INTELLIGENCE REPORT

NIGERIA ELECTRICITY MARKET

2021

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Contents

1 Executive Summary

This publication presents an analysis of the quarterly performance of Nigeria's Electricity Market, highlighting the generation, transmission, and distribution segments. Data was open-sourced from the National Control Centre (NCC) and the Quarterly Nigerian Electricity Regulatory Commission (NERC) Reports. The sourced data was analyzed by Nextier Power. Better market performance can be achieved through sector coordination and synchronized improvement of various factors. Some of these factors include adequate alignment of the gas suppliers and power generation; expanded, efficient, and reliable transmission network; expanded distribution network capacities; proper water storage infrastructures; fair and bankable management of power dispatch; among many others. These proposed solutions are at a high level; therefore, it is fundamental to present a proper in-depth analysis that investigates and identifies the root causes of these issues across several interfaces in the value chain. This exercise will enable the development of trends and provide reasons for any identified changes between successive months and/or quarters. For instance, a hike in gas constraints could indicate the unavailability of gas turbines. Still, the reasons why the turbines were not available would require a more in-depth analysis of available performance data. The reasons could be low gas supply levels, vandalized pipelines, challenges with circulating water pumps, high turbine exhaust temperature, and many others. For the period under review (2021), the average available capacity for all the generating plants was 5,254.03MW with an average available generation of was 4,199.06MWh/h derived by the available capacity made available values by the number of hours. However, the average energy sent out from the available generation was 4,128.32 MWh/h. Gas constituted 77% of the fuel source for power generation while hydro constituted 23%. On transmission, the actual Transmission Loss Factor (TLF) was 7.46% was lower than the approved (TLF) for 2021 of 8.05%. This caused a difference in the total energy injected into the grid and the total energy delivered to the Distribution Companies (DisCos) and Exports of 2,692.02GWh. There were four system collapses in 2021. As of 2021 Q4, the DisCos with the least ATC&C losses are Ikeja, Eko, and Abuja DisCos with collection efficiencies of 20%, 27%, and 44% respectively. Conversely, the DisCos with the highest ATC&C for Q4 in 2021 are Jos, Kaduna, and Yola DisCos of 67%, 74%, and 73% respectively. As of 2021 Q4, only about 79,978 meters were deployed under the Meter Asset Program (MAP) and the National Mass Metering Programme (NMMP) meter deployment programs across the eleven DisCos.

2 Background

The expectation, with the privatization of Nigeria's electricity supply industry in 2013, was that the industry would attract private investment, increase electricity generation and supply, improve efficiency, etc. This has not been the case mainly because the eventual owners lack the technical and financial capabilities required to transform the industry. Similarly, the government has failed to deliver on its promises of cost-reflective tariffs and other policy and regulatory requirements. As a result, Nigeria's electricity market has been unable to provide an incremental, stable, and uninterrupted power supply. The industry has also lacked coordination and communication among the market operators.

The electricity market recorded an improvement as there was a significant improvement in the market remittances of the DisCos to the Nigerian Bulk Electricity Trading Plc and the Market Operator (MO) as a result of the introduction of the minimum remittance obligation by the NERC.

There are myriad performance and operational issues with generation, transmission, and distribution:

- Generation capacity issues where the operational capacity of the country's power plants is about one-third of the installed capacity.
- Gas supply issues resulting from incessant vandalization of oil and gas pipelines which, in turn, results in gas shortages at power plants.
- Infrastructure issues resulting in frequent system collapses and restrictions within the transmission and distribution networks.
- Financial issues resulting in high ATC&C losses impact the financial viability of the DisCos.

An independent market analysis will point to the root causes of the challenges across the entire value chain and highlight the areas of intervention. The analysis will include the compilation, validation, interpretation, and dissemination of comprehensive technical data on the performance and operations of the electricity market. The intent is to create a single source of standardized market data to provide confidence between market stakeholders and provide pragmatic options for resolving performance and operational challenges. This Nextier Power Nigeria Electricity Market Intelligence Report aims to not only ensure improved and sustainable practices for the operators in the electricity market but also build a robust stakeholder network in the electricity market.

3 Generation

3.1 Energy Flow - Generation

Twenty-Six power stations are connected and generating to the national grid with an installed capacity of about **13,000MW.** The breakdown of these stations include: eighteen (18) gas powered plants, four (4) hydro powered plants, two (2) steam powered plants and two (2) steam/gas powered plants.

25 of the 26 Gencos had market obligations with NBET, Paras has a bilateral agreement with an international customer and while some other Gencos have bilateral agreements obligations with the Discos, some eligible customers and international customers.

In 2021, the average available capacity for all the generating plants was **5,254.03MW** with an average available generation of was **4,199.06MWh/h** derived by the available capacity made available values by the numbers of hours. However, the average energy sent out from the available generation was **4,128.32 MWh/h**. See figure 1 for the average generation profile for 2021.

