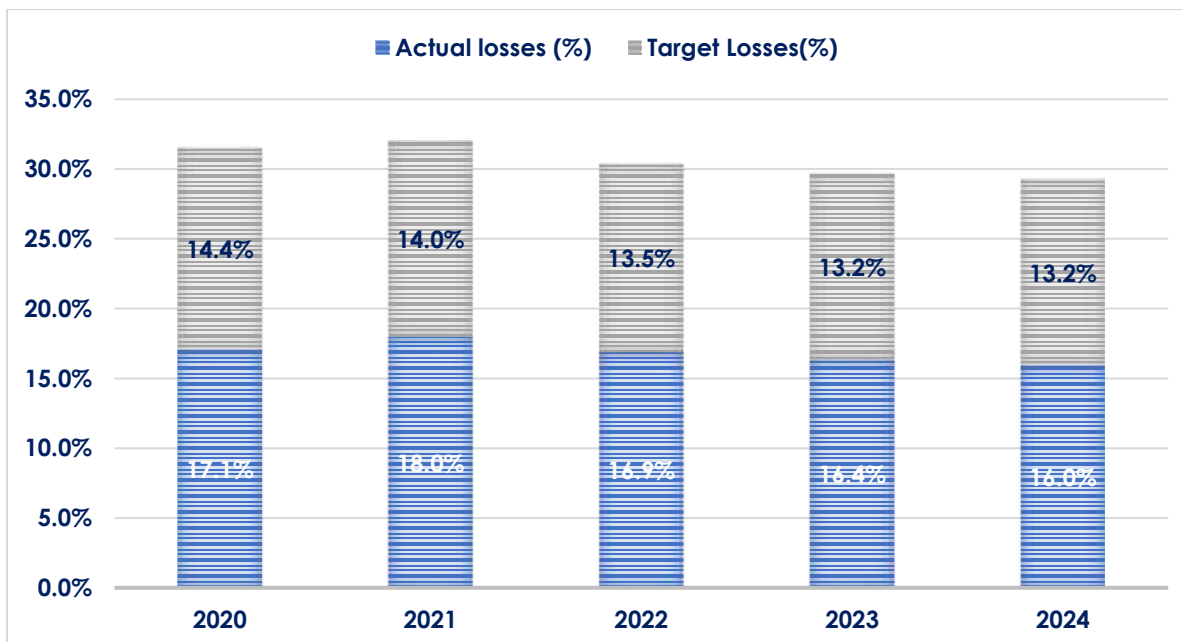


Figure 14: Electricity Distribution Losses by Umeme Limited

3.2 Energy Purchases, Sales, and Losses of Other Distributors/Mini-grids

In this section, the term "other distributors/mini-grids" refers to companies supplying electricity to consumers connected to the national grid in areas outside the Umeme Limited concession.

In accordance with the Cabinet Directive issued in October 2022, which approved the non-renewal of all expiring concession agreements, the licences of various private electricity distribution companies are not being renewed upon expiry. As a result, in 2024, the Uganda Electricity Distribution Company Limited (UEDCL) assumed control of distribution assets previously managed by Kilembe Investments Limited (KIL) and Kyegegwa Rural Electricity Cooperative Society (KRECS).

By the end of 2024, in addition to Umeme Limited, the companies distributing electricity on the national grid included UEDCL, West Nile Rural Electricity Company Ltd (WENRECo), and Kalangala Infrastructure Services (KIS). Collectively, these three distributors purchased a total of 258.1 GWh and sold 165.9 GWh of energy in 2024.

As detailed in Table 6, energy purchases by these distributors increased by 28% compared to 2023, while energy sales rose by 40%.

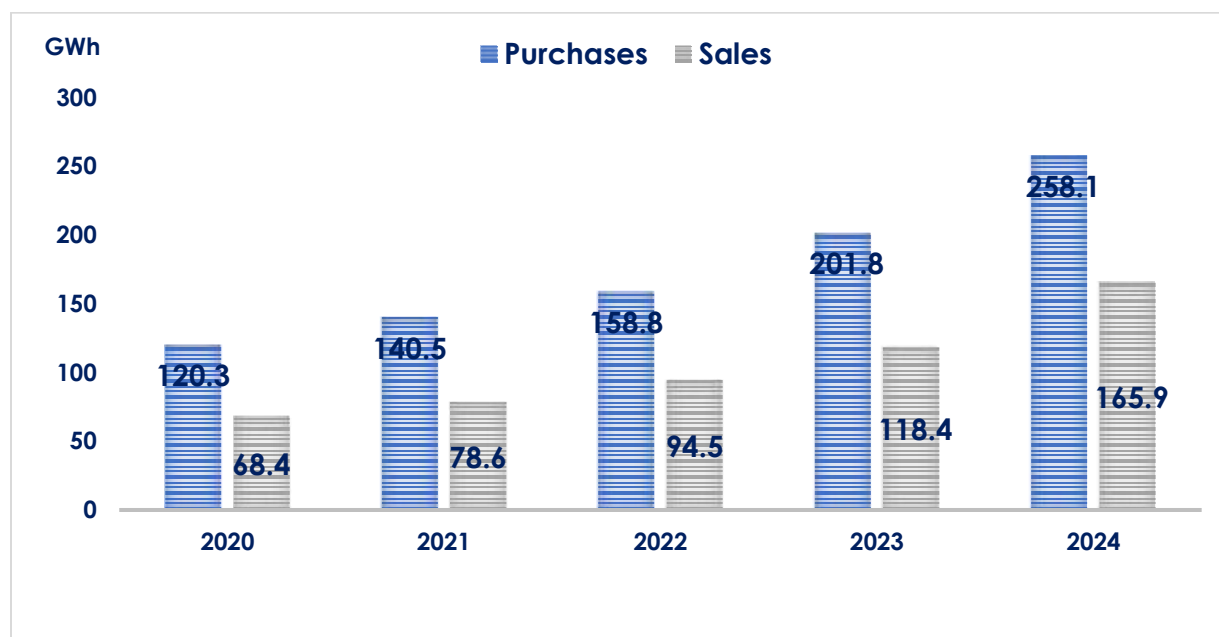


Figure 15: Energy Purchases and Sales of Other Electricity Distribution Companies

3.2.1 Electricity Distribution Losses for Mini-Grids/Other distributors

In the last five (5) years, energy losses of other distributors have remained relatively high, ranging between 40% and 43%, with the highest recorded in 2021. In 2024, Mini-grids registered a 5% reduction in energy losses from 41% in 2023, dropping to 36% in 2024, as shown in Figure 16.