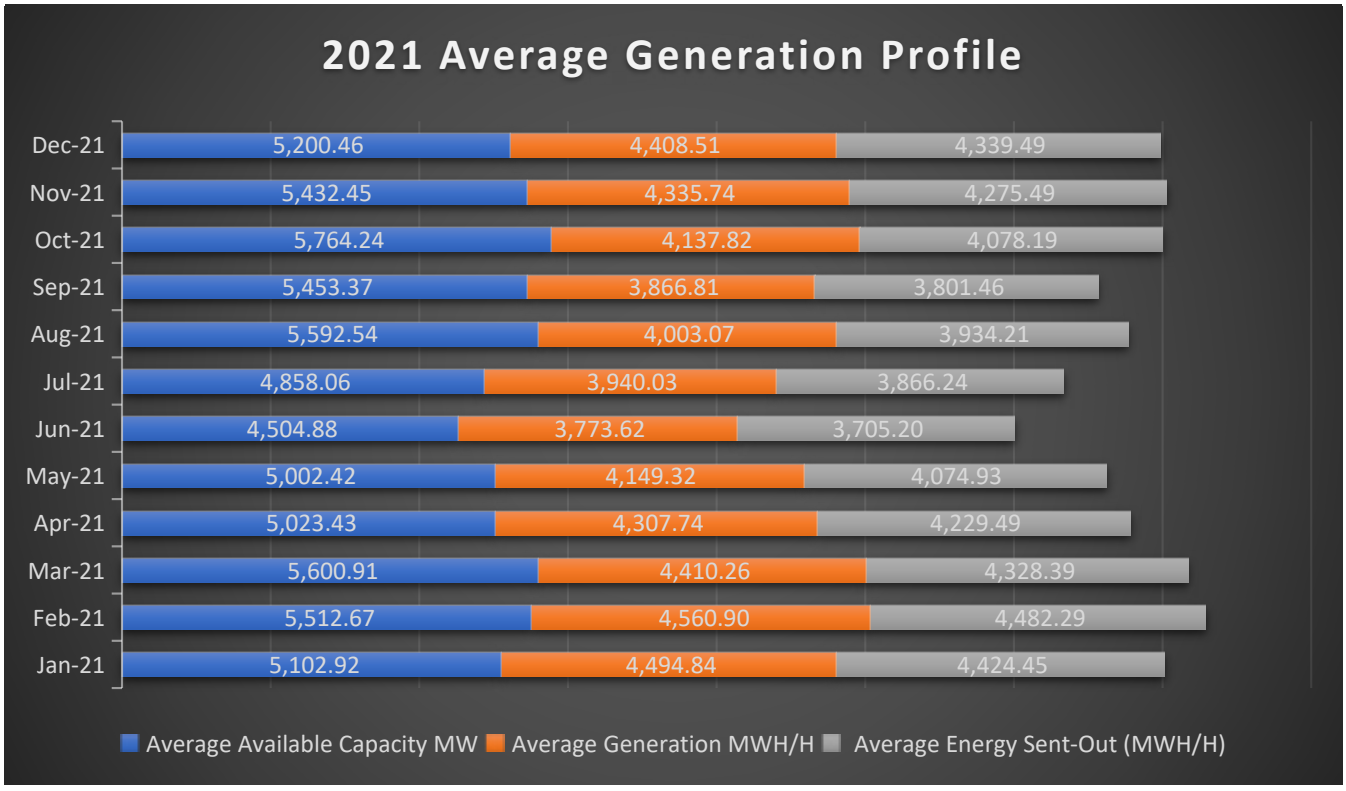


Figure 1: 2021 Average Generation Profile

The total capacity made available in 2021 was **38,076,774 MWh** and total energy sent out was **36,065,341MWh**. Figures 2,3 and 4 shows the avergae generation profile of each of the plants.

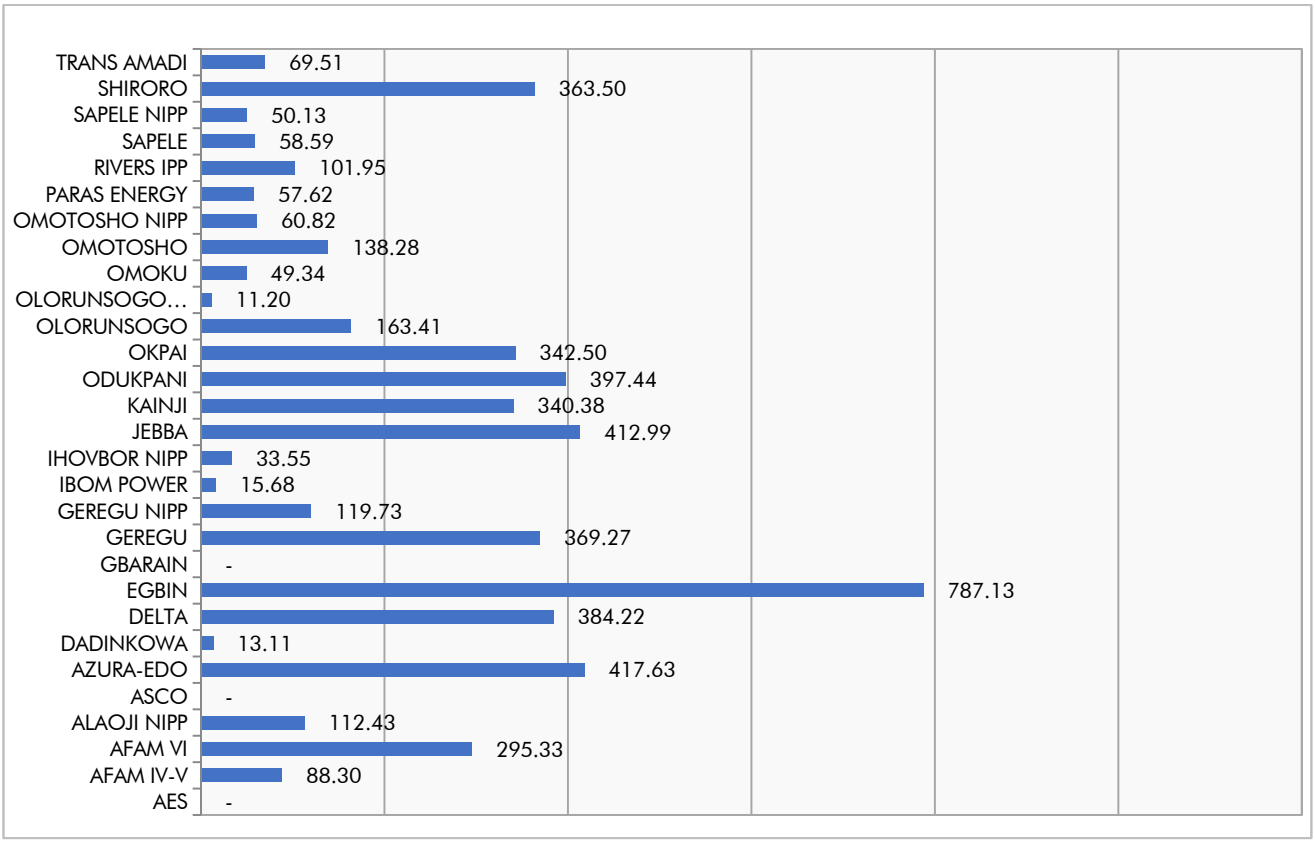


Figure 2: Average Plant Availability (MW)

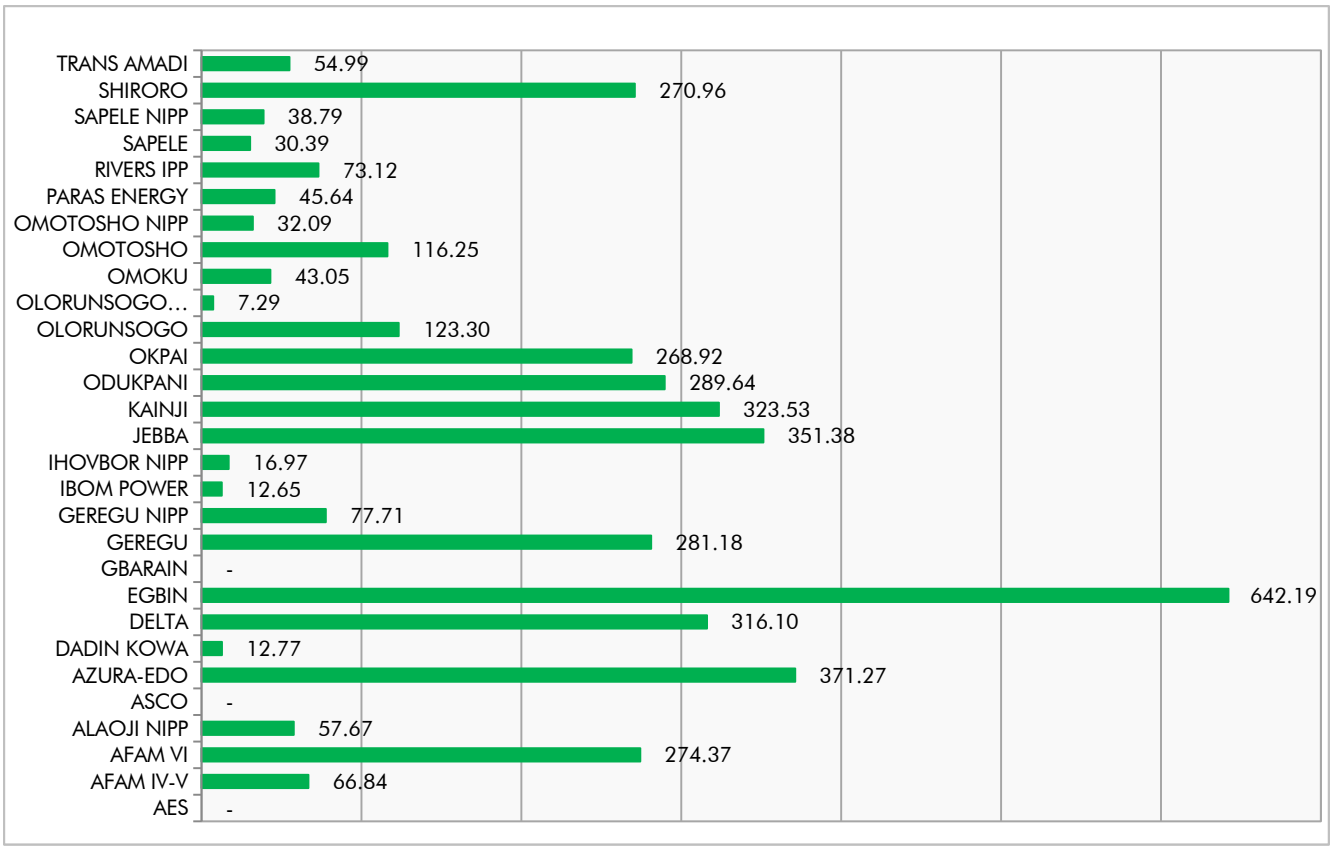


Figure 3: Average Generation by Plant (MWH/H)

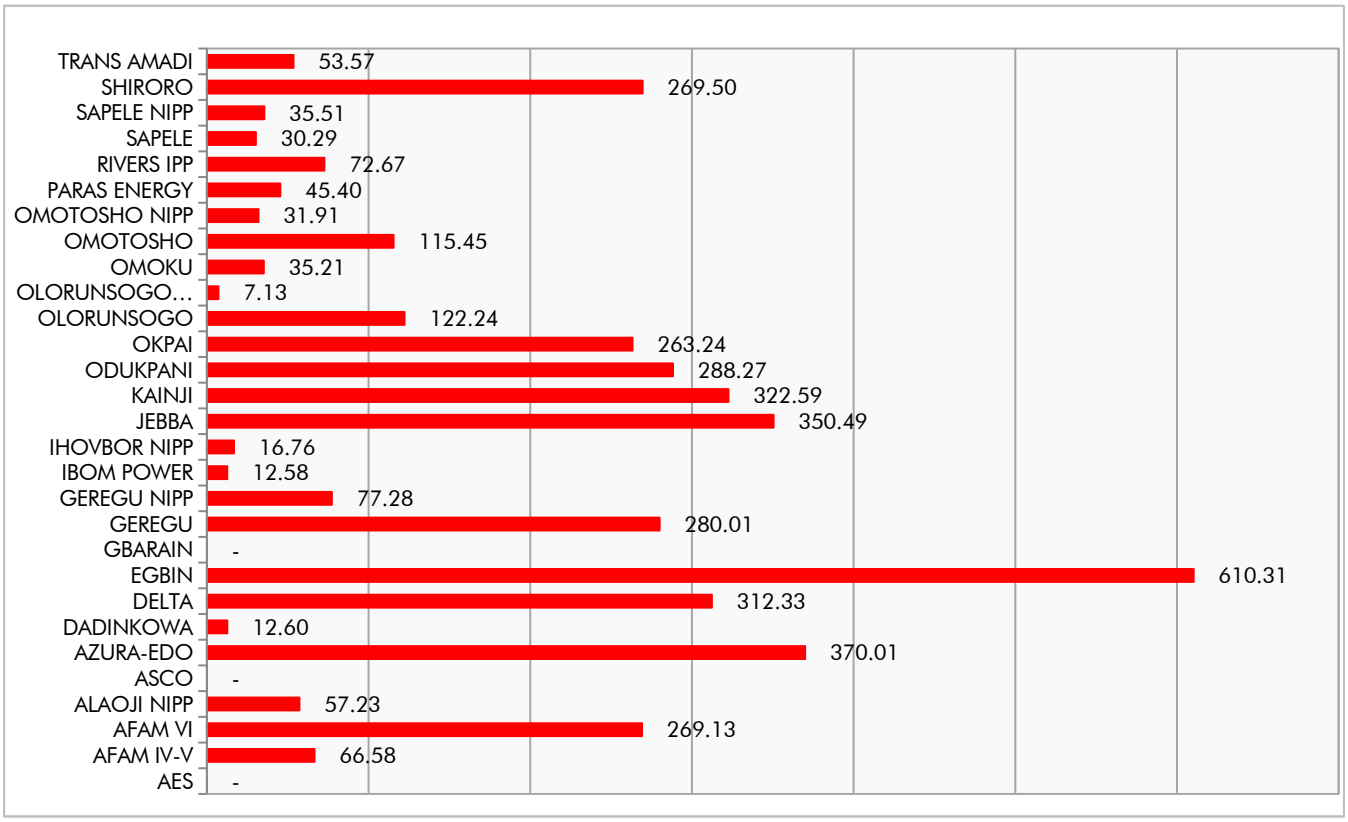


Figure 4: Average Sent-Out by Plant (MWH/H)

3.2 Average Available Capacity

The average available generation capacity was **5,254.03MW,** the major contributors to the available generation capacity include;

Egbin 15% **(787.13MW)**, Azura 7.9% **(417.63MW)**, Jebba 7.9% **(412.99MW)**, Odukpani 7.6% **(397.44MW)**, Delta 7.3% **(384.22MW)**, Geregu 7% **(369.27MW)**, Shiroro 6.9% **(363.50MW)**, Okpai 6.5% **(342.50MW),** Kainji 6.5% **(340.38MW)**, Afam VI 5.6% **(295.33MW)** and Others 21.8% **(1,143.65MW)**.

Overall, ten generating plants contributed more than 78% of the available capacity in 2021.