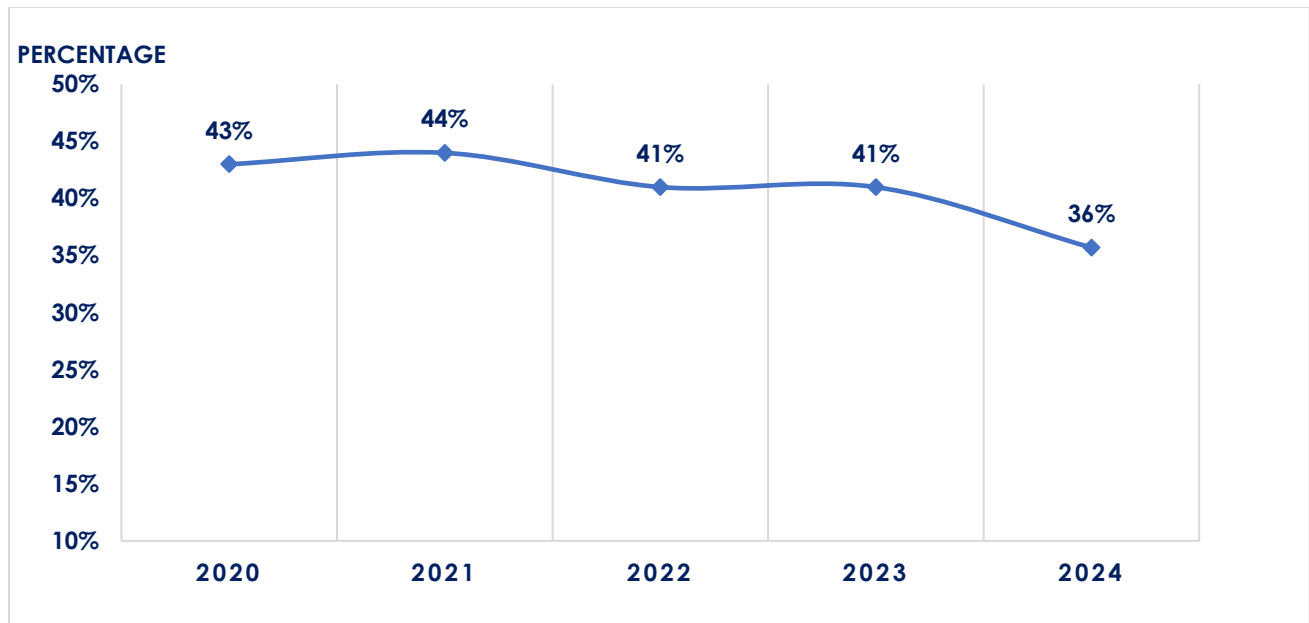


Figure 16: Electricity Distribution Losses for Mini-Grids/Other Distributors

3.2.2 Energy Sales by Mini-Grids by Customer Category

Until the end of 2024, Uganda's electricity tariff structure categorized customers into six distinct groups: Domestic, Commercial, Medium Industrial, Large Industrial, Extra-Large Industrial, and Street Lighting. As of the end of 2024, 95.8% of the customers on the National Grid were domestic², 4.0% were Commercial³, Industrial Customers (Medium, Large, Extra-Large) at 0.2%, and Street Lighting, constituting only 0.01%.

In 2024, mini-grid distributors sold the majority of energy to domestic customers, who accounted for 46% of total sales. Commercial customers represented 34%, while industrial customers comprised the remaining 20% of the energy sold.

² Low voltage single phase supplied at 240 volts

³ Three phase low voltage load not exceeding 100 Amperes supplied at 415 volts

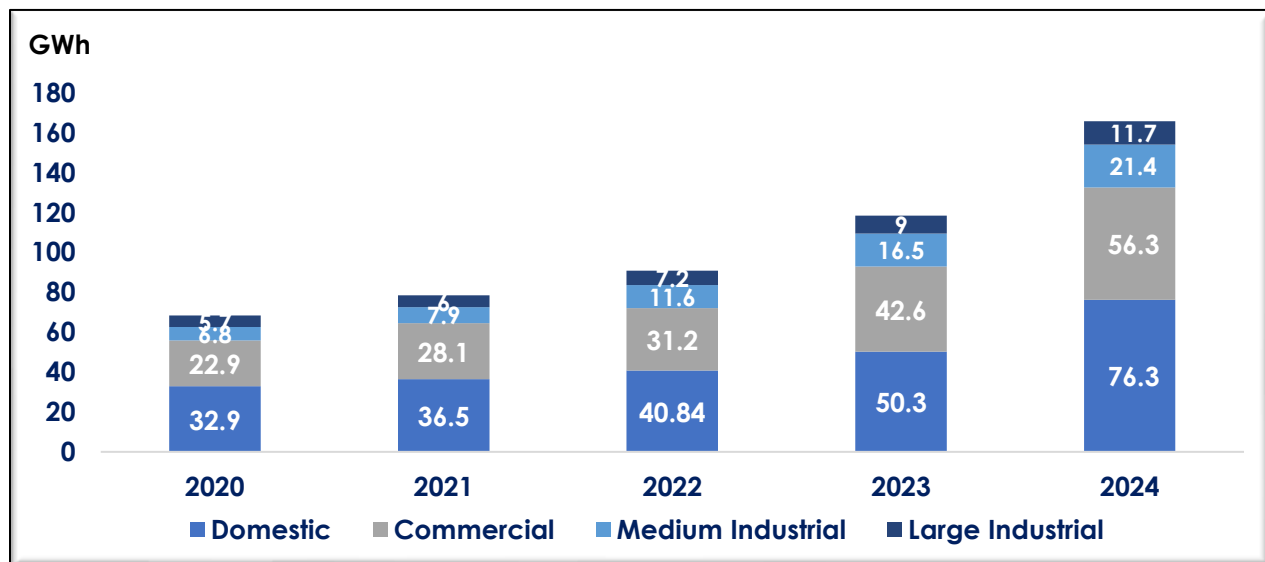


Figure 17: Energy Sales by Mini-Grids by Customer Category

3.3 Growth in Customer Numbers

By December 2024, the total number of customers connected to the National Grid had reached 2,430,489, reflecting a 15.3% increase compared to 2023. During the year, Umeme Limited facilitated 216,907 new connections, while other distribution utilities collectively added 84,957 new customers to the grid.

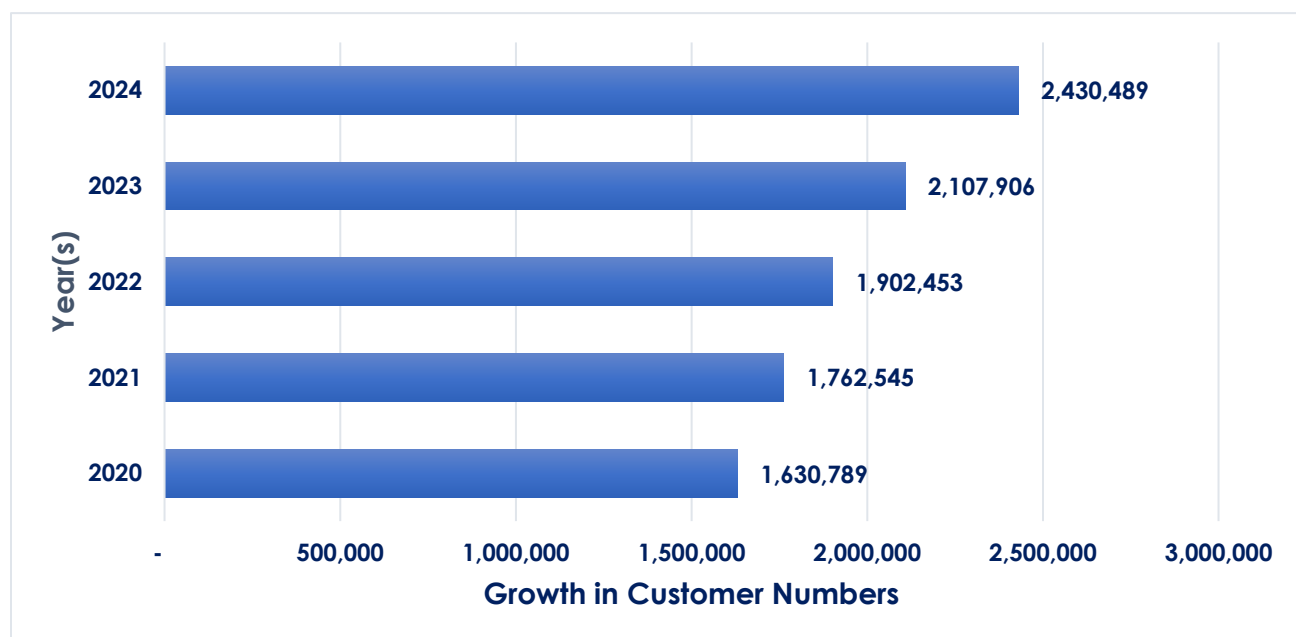


Figure 18: Growth in the Number of Customers on the Network

3.3.1 Customers by Electricity Distribution Utility

In 2024, Umeme Limited accounted for 89% of the total domestic customer base connected to the National Grid. The Uganda Electricity Distribution Company Limited (UEDCL), operating across twelve service territories, served approximately 10% of domestic customers. The remaining 1% was collectively served by other distribution utilities.