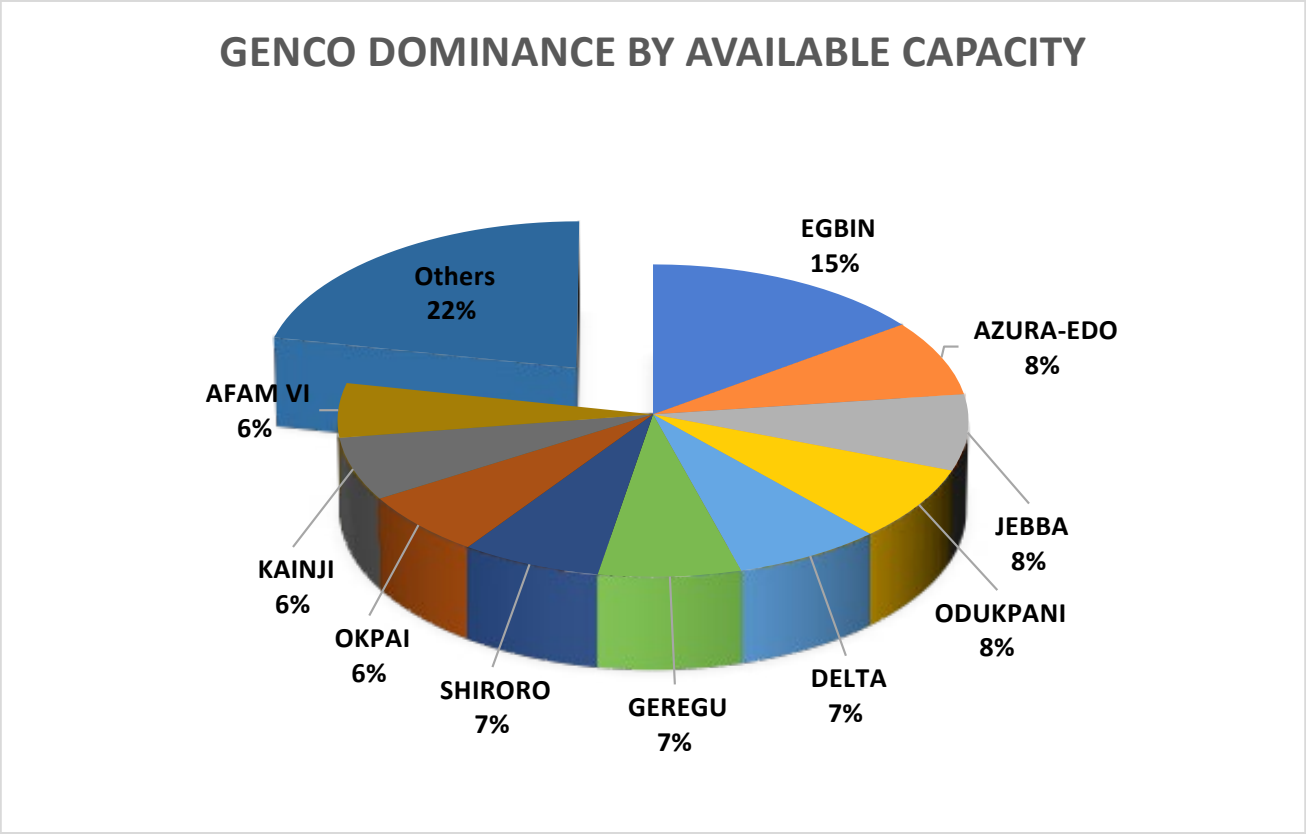


Figure 5: Top 10 Gencos Available Capacity for 2021

3.1 Average hourly Generation

Average Hourly Generation: The combined hourly output of all the units in a power plant varies in accordance with grid demand and availability of the units. A plant's average hourly output throughout the quarter is an indication of the operational health of the power plant as well as the overall grid demand during the period because a plant is only dispatched when there is a load in need of power on the system. Incessant technical faults, gas constraints, maintenance as well as undulating load demand patterns have continued to affect the amount of energy generated by power plants. The reduced generation was also due to an overall reduction in available capacity.

In 2021 the grid's average hourly generation was **4,199.06MWh/h**. Ten generating plants were responsible for more than 80% of the average hourly generation while sixteen generating plants were only able to contribute 19.30%. This is depicted in Figure 6 below

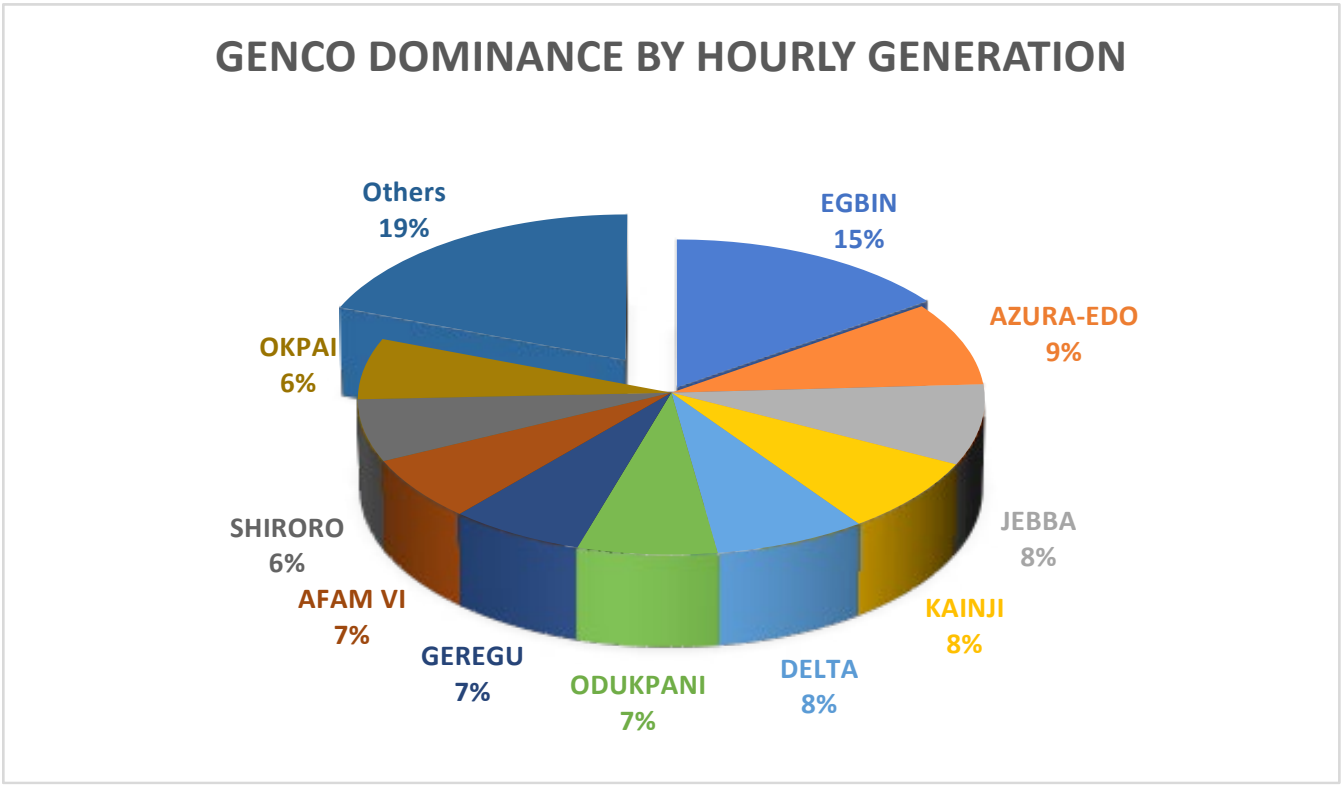


Figure 6: Top 10 Gencos Dominance by Hourly Generation for 2021

3.4 Average Energy Sent Out by Plants

The average energy sent out in 2021 was **4,128.32 MWh/h**. There are three major types of plant by fuel use on the grid (Gas plants, Steam/Gas plants and Hydro plants). Gas plants contributed **2,532.53 MWh/h** (61%), Steam /Gas plants **640.61 MWh/h** (16%) and Hydro plants **955.18 MWh/h** (23%). Overall, gas and steam plants contributed 77% of the average energy sent out in 2021 and Hydro plants contributed 23% of the average energy sent out in 2021. See Figure 7 below

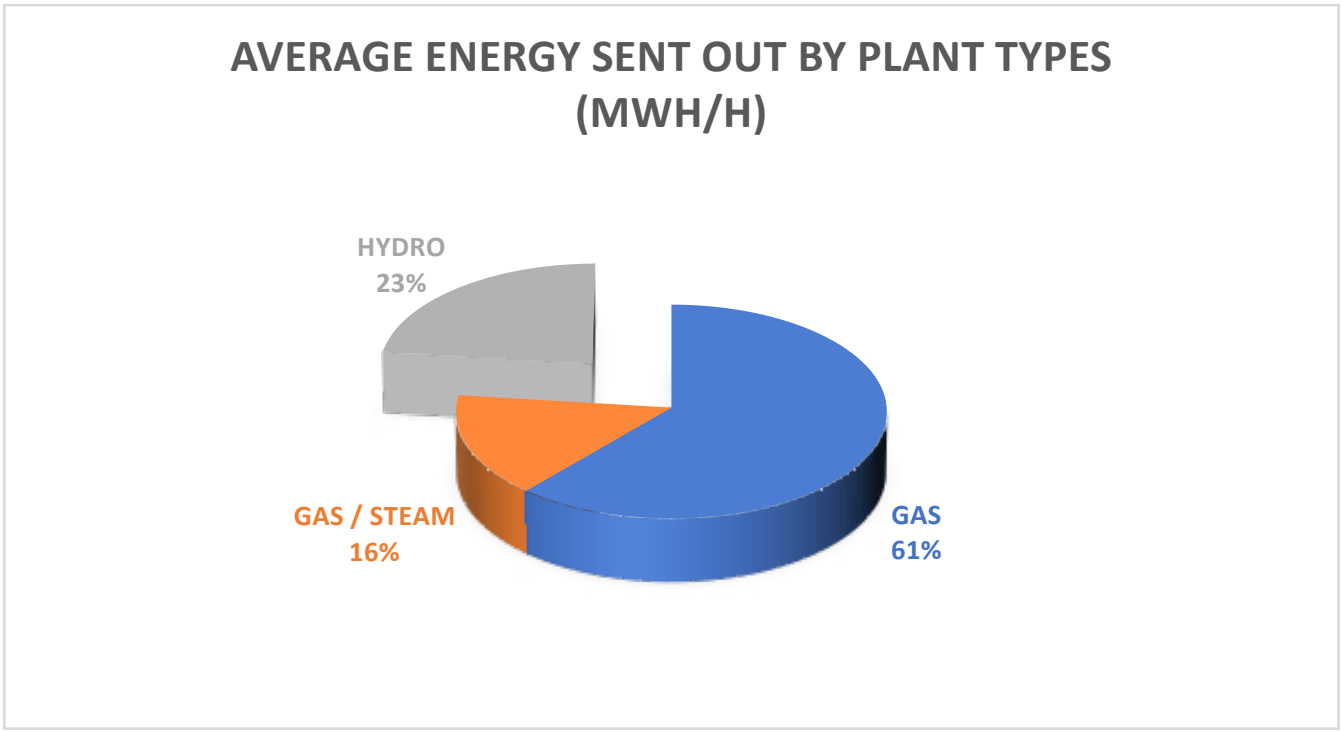
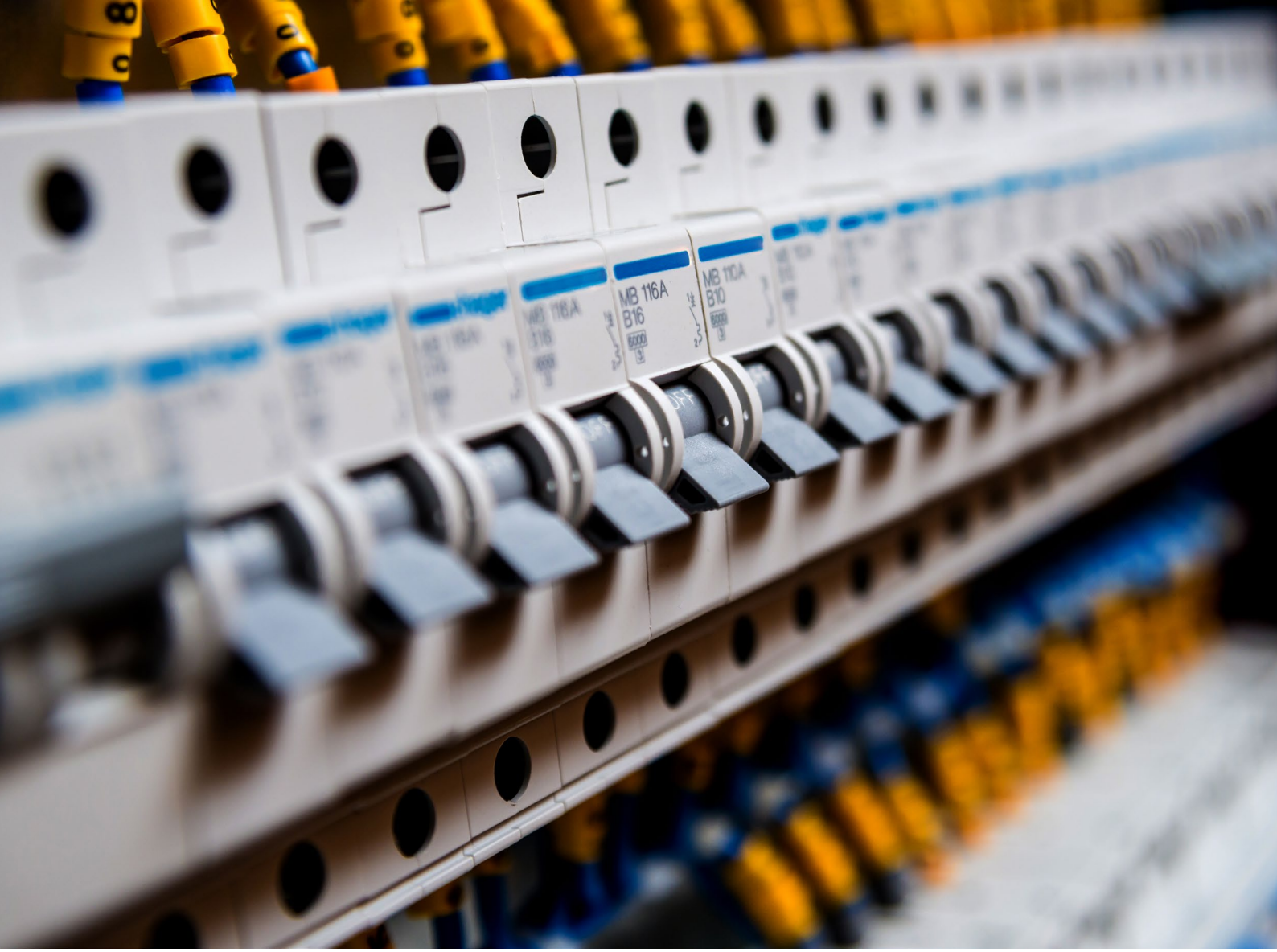


Figure 7: Average Energy Sent Out by Plant Types for 2021



4 Operational Performance

4.1 Capacity Utilization

Capacity Utilization Percentages (CUP) is the ratio of the Energy Sent Out (ESO) to Capacity Made Available (CMA). The capacity utilization for all the generation plants in 2021 was 79%. The CUP for the thermal plants is 72% while for the Hydro plants is 87%. The CUP values shows that only 79% of the average capacity made available was converted to energy sent out in 2021. The utilization varies across the various plants, Alaoji NIPP was only able to convert 51% of its available capacity while Dadin Kowa Hydro converted 96% of its capacity to energy. Low value CUPs can be attributed to transmission evacuation and fuel constraint. See Table 1 below for the CUP values for all plants in 2021.