Table 7: Number of Customers on the National Grid

Utility	Units	Domestic	Commercial	Medium	Large	Extra Large	Street Lights / Lighting
Umeme Limited	Number	2,069,143	91,788	3,715	713	52	339
UEDCL	Number	221,248	4,717	240	17	0	18
Mini-grids	Number	37,507	921	65	6	0	0
Total	Number	2,327,898	97,426	4,020	736	52	357

3.4 Distribution Network Length

By the end of 2024, Uganda's electricity distribution network had expanded to a total length of 71,346 kilometers. This represents an increase of 6,217 kilometers from the 65,129 kilometers recorded in 2023, equivalent to a growth rate of 10%.

Table 8: The 2024 Distribution Network Length by Category and Distributor

	Units	LV	11KV	33KV	Streetlights	Total
Umeme	km	22,931	7,798	11,678	595	43,001
Others	km	13,609	45	14,672	18	28,345
Grand Total	km	36,540	7,843	26,350	613	71,346

During the period under review, Uganda's electricity distribution network was predominantly composed of low-voltage infrastructure. Umeme Limited operated the largest share of this network, maintaining its position as the leading distributor within this segment.

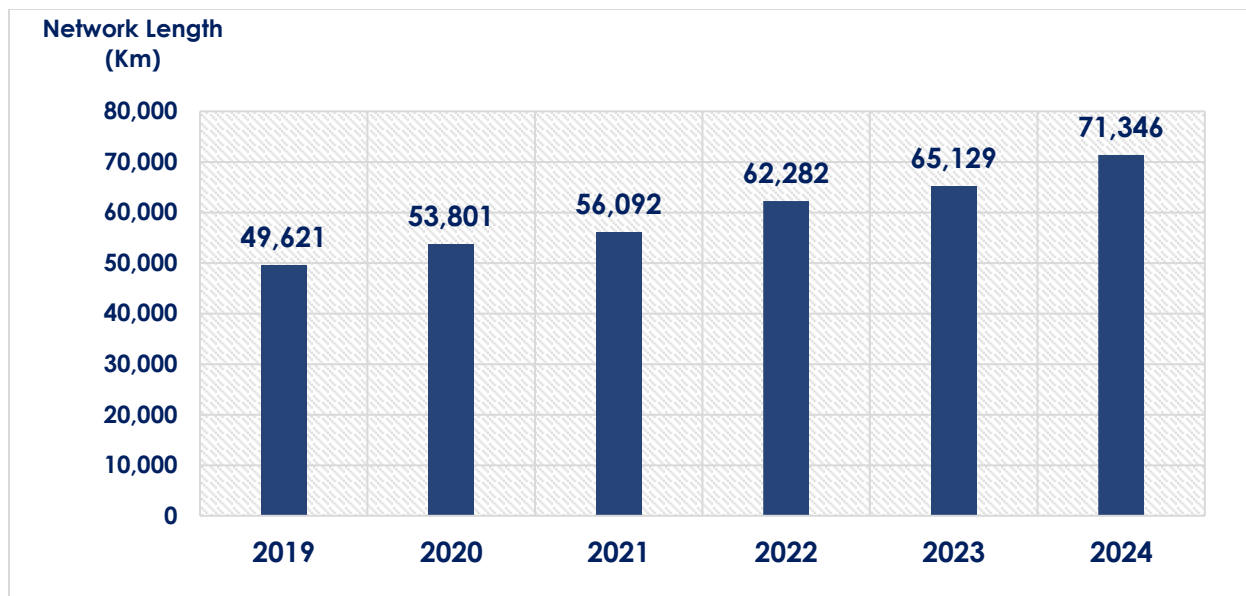


Figure 19: Electricity Distribution Network Length Over the Years

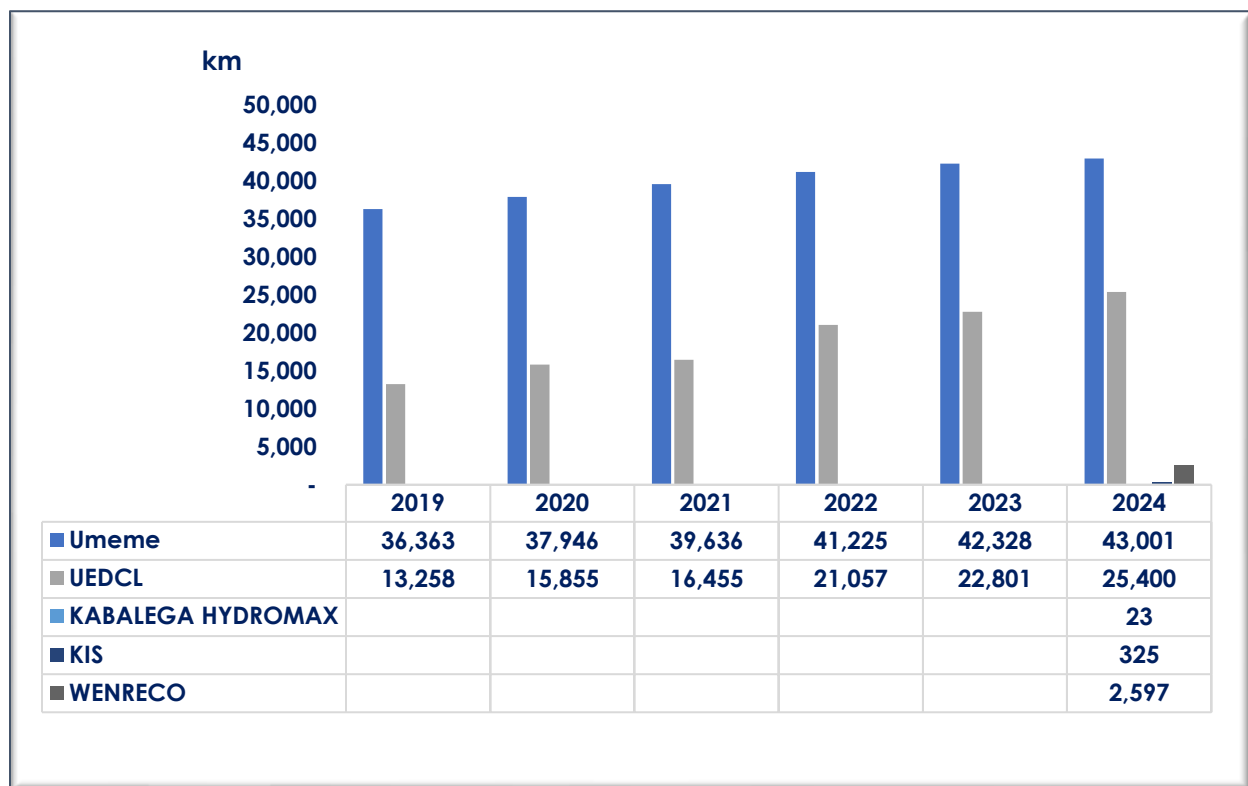


Figure 20: Distribution Network (km) by Distribution Utility

4 ELECTRICITY GENERATION AND DISTRIBUTION BY OFF-GRIDS

In this report, *off-grids* refer to electricity distribution utilities that generate and supply electricity directly to end-users, independent of the national grid.

By the end of 2024, West Nile Rural Electricity Company (WENRECo) and Kalangala Infrastructure Services (KIS) had been integrated into the national grid and ceased operating as standalone off-grid entities.

Currently, eleven (11) recognized off-grid companies hold License Exemptions issued by the Electricity Regulatory Authority. These companies operate forty-five (45) off-grid sites across various regions of the country. Five (5) sites are designated for own-use generation, while the remaining forty (40) are engaged in the generation, distribution, and sale of electricity to end-users.