Table 1: 2021 Capacity Utilization

Plant	Type	Average Capacity Made Available	Average Energy Sent Out	% of Average Energy Sent Out	Capacity Utilization
AFAM IV-V	THERMAL	88.30	66.58	1.6%	75%
AFAM VI	THERMAL	295.33	269.13	6.5%	91%
ALAOJI NIPP	THERMAL	112.43	57.23	1.4%	51%
AZURA-EDO	THERMAL	417.63	370.01	9.0%	89%
DADINKOWA	HYDRO	13.11	12.60	0.3%	96%
DELTA	THERMAL	384.22	312.33	7.6%	81%
EGBIN	THERMAL	787.13	610.31	14.8%	78%
GEREGU	THERMAL	369.27	280.01	6.8%	76%
GEREGU NIPP	THERMAL	119.73	77.28	1.9%	65%
IBOM POWER	THERMAL	15.68	12.58	0.3%	80%
IHOVBOR NIPP	THERMAL	33.55	16.76	0.4%	50%
JEBBA	HYDRO	412.99	350.49	8.5%	85%
KAINJI	HYDRO	340.38	322.59	7.8%	95%
ODUKPANI	THERMAL	397.44	288.27	7.0%	73%
OKPAI	THERMAL	342.50	263.24	6.4%	77%
OLORUNSOGO	THERMAL	163.41	122.24	3.0%	75%
OLORUNSOGO NIPP	THERMAL	11.20	7.13	0.2%	64%
OMOKU	THERMAL	49.34	35.21	0.9%	71%
OMOTOSHO	THERMAL	138.28	115.45	2.8%	83%
OMOTOSHO NIPP	THERMAL	60.82	31.91	0.8%	52%
PARAS ENERGY	THERMAL	57.62	45.40	1.1%	79%
RIVERS IPP	THERMAL	101.95	72.67	1.8%	71%
SAPELE	THERMAL	58.59	30.29	0.7%	52%
SAPELE NIPP	THERMAL	50.13	35.51	0.9%	71%
SHIRORO	HYDRO	363.50	269.50	6.5%	74%
TRANS AMADI	THERMAL	69.51	53.57	1.3%	77%
		5,254.03	4,128.32	100%	79%

4.2 Generation Mix

The generation mix is the combination of the fuel types used to generate electricity in the year 2021. The national grid consists of two major fuel type Gas/Steam and Hydro. The share of the generation by the fuel types is shown in figure 8 below. The energy generation mix makes the grid susceptible to fluctuation from seasonal variation in water volume and availability of gas.

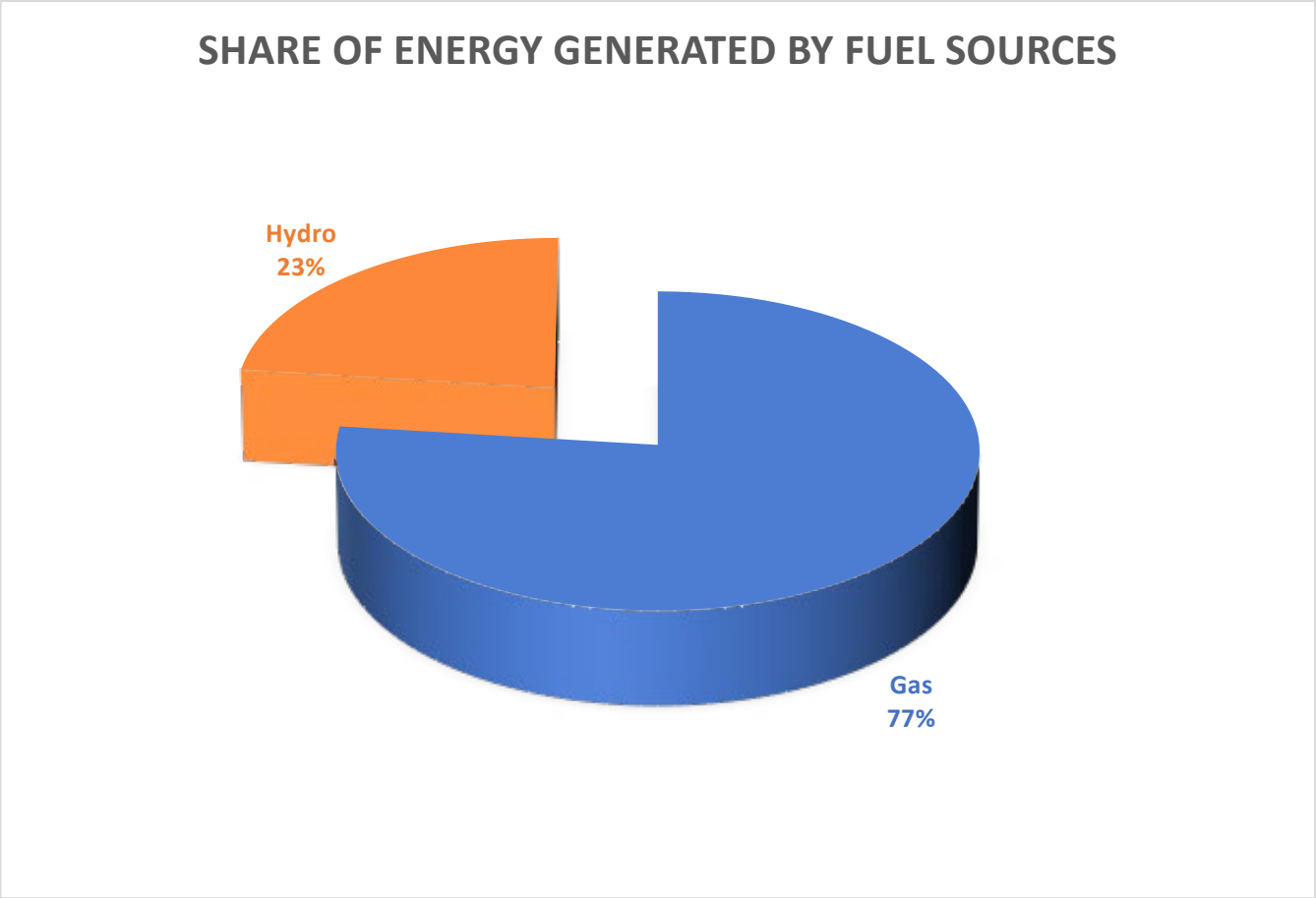


Figure 8: 2021 Energy Generation Mix

5 Transmision

The transmission as managed by the Transmission Company of Nigeria (TCN) is responsible for bulk movement of power from the generating plants to the distribution companies, eligible and international customers. The TCN provides transmission service and system operation.

5.1 Grid Performance

In 2021, the total energy injected to the grid from the generating plants was 36,065.34GWh while TCN was able to deliver 33,373.32GWh to distribution companies, eligible and international customers. TCN was unable to deliver 2,692.02GWh of energy which represent 7.5% of the total energy injected. Table 2 below shows the monthly energy injected and delivered by TCN in 2021.

Table 2: 2021 TCN Wheeled Energy

Month	Energy Injected into Grid (GWh)	Energy Delivered to Dis-Cos & Exports (GWh)
Jan-21	3,294.70	3,042.93
Feb-21	3,007.26	2,781.45
Mar-21	3,219.53	2,982.34
Apr-21	3,044.46	2,816.29
May-21	3,033.42	2,808.75
Jun-21	2,663.95	2,464.44
Jul-21	2,833.95	2,654.16
Aug-21	2,890.40	2,704.65
Sep-21	2,714.19	2,522.31
Oct-21	3,029.77	2,785.37
Nov-21	3,090.54	2,827.85
Dec-21	3,243.19	2,982.78
Total	36,065.34	33,373.32

5.2 Transmission Loss Factor (TLF)

The transmission loss factor is measured as a proportion of the total energy wheeled by the generating plants that was not used by the transmission stations or delivered to the distribution companies, eligible and international customers. The TLF is used as a measure of efficiency of the transmission system. TLF is measured as the percentage of energy delivered to total energy sent out by the generators. The approved TLF figure for TCN in 2021 was 8.05% by the regulator. This means that TCN is allowed to lose 8.05% of the total energy it received from the generating plants.

The actual TLF figure for 2021 was 7.46% which is less than 8.05% by 0.59%. The TLF of 7.46% showed that for every 100MWh of energy injected by the plants in 2021, 7.46MWh of it is lost as against the allowed 8.05MWh indicating an improvement in the transmission efficiency of TCN and more energy delivered to the load. Figure 9 below shows the monthly TLF figures as against the allowed MYTO approved levels in 2021.

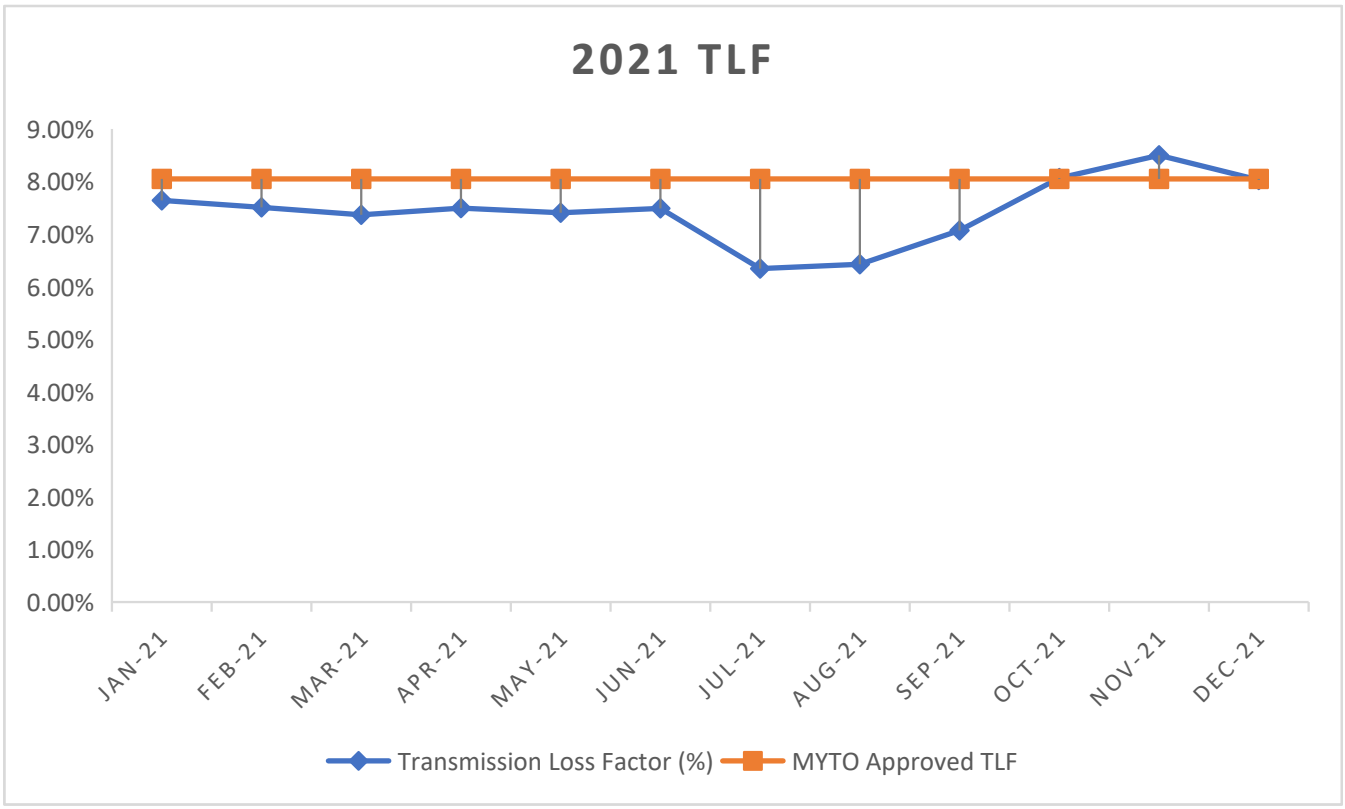


Figure 9: 2021 TLF Figures versus the MYTO approved TLF

5.3 System Collapse

The national grid operates as interconnected system of transmission lines connecting generating plants to load centres across the country. The grid is designed to operate within a determined limit of voltage (330kV±0.5%) and frequency (50Hz±0.5%). Whenever, it operates outside these limits, the grid becomes unstable and can lead to disruption in the system. The disruption can be in a section of the grid (partial collapse), or the entire grid (total collapse) which leads to blackouts. The System Operator is responsible for the maintaining grid stability and also ensure there is enough reserve to maintain the grid.

In 2021, four system collapses were recorded, there was two partial collapses recorded in February and August and two full system collapses in May and July. Table 3 highlights the number of collapses recorded in 2021.