Table 9: List of Off-Grid Companies by Installed Capacity (2024)

No.	Developer	Number of Off-Grid Sites	Installed Capacity (MW)
1.	Winch Energy Uganda SMC Limited-Bunjako& Lamwo	31	1.31
2.	Ecoligo Renewable Energy Co Ltd	4	1.04
3.	Engie Equatorial	1	0.55
4.	Solargen (U) Limited	1	0.40
5.	Absolute Energy Africa Limited (AEAL)	2	0.33
6.	Kisiizi Hospital Power	1	0.30
7.	Kuluva Hospital Mini Power Generation Company Limited	1	0.11
8.	Bwindi Community Micro Hydro Power Ltd	1	0.07
9.	Volt-Terra Farm and Energy Solutions Limited	1	0.06
10.	KRECS	1	0.05
11.	Mandulis Energy Ltd	1	0.04

5 RETAIL TARIFFS

The Electricity Regulatory Authority (ERA) sets tariff rates for distribution licensees in accordance with Sections 10 and 75 of the Electricity Act, Cap 157. The tariff methodology applied within Uganda's Electricity Supply Industry is responsive to macroeconomic dynamics and is reviewed periodically as provided for under the Tariff Regulations.

Tariff adjustments are informed by several factors, including macroeconomic indicators and the prevailing energy mix. Key macroeconomic parameters considered in the tariff review process include the Consumer Price Index (CPI), the U.S. Dollar Producer Price Index (US PPI), the exchange rate of the Uganda Shilling (UGX) against the U.S. Dollar, and international fuel prices.

ERA sets Base Tariffs annually, which are subsequently adjusted quarterly to reflect movements in these parameters relative to the base assumptions. This section presents the tariff outcomes determined by the Authority for the various licensees across the respective customer categories.

5.1 Grid Retail Tariff

Umeme Limited and the Uganda Electricity Distribution Company Limited (UEDCL) operate under a unified tariff structure, given that their services are delivered across the same service areas.

In the Tariff Year 2024, the Base Retail Tariff was reduced across all customer categories except for street lighting. The most significant reduction was recorded in the Medium Industrial category at 5%, followed by Commercial customers at 3.8%. Large and Extra-Large Industrial customers experienced a reduction of 1.8%, while Domestic customers registered the smallest decrease at 1.4% (refer to Table 10).

Table 10: Base Retail Tariffs of Customers on the Main Grid

Period	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street Lights
Units	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)
2024	797.3	600.6	448.7	379.2	320.6	370.0
2023	808.9	624.6	472.3	386.3	326.6	370.0
2022	747.5	597.2	472.9	349.3	285.6	370.0
2021	750.9	642.4	560.2	361.0	301.7	370.0
2020	751.7	649.4	575.2	362.4	302.2	370.0

5.2 Retail Tariffs for Mini-Grid and Off-grid Customers

In 2024, end-user tariffs for main grid electricity customers served by Umeme Limited, Uganda Electricity Distribution Company Limited (UEDCL), West Nile Rural Electricity Company (WENRECO), and Kalangala Infrastructure Services (KIS) were adjusted quarterly in response to key macroeconomic changes. In contrast, tariff structures for smaller electricity distribution utilities were revised only at the beginning of the Tariff Year.

By the end of 2024, the mini-grids previously operated by Kyegegwa Rural Electricity Cooperative Society (KRECS) and Kilembe Investments Limited (KIL) were incorporated into UEDCL's service territories. As a result, these areas adopted the main grid tariff structure from April and September 2024, respectively.

During the same period, WENRECO and KIS ceased operating as off-grid utilities following their integration into the national grid.

Table 11 presents the average Base Tariff Charges per kilowatt-hour (kWh) consumed by customers served by the mini-grids and former off-grid utilities (WENRECO and KIS) in 2024, in comparison with Umeme Limited.

Table 11: Base Tariffs for End-User Customers by Distribution Utility

Operator	Base Tariffs (2024)					
Service Territory	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street Lights
Units	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)
Umeme	797.3	600.6	448.7	379.2	320.6	370
KIL	765.1	653.9	580.7			
KRECS	768.6	618.2	607.6			
UEDCL Service Territories						
SST	797.3	600.6	448.7	379.2		
SWST	797.3	600.6	448.7	379.2		
NWST	797.3	600.6	448.7	379.2		370
CNST	797.3	600.6	448.7			370
EST	797.3	600.6	448.7			
NEST	797.3	600.6	448.7	379.2		370
NNWST	797.3	600.6	448.7	379.2		370
MWST	797.3	600.6	448.7			
RST	797.3	600.6	448.7			
NST	797.3	600.6	448.7			
CST	797.3	600.6	448.7			
WST	797.3	600.6	448.7	379.2		
Off-Grids						

Operator	Base Tariffs (2024)					
Service Territory	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street Lights
Units	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)	(Shs/kWh)
KIS	1,269.8	1,632.2	1,632.2			
WENRECO	742.1	668.9	645.9	399.5		402.1
Kisiizi	710.4	710.4				

6 INDUSTRY PROJECTIONS FOR 2025

6.1 Plants Expected to Commission

According to the Ministry of Energy and Mineral Development (MEMD), Uganda possesses an estimated hydropower potential exceeding 2,500 MW, alongside approximately 450 MW of geothermal capacity. By the end of 2025, an additional 140.3 MW is projected to be integrated into the National Grid, further strengthening the country's generation capacity and supporting its energy access and sustainability goals.

Table 12: Electricity Generation Projects Under Development

No.	Name	Technology	Units	Capacity	COD
1.	Nyagak III Hydropower Project in Zombo district	Hydro	MW	6.6	2025
2.	Kingfisher Gas Power Project in Kikuube District	Thermal	MW	53.7	2025
3.	Tillenga Gas Power Project in Bulisa District	Thermal	MW	80.0	2025
4.	Mitaano Hydropower Project in Rukungiri District	Hydro	MW	13.6	2026
	Others				
5.	Nyamabuye Hydropower Project in Kisoro District	Hydro	MW	7.0	2029
6.	Nyabuhuka Hydropower Project in Bunyangabu District	Hydro	MW	3.2	2028
7.	Atari 1 Hydropower Project in Kapchorwa District	Hydro	MW	3.3	2028
8.	Kabeywa 1 Hydropower Project in Kapchorwa District	Hydro	MW	6.5	2028
9.	Kabeywa 2 Hydropower Project in Kapchorwa District	Hydro	MW	2.0	2028
10.	Sironko HPP in Sironko District	Hydro	MW	7.1	2028
11.	Simu HPP in Kapchorwa District	Hydro	MW	9.5	2028
12.	Sisi HPP in Kapchorwa District	Hydro	MW	7.0	2028
13.	Lirima Hydropower Project in Namisindwa District	Hydro	MW	3.9	2028
14.	Mukoki Hydropower Project in Kabale District	Hydro	MW	3.5	2029
15.	Kinyara bagasse Cogeneration Power project in Masindi district	Cogeneration	MW	45 (25 MW to grid)	2027
16.	Rupa Wind Power Project in Moroto District	Wind	MW	20.0	2028

No.	Name	Technology	Units	Capacity	COD
17.	Ituka Solar PV Project in Madi-Okollo District	Solar	MW	20.0	2026
18.	Kiraboha Hydropower Project in Bunyangabu District	Hydro	MW	4.8	2027
19.	Hoimo Hydropower Project in Hoima District	Hydro	MW	3.3	2028
20.	Igassa Hydropower Project in Bunyangabu District	Hydro	MW	0.3	2028
21.	Kabasanja Hydropower Project in Kabarole District	Hydro	MW	0.4	2028
22.	Tokwe Hydropower Project in Bundibugyo District	Hydro	MW	0.3	2028
23.	Nyahuka Hydropower Project in Bundibugyo District	Hydro	MW	0.7	2028
24.	Nsongya Hydropower Project in Bunyangabu District	Hydro	MW	0.7	2028
25.	Katooke Hydropower Project in Kasese District	Hydro	MW	0.3	2028
26.	Nchwera Hydropower Project in Mitooma District	Hydro	MW	0.5	2028

6.2 Projects Under Feasibility Study

As of December 2024, there were 26 projects at the feasibility study stage, all holding valid permits to undertake studies across various technologies and geographical locations in the country, with a combined potential capacity of 280 MW. (See Table 13)

Table 13: List of Projects Under Feasibility Study

No.	Project	Location (District)	Units	Expected Generation Capacity
1.	10MWp Floating Solar PV Project on Isimba Reservoir in Kayunga district	Kayunga	MW	10.0
2.	10MWth/2Mwe CHP Plant in Jinja for Direct Sale to the Nile Breweries Jinja	Jinja	MW	2.0
3.	2 MW Hydropower Plant in Kasese District for sale to the grid	Kasese	MW	2.0
4.	2.7 Atari 2 HPP in Kapchorwa for sale to the grid	Kapchorwa	MW	2.7
5.	20MW Olwiyo Solar PV Project	Nwoya	MW	20.0
6.	3MW Rushango HPP	Ibanda	MW	3.0
7.	Biomass Power Project at the premises of Modern Laminates in Buikwe district	Buikwe	MW	15.0

No.	Project	Location (District)	Units	Expected Generation cCapacity
8.	Bugongo Hydro Electricity Company Limited-Okollo Hydropower Project	Madi-okollo	MW	6.5
9.	Buhweju Energy Limited	Ibanda	MW	4.7
10.	Buhweju Energy Limited - Buhundagi Hydropower Project	Ibanda	MW	4.7
11.	Cheptui HPP	Kween	MW	5.8
12.	Iganga Solar PV Project in Iganga district	Iganga	MW	20.0
13.	Keere HPP on R Keere in Kween district	Kween	MW	5.7
14.	Lower Achwa HPP on River Achwa	Lamwo	MW	17.4
15.	Mbalala Waste- to -Energy Project	Mukono	MW	35.0
16.	Mihunga Hydro Uganda Limited -Mihunga Hydropower Project	Kasese	MW	2.0
17.	Muzizi HPP	Kibaale	MW	48.0
18.	Nengo Bridge HPP on River Mitano	Kanungu	MW	7.5
19.	Ngenge HPP on River Ngenge and & River. Emuchoni	Kween	MW	13.8
20.	Nshongi HPP on R Nsongya in Bunyangabu district	Bunyangabu	MW	11.0
21.	Okollo SHP on River Ora	Madi-Okollo	MW	5.0
22.	Panyimur Panyigoro Geothermal Power Plant	Pakwach	MW	10.0
23.	Rakai Hydro Energy Limited - Kibale Hydropower project	Rakai	MW	4.3
24.	Tororo Solar PV project in Tororo district	Tororo	MW	20.0
25.	Xylo Biomass CHPs	Buikwe	MW	2.0
26.	Xylo Combined Heat and Power Jinja Uganda Limited - Biomass Combined Heat and Power Project	Buikwe	MW	2.0

6.3 Demand-Supply Balance

By the end of 2024, Uganda's maximum electricity demand had reached 1,117.9 MW, up from 987.8 MW recorded in 2023. This represents a 13% increase in peak demand over the one-year period. However, the actual demand registered in 2024 was approximately 6% lower than the projected high-case scenario for that year.

Looking ahead, demand is expected to continue rising, with projections indicating an increase from 1,324 MW in 2025 under the high-case scenario to 7,576 MW by 2040, as illustrated in Figure 21. This anticipated growth is driven by several factors, including the expansion of oil and gas sector activities, the promotion of electric cooking in institutions and households, increased connections under the Electricity Access Scale-Up Project (EASP), implementation of the hybrid connection framework, rising industrial electricity consumption, and the advancement of electric mobility as part of the Government's strategic agenda.

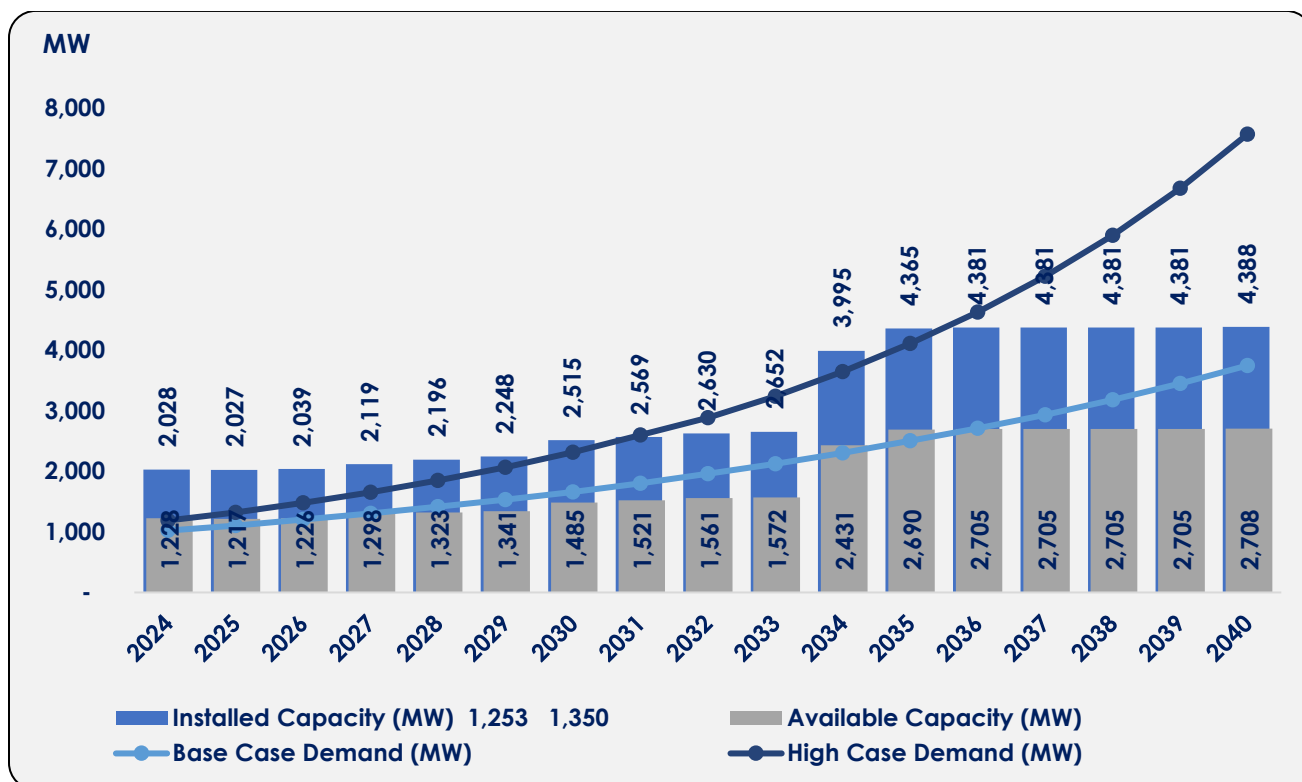


Figure 21: Demand Supply Balance Projections (2024 to 2040)

6.4 Initiatives to Grow Electricity Demand and Improve Access

The Electricity Regulatory Authority (ERA) is implementing several strategic initiatives aligned with the Third National Development Plan (NDP III) and Vision 2040 to enhance access to electricity and promote the use of clean energy. These efforts are also guided by the Presidential Directives on reducing the cost of electricity for manufacturers. As part of these efforts, ERA has introduced specific interventions aimed at lowering tariffs, including the following:

6.4.1 Electricity Tariffs for Industrial Parks

The President of Uganda issued a directive to support industrial growth and reduce the end-user cost of electricity for manufacturers. The directive also enhances the competitiveness of locally produced goods and stimulates electricity demand.

The directive stipulates the following:

- (i) The cost of electricity supplied to manufacturers, across all categories including Extra-Large, Large, Medium, and Commercial, shall be set at US Cents 5 per kilowatt-hour (kWh).
- (ii) Industrial Parks shall receive electricity directly from Government-owned power stations, namely Karuma, Isimba, Nalubaale, and Kiira, bypassing Umeme Limited as the distribution utility.

This policy intervention is intended to promote industrialization, reduce production costs, and accelerate economic transformation.

6.4.2 Implementation of the Declining Block tariff

Beginning with the Tariff Year 2020, the Electricity Regulatory Authority (ERA) approved the implementation of a declining block tariff structure for Large Industrial and Extra-Large Industrial customers. Under this structure, energy consumption is segmented into two categories: consumption billed at the standard tariff rate, based on the prevailing tariff methodology, and additional consumption billed at a lower rate, the declining block tariff.

The lower tariff applies to energy consumed beyond the historical periodic baseline, adjusted to account for a reasonable growth trend in consumption. This incentive is designed to encourage increased industrial productivity and efficiency by offering reduced rates for incremental usage.

ERA continues to monitor the implementation of this initiative. Following a comprehensive assessment, 266 companies qualified to benefit from the declining block tariff. A review conducted between 2023 and 2024 revealed that energy consumption billed under the declining block increased at an annualized rate of 3.3%.

6.4.3 Biomass to Electricity Cooking

The Electricity Regulatory Authority (ERA) launched the "Charcoal-to-Power Project," a strategic initiative aimed at curbing the use of biomass for cooking and promoting electricity consumption among households and institutions. This campaign is part of ERA's broader effort to stimulate electricity demand while advancing cleaner and more sustainable energy practices.

To support the initiative, ERA approved a pilot cooking tariff of Ush 451.4 per kilowatt-hour (kWh) for Mulago National Hospital. The pilot, implemented in collaboration with the United Nations Development Programme (UNDP), is intended to generate insights that will guide the scale-up of electric cooking across other public institutions, including hospitals, prisons, and schools.

For domestic and household consumers, ERA approved a Cooking Tariff of Ush 412 per kWh. The tariff design provides a progressive structure whereby, after the first 80 kWh consumed in a given month, the rate drops from the standard Ush 797.3 (applicable in 2024) to Ush 412 for the next 70 kWh units purchased within the same month.

Ongoing studies and close monitoring of the initiative have revealed a growing uptake among domestic customers. ERA continues to undertake deliberate

sensitization efforts to raise awareness about the Cooking Tariff and encourage broader adoption of electricity for cooking purposes.

6.4.4 The Electricity Access Scale-up Project

In February 2024, the Government of Uganda, through the Ministry of Energy and Mineral Development and with support from the World Bank, officially launched the Electricity Access Scale-up Project. This ambitious initiative aims to expand electricity access by connecting approximately 1,500,000 households over a five-year period, averaging 300,000 new connections annually.

The project is expected to significantly improve national electricity access statistics, contributing to Uganda's broader goals of inclusive development, enhanced service delivery, and economic transformation through increased energy access.

6.4.5 Other initiatives to Grow Electricity Demand and Improve Access

- a) Implementation frameworks under the Amended Electricity Act are being fast-tracked to ensure effective regulation and monitoring of sector operations.
- b) The Government of Uganda continues to invest in transmission and distribution infrastructure with the objective of minimizing tariff impacts on end-users.
- c) Efforts are being made to accelerate the development of an independent power transmission framework. This will enable private sector participation in transmission infrastructure, helping to address longstanding challenges related to power evacuation and electricity exports that have persisted over the past five years.

APPENDICES

Appendix 1: List of Generation Plants in Operation by December 2024

Generation Plants by Technology and Purpose	Installed Capacity					
	Units	2020	2021	2022	2023	2024
1.0 On-Grid	MW	1,167.2	1,234.8	1,269.7	1,700.8	1,923.1
1.1 Large Hydro	MW	854.0	896.0	896.0	1,300.2	1,500.2
Achwa 1 HPP	MW		42.0	42.0	46.2	46.2
Achwa 2 HPP	MW	41.0	41.0	41.0	41.0	41.0
Bujagali HPP	MW	250.0	250.0	250.0	250.0	250.0
Isimba HPP	MW	183.0	183.0	183.0	183.0	183.0
Karuma HPP	MW				400.0	600.0
Kiira HPP	MW	200.0	200.0	200.0	200.0	200.0
Nalubale HPP	MW	180.0	180.0	180.0	180.0	180.0
1.2 Small Hydro	MW	152.0	177.6	199.7	206.6	214.3
AEMS Mpanga	MW	18.0	18.0	18.0	18.0	18.0
Bugoye Hydro Limited (Mobuku II)	MW	13.0	13.0	13.0	13.0	13.0
Ishasha Ecopower	MW	6.6	6.6	6.4	6.4	6.4
Kabalega Hydromax Buseruka	MW	9.0	9.0	9.0	9.0	9.0
Kakaka	MW		4.6	4.6	4.6	4.6
Kasese Cobalt (KCCL) (Mobuku III)	MW	9.9	9.9	9.9	9.9	9.9
Kigwabya						4.2
Kikagati	MW			14.0	14.0	14.0
Kilembe Mines Limited (KML) (Mobuku 1)	MW	5.0	5.0	5.0	5.0	5.0
Lubilia	MW	5.4	5.4	5.4	5.4	5.4
Mahoma Hydro	MW	2.7	2.7	2.7	2.7	2.7
Muvumbe	MW	6.5	6.5	6.5	6.5	6.5
Muyembe	MW				6.9	6.9
Ndugutu HPP	MW	5.9	5.9	5.9	5.9	5.9
Nkusi	MW	9.6	9.6	9.6	9.6	9.6
Nyagak						3.5
Nyamagasani 2	MW		6.0	6.0	6.0	6.0
Nyamasagani 1 (Rwenzori Hydro)	MW		15.0	15.5	15.5	15.5
Nyamwamba	MW	9.2	9.2	9.2	9.2	9.2
Nyamwamba II	MW			7.8	7.8	7.8
Rwimi	MW	5.5	5.5	5.5	5.5	5.5
Siiti I	MW	5.0	5.0	5.0	5.0	5.0
Sindila (Butama)	MW	5.3	5.3	5.3	5.3	5.3
Siti II Small Hydro Power	MW	16.5	16.5	16.5	16.5	16.5

Timex Bukinda	MW	6.5	6.5	6.5	6.5	6.5
Waki HPP	MW	4.8	4.8	4.8	4.8	4.8
Ziba Limited (Kyambura)	MW	7.6	7.6	7.6	7.6	7.6
1.3 Solar PV	MW	60.0	60.0	60.0	80.0	85.6
Access Solar	MW	10.0	10.0	10.0	10.0	10.0
Busitema Solar PV						4.0
Emerging Power U Ltd (Mayuge/Bifulubi)	MW	10.0	10.0	10.0	10.0	10.0
Kalangala Infrastructure Services						1.6
MSS Xsabo Solar Power Limited	MW	20.0	20.0	20.0	20.0	20.0
Nkongwe Solar	MW				20.0	20.0
Tororo PV Power Project (Tororo PV Power Co. Ltd)	MW	10.0	10.0	10.0	10.0	10.0
Tororo Solar North	MW	10.0	10.0	10.0	10.0	10.0
1.4 Thermal	MW	92.0	92.0	92.0	92.0	100.0
Electromax	MW	42.0	42.0	42.0	42.0	50.0
Jacobsen Plant - Namanve	MW	50.0	50.0	50.0	50.0	50.0
1.5 Cogeneration	MW	9.2	9.2	22.0	22.0	23.0
	MW	9.2	9.2	22.0	22.0	23.0
Mayuge Sugar Limited						
2.0 Off-grid	MW	13.9	14.1	16.3	16.8	3.7
2.1 Biomass	MW	-	-	0.4	0.4	0.4
Gotngur	MW			0.4	0.4	0.4
2.2 Small Hydro	MW	4.0	4.0	4.0	4.1	0.6
Bwindi	MW	0.1	0.1	0.1	0.1	0.1
Kisiizi Hospital Power	MW	0.4	0.4	0.4	0.4	0.4
Kuluva Hospital	MW				0.1	0.1
Nyagak	MW	3.5	3.5	3.5	3.5	-
2.3 Solar PV	MW	1.9	2.1	3.9	4.3	2.7
Absolute-Kitobo	MW	0.2	0.2	0.2	0.2	0.2
Bukasa Island Offgrid	MW	0.1	0.1	0.1	0.1	0.1
Bunjako	MW			0.1	0.1	0.1
Bussi Islands	MW				0.4	0.4
Kalangala Infrastructure Services	MW	1.6	1.6	1.6	1.6	-
Katiirwe	MW			0.1	0.1	0.1
Lamwo off-grids	MW			1.0	1.0	1.0
Lolwe Islands	MW			0.6	0.6	0.6
Nsambya Offgrid (Volt Tera)	MW			0.1	0.1	0.1
Sagewood	MW		0.2	0.2	0.2	0.2
2.4 Thermal	MW	8.0	8.0	8.0	8.0	-
Electro-Maxx	MW	8.0	8.0	8.0	8.0	-
3.0 Own use	MW		10.4	14.4	26.4	22.4

3.1 Cogeneration	MW		10.4	10.4	22.4	22.4
GM Sugar	MW		7.4	7.4	7.4	7.4
Hoima Sugar	MW			-	12.0	12.0
Kamuli Sugar	MW		3.0	3.0	3.0	3.0
3.2 Solar PV	MW			4.0	4.0	-
Busitema Solar PV	MW			4.0	4.0	-
4.0 Own Use and Grid	MW	87.0	102.5	103.5	103.5	103.5
4.1 Cogeneration	MW	87.0	102.5	103.5	103.5	103.5
Kakira Sugar Limited	MW	51.1	51.1	51.1	51.1	51.1
Kinyara Sugar Works Limited	MW	14.5	14.5	14.5	14.5	14.5
Sugar and Allied Industries Uganda Limited (SAIL)	MW	11.9	11.9	11.9	11.9	11.9
Sugar Corporation of Uganda (SCOUL)	MW	9.5	25.0	26.0	26.0	26.0
Grand Total	MW	1,268.2	1,361.8	1,403.9	1,847.5	2,052.7

Appendix 2: Performance of Power Generation Plants for 2024

Generation Plant	Units	2020	2021	2022	2023	2024
Access Solar	GWh	16,945.0	16,171.8	16,239.8	16,132.2	16,242.1
Achwa 1	GWh	-	72.8	6,110.4	29,957.3	193,109.5
Achwa 2	GWh	6,363.6	1,689.0	28,297.2	26,770.3	182,295.4
Aems-Mpanga	GWh	94,646.6	87,181.2	84,065.7	106,489.8	113,824.8
Bujagali Electricity Limited	GWh	1,396,096.0	1,300,248.0	1,504,351.0	1,495,298.2	1,407,929.3
Ecopower-Ishasha	GWh	16,836.0	10,906.0	22,038.3	22,934.5	21,252.4
Electromaxx (U) Limited	GWh	3,646.1	6,741.5	13,995.2	-	14,172.9
Elgon Hydro Siti	GWh	24,947.9	14,129.6	15,602.2	19,538.9	26,739.4
Emerging Solar Power (Bufulubi)	GWh	17,957.0	17,860.9	15,577.5	16,831.0	15,869.9
Hydromax Nkusi (Waki)	GWh	18,018.4	18,791.0	17,157.9	23,560.3	24,436.5
Isimba	GWh	857,335.0	930,456.6	1,048,512.8	1,120,086.0	1,035,826.7
Kabalega Hydromax	GWh	78,401.4	67,318.6	54,334.6	65,046.3	78,879.8
Kakaka	GWh	-	1,488.0	20,920.8	20,339.5	18,765.5
Kakira Sugar Works	GWh	150,245.0	176,455.7	159,643.1	55,732.2	242,625.0
Karuma	GWh	-	-	-	403,836.4	675,286.2
Kasese Cobalt Company Limited	GWh	46,801.0	43,500.6	54,931.0	48,391.5	55,791.1
Kiira& Nalubaale	GWh	1,199,074.8	1,470,849.0	1,609,011.4	1,670,312.9	1,539,036.1
Kikagat	GWh	-	2,281.8	68,455.9	93,440.2	75,630.7
Kilembe Mines Limited (KML)	GWh	3,845.3	1,108.4	9,558.6	6,913.2	-
Kinyara Sugar Works	GWh	7,533.8	134.4	3,002.2	9,641.6	21,077.9
Lubilia	GWh	20,356.4	17,318.9	18,894.1	19,509.3	20,495.8
Mahoma	GWh	11,720.1	11,364.2	14,081.1	11,313.0	10,590.0
Maji-Power Bugoye-Limited	GWh	72,433.3	64,161.2	77,359.6	48,518.9	64,749.1
Mayuge Sugar	GWh	-	-	-	24,006.1	118,083.7
Muvumbe Hydro (U) Limited	GWh	35,609.6	29,722.8	37,078.5	34,683.8	37,788.3
Ndugutu	GWh	19,029.0	18,604.0	18,090.5	20,464.7	19,088.5
Nkusi (Pa Technical)	GWh	69,201.0	68,804.5	52,393.3	70,276.7	78,461.0
Nyamagasani 2	GWh	-	8,954.9	20,576.6	21,890.8	24,632.5
Nyamwamba	GWh	16,769.0	23,685.5	28,038.0	30,489.6	23,457.0
Nyamwamba 2	GWh	-	-	18,029.5	9,800.8	17,507.8
Rwenzori Hydro	GWh	-	5,204.0	36,713.6	47,543.1	16,721.1

Generation Plant	Units	2020	2021	2022	2023	2024
Rwimi	GWh	28,486.4	25,328.5	25,311.4	25,952.9	28,759.8
Sail Kaliro	GWh	30,504.7	37,223.7	35,701.5	4,181.1	16,434.5
Scoul	GWh	-	67,906.7	164,807.3	140,785.9	210,729.6
Sindila	GWh	14,691.9	14,395.6	13,557.3	14,962.1	14,157.3
Siti 2	GWh	6,524.5	27,940.4	25,330.6	44,493.2	58,163.7
SM Hydro	GWh	-	-	-	18,502.5	27,817.5
Timex Bukinda	GWh	7,193.7	35,249.5	29,438.8	38,209.9	42,480.4
Tororo PV Power Co. Ltd	GWh	6,747.6	20,762.1	19,328.2	20,934.2	19,954.9
Tororo Solar (North)	GWh	16,329.4	16,188.1	15,834.5	16,045.4	15,677.7
Uegcl Namanve (Jacobsen)	GWh	54,492.3	45,593.0	60,892.2	65,122.9	63,042.8
Xsabo Solar	GWh	31,668.4	29,756.5	32,347.6	29,298.1	23,750.8
Ziba	GWh	38,341.3	33,541.0	24,686.2	24,078.5	36,699.3
Total	GWh	4,418,791.3	4,769,089.8	5,520,295.9	6,032,315.6	6,788,501.3

Appendix 3: Distribution of Energy Sold by UETCL Over the Years

Utilities	Units	2020	2021	2022	2023	2024
Umeme Limited	GWh	3,883.5	4,277.4	4626.4	5,042.8	5,572.0
UEDCL	GWh	94.0	120.7	129.0	137.4	205.8
KIL	GWh	7.9	9.2	13.89	14.6	12.4
BECS	GWh	9.2	1.9	-	-	-
PACMECS	GWh	2.3	3.0	4.3	36.8	-
KRECS	GWh	5.5	6.4	10.1	13.6	5.2
KENYA	GWh	132.0	282.8	303.4	249.5	217.6
TANESCO	GWh	81.4	99.9	112.6	141.6	172.5
Rwanda	GWh	6.7	8.0	7.0	91.3	85.2
DRC	GWh	2.2	1.8	2.0	2.5	2.8
Ferdsult	GWh	-	-	-	-	-
WENRECO	GWh	3.6	6.7	15.36	9.4	26.1
KIS	GWh					1.5
Total	GWh	4,228.3	4,817.8	5,224.2	5,739.5	6,301.1

Appendix 4: UETCL Energy purchases (GWh) by Source

Plant	Units	2019	2020	2021	2022	2023	2024
UEGCL-Nalubaale & Kiira	GWh	1,322.7	1,179.8	1,465.7	1,538.3	1,644.9	1,517.7
Bujagali HPP	GWh	1,464.4	1,392.0	1,555.7	1,541.5	1,492.2	1,409.0
Karuma HPP	GWh						672.3
Isimba	GWh	718.8	857.3	923.4	1,103.0	1,114.8	1,030.2
ACHWA 1&2	GWh		5.7	25.0	26.3	48.0	374.5
Mobuku III HPP (KCCL)	GWh	56.0	45.5	42.2	51.9	47.2	54.3
Mobuku I HPP (KML)	GWh	11.9	3.8	1.1	10.3	6.9	-
Bugoye (Mobuku II) HPP	GWh	67.1	67.5	63.0	56.6	61.4	64.3
Kabalega (Buseruka) HPP	GWh	46.7	72.5	62.2	46.1	59.4	72.6
Mpanga HPP	GWh	66.7	94.6	86.8	77.2	92.9	112.6
Ishasha HPP	GWh	14.4	16.8	10.6	22.3	22.9	21.1

Plant	Units	2019	2020	2021	2022	2023	2024
Muvumbe HPP	GWh	28.8	35.2	29.3	37.3	30.2	31.8
Siiti 1 HPP	GWh	20.0	24.5	13.8	7.8	26.3	26.2
Rwimi HPP	GWh	25.1	28.1	25.0	24.7	21.9	28.3
Nyamwamba HPP	GWh	29.6	16.5	22.6	24.3	30.0	23.1
Nyamwamba HPP 2	GWh				18.0	9.8	17.1
Lubilia HPP	GWh	15.8	19.9	16.9	18.8	19.6	20.0
Nkusi HPP	GWh	42.7	66.8	68.8	49.3	71.5	77.6
HYDROMAX NKUSI (WAKI)	GWh	12.9	17.6	18.3	16.3	21.3	23.4
MAHOMA	GWh	9.6	11.7	11.4	11.1	13.2	10.6
Sindila	GWh	9.6	14.7	14.4	12.8	14.8	13.4
Ziba	GWh	15.9	33.7	26.5	27.5	20.6	33.8
Siti 2	GWh	2.2	6.3	27.5	16.1	44.4	58.1
Ndugutu	GWh	4.8	19.0	18.6	17.8	20.4	18.9
Timex Bukinda	GWh		7.2	34.4	28.2	41.2	42.0
Nyamagaasani 2	GWh			9.3	18.8	21.8	24.3
Rwenzori Hydro (Nyamasagani 1)	GWh			5.5	32.3	44.2	16.6
Kakaka (Greenwewus Energy Africa Ltd)	GWh			1.5	19.5	20.2	18.6
Kikagati	GWh			2.3	65.1	91.6	97.0
SM Hydro	GWh					16.2	28.0
Kigwabya	GWh						11.0
Electromaxx	GWh	34.0	3.6	6.7	15.1	-	14.2
Namanve - Jacobsen	GWh	68.8	53.6	44.4	45.3	64.0	60.7
Kakira	GWh	161.7	150.2	176.5	170.7	55.7	131.0
Kinyara	GWh	7.5	7.5	0.1	1.3	9.6	8.6

Plant	Units	2019	2020	2021	2022	2023	2024
SAIL Kaliro PP	GWh	27.6	30.5	37.2	38.7	4.2	16.4
SCOUL	GWh			52.7	160.7	24.0	159.7
Mayuge Sugar	GWh						118.1
Access Solar PV PP	GWh	15.8	15.9	15.7	16.6	16.0	16.2
Tororo Solar PV PP	GWh	16.0	16.0	15.9	15.8	15.7	15.1
XSABO SOLAR	GWh	32.1	31.6	31.8	31.2	28.9	24.0
Bufulubi Solar PV	GWh	14.2	17.2	17.0	16.3	16.8	15.8
Tororo PV Power Project (Tororo PV Power Co. Ltd)	GWh		6.7	20.6	20.0	20.8	19.8
Xsabo Nkonge Solarline	GWh						23.6
Busitema Solar	GWh				28.0	-	0.9
Kenya	GWh	16.2	16.5	18.2	14.4	33.7	42.1
Rwanda	GWh	4.3	4.9	5.7	6.6	7.6	7.8
Total	GWh	4,383.9	4,391.1	5,024.2	5,454.0	6,027.8	6,622.6

Appendix 5: Projects Under Construction

No.	Project	Capacity (MW)	Technology	District	COD
1	Nyagak 3 HPP	6.6	Hydro	Zombo	2025
2	Kingfisher Gas Power Project	53.7	Thermal/ Gas	Kikuube	2025
3	Tilenga Gas-to-Power project	80.0	Thermal/ Gas	Buliisa and Nwoya districts	2025
4	Mitaano Hydro Power Project	13.6	Hydro	Rukungiri	2025

Appendix 6: Licensed Projects Yet to Start Construction

S/N	Project	Capacity (MW)	Permit Holder	Technology	Expected COD
1.	Atari 1 HPP on River Atari in Kapchorwa district	3.3	Senok Atari (PVT) Limited	Hydro	2028 (assuming the evacuation arrangement is ready by 2026) Project Implementation timelines are tagged to the availability of the 132kV Mbale - Bulambuli – Kapteror Transmission Project.
2.	Kabeywa 1 HPP in Kapchorwa district	6.5	Senok Kabeywa 1 (PVT) Limited	Hydro	
3.	Kabeywa 2 HPP in Kapchorwa District	2.0	Senok Kabeywa 2 (PVT) Limited	Hydro	
4.	Sironko HPP in Sironko district	7.1	Eco Clean (PVT) Limited.	Hydro	
5.	Simu HPP in Kapchorwa district	9.5	raREH Simu (PVT) Ltd	Hydro	
6.	Sisi HPP in Kapchorwa district	7.0	raREH Sisi (PVT) Ltd	Hydro	
7.	Nyamabuye HPP in Kisoro district	7.0	Elemental Energy Limited	Hydro	2029
8.	Nyabuhuka-Mujunju HPP in Bunyangabu district	3.2	Rwenkuba Power Company Limited	Hydro	2028
9.	Hoimo HPP in Hoima district	3.3	UECCC	Hydro	2028 Commencement of construction pending completion of the procurement process of the EPC Contractor for the projects
10.	Igassa HPP in the Bungangabu district	0.3	UECCC	Hydro	
11.	Kabasanja HPP in Kabarole district	0.4	UECCC	Hydro	
12.	Tokwe HPP in Bundibudgyo district	0.3	UECCC	Hydro	
13.	Nyahuka HPP in Bundibudgyo district	0.7	UECCC	Hydro	
14.	Nsongya HPP in Bunyangabu district	0.7	UECCC	Hydro	
15.	Katooke HPP in Kasese district	0.3	UECCC	Hydro	
16.	Nchwera HPP in Mitooma district	0.5	UECCC	Hydro	
17.	Warugo HPP in Bushenyi district	0.5	UECCC	hydro	
18.	Lirima HPP in Namisindwa district	3.9	Kametsi Energy LIMITED	hydro	2028

S/N	Project	Capacity (MW)	Permit Holder	Technology	Expected COD
19.	Kinyara Bagasse Power Plant in Masindi district	40.0 (25MW to grid)	Kinyara Sugar Limited	Cogeneration	2027 Project Implementation timelines tagged to the availability of the 220kV Hoima – Kinyara – Kafu transmission Project. however, part of the power can be evacuated on the 33kV Hoima - Kinyara line in the interim
20.	Mukoki HPP in Kabale district	3.4	Mukoki Hydro Ltd	Hydro	2029
21.	Rupa Wind Power Project in Moroto district	20.0	Senok Wind Uganda Limited	Wind	2028 Project Implementation Timelines tagged to completion of 33kV evacuation line from the Wind farm to the Moroto UETCL substation
22.	Mitaano HPP in Kanungu and Rukungiri districts	13.6	Pago (U) Limited	Hydro	2028
23.	Ituka Solar PV	20.0	Ituka West Nile Power Company/ AMEA	Solar	2026
24.	Kiraboha HPP	4.8	Navitas Hydro (PvT) Ltd	Hydro	2027