Table 3: System Collapse in 2021

Month	No. of Total System Collapse	No. of Partial System Collapse
Jan-21	0	0
Feb-21	0	1
Mar-21	0	0
Apr-21	0	0
May-21	1	0
Jun-21	0	0
Jul-21	1	0
Aug-21	0	1
Sep-21	0	0
Oct-21	0	0
Nov-21	0	0
Dec-21	0	0
Total	2	2

6 Distribution Sub-Sector

Section 67 of the Electric Power Sector Reform Act, 2005 empowers the Distribution Companies (DisCos) to retail electricity to the end-user consumers. These customers are categorized into residential, commercial, industrial, and special classes. However, with the introduction of the Service-Based Tariff (SBT) on the 1st of November 2020 to improve service delivery to end-user Customers and ensure that the electricity tariffs paid by end-user Customers, customers are now categorized into Bands. Under the SBT, consumers are classified in Bands A to E as follows:

Band A: Minimum of 20 Hours

Band B: Minimum of 16 Hours

Band C: Minimum of 12 Hours

Band D: Minimum of 8 Hours

Band E: Minimum of 4 Hours

There are eleven (11) DisCos in Nigeria providing power supply to different areas (franchise areas), namely:

1. Abuja Electricity Distribution Company (AEDC) - Abuja FCT, Niger, Kogi, and Nassarawa States.
2. Benin Electricity Distribution Company (BEDC) - Edo, Delta, Ondo, and part of Ekiti States.
3. Eko Electricity Distribution Company (EKEDC) - parts of Lagos State.
4. Enugu Electricity Distribution Company (EEDC) - Enugu, Abia, Imo, Anambra, and Ebonyi States.
5. Ibadan Electricity Distribution Company (IBEDC) - Oyo, Ogun, Osun, Kwara, and parts of Ekiti States
6. Ikeja Electric (IE) - parts of Lagos State.
7. Jos Electricity Distribution Company (JEDC) - Plateau, Bauchi, Benue, and Gombe States.
8. Kaduna Electricity Distribution Company (KAEDC) - Kaduna, Sokoto, Kebbi, and Zamfara States.
9. Kano Electricity Distribution Company (KEDC) - Kano, Jigawa, and Katsina States.
10. Port Harcourt Electricity Distribution Company (PHEDC) - Rivers, Cross River, Bayelsa, and Akwa Ibom States.
11. Yola Electricity Distribution Company (YEDC) - Adamawa, Borno, Taraba, and Yobe States.

These companies have distribution licensees, obtained from the Nigerian Electricity Regulatory Commission (the Commission) which authorizes them to construct, operate, and maintain a distribution system and facilities. The DisCos connect customers for the purpose of receiving a supply of electricity and engaging in the installation and maintenance of meters, as well as billing and collection activities. Before the electricity sector reforms in 2005, the distribution sub-sector is still inundated with numerous challenges ranging from dilapidated distribution infrastructure, customer empathy, high aggregate technical commercial and collection (ATC&C) losses, huge outstanding Ministry Departments and Agencies (MDA) debts, market and tariff shortfalls, and paucity of funds, etc.

The DisCos agreed to meet certain performance and efficiency targets in their Performance Agreements with the Bureau of Public Enterprises (BPE). However, to meet their set performance and efficiency targets contained in their respective Performance Agreements as set by the BPE, there is a need for massive investments in the distribution networks of the DisCos. Consequently, in December 2021, the BPE relinquished the monitoring of the performance targets to the NERC. In order words, NERC is now responsible for monitoring the achievement of the performance targets by the DisCos.

This chapter presents an evidence-based analysis of several performance parameters related to the distribution sub-sector. The highlighted parameters include energy received, energy billed, revenue collected, ATC&C losses, and operational performance.

6.1 Energy Received

The amount of energy received at the distribution interface is subject to the quantum of the energy evacuated from the generating plants, transmission loss factor (TLF), and wheeling capacity. The grid currently operates at a wheeling capacity close to 5,500 MW, although the simulated wheeling capacity is estimated at 8,100 MW. However, there are also grid constraints and transmission losses that further reduce the operational wheeling capability to lower levels. Several upgrades and expansions in the transmission and distribution network interfaces (132kV and 33 kV), including the lines and injection substations, can improve the amount of energy received. Table 1 below shows the Quarterly Energy (GWh) received by the DisCos for 2021

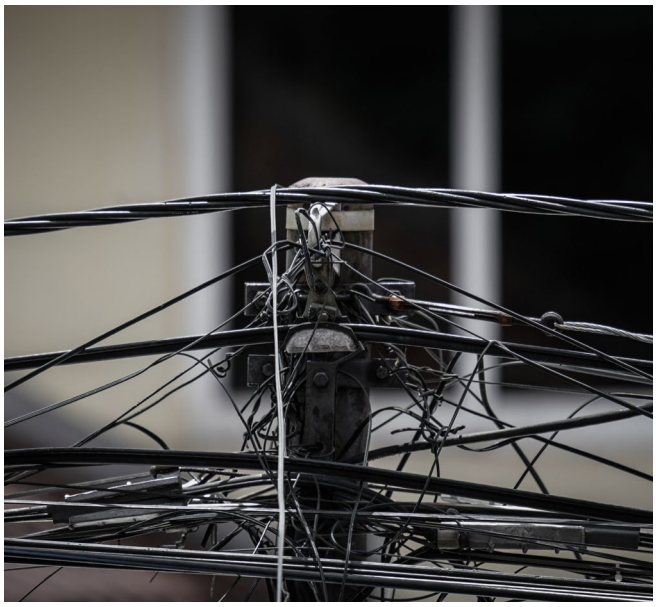
Table 4: Quarterly Energy (GWh) received by the DisCos for 2021

DisCos	Energy Received in 2020/ Q4	Energy Received in 2021/ Q1	Energy Received in 2021/ Q2	Energy Received in 2021/ Q3	Energy Received in 2021/ Q4
Abuja	973	1,061	985	823	1,057
Benin	666	702	647	644	693
Eko	896	975	841	787	927
Enugu	671	783	660	644	734
Ibadan	1,015	1,105	921	930	1,079
Ikeja	1,170	1,208	1,104	1,074	1,167
Jos	359	328	348	394	379
Kaduna	566	551	584	573	628
Kano	480	506	486	573	541
Port Harcourt	543	565	528	465	489
Yola	282	253	224	251	217

Source: NERC Quarterly Reports

6.2 Distribution Losses

Distribution losses in the Nigerian Electricity Supply Industry (NESI) can be categorized into technical, commercial, and collection losses.



a. Technical losses result from the wheeling and distribution of electricity through conductors, substations, and transformers. It is impossible to eradicate technical losses due to the nature of Nigeria's dilapidated power infrastructure. Contributors to technical losses within the DisCo sub-sector are undersized conductors, vandalism, line snaps, losses on the transformers, knock-down of technical infrastructure, sub-standard equipment, weak joints, etc. However, these losses can be minimized with proper equipment sizing and selection.

b. Commercial loss is the difference between energy received by the DisCo and the energy bill by the DisCo. In other words, it is the quantity of energy that is consumed but not accounted for. This occurrence can be related to illicit activities, such as meter bypass, illegal connections, the existence of illegal meters, meter tampering, and energy theft. An erroneous estimate (or under-billing) of the electricity consumption from unmetered customers could also be a reason for commercial losses.

Commercial Loss = Energy Received – Energy Billed

c. Collection losses occur when the DisCo is unable to recover the amounts due for consumed energy. It is the difference between the total amount billed for energy consumed and the total amount collected from the customers for energy consumed. The non-payment of electricity utility bills by customers results in collection losses.

Collection Losses = Billing – Revenue Collected

The combination of the three (3) losses results in what is referred to as Aggregate Technical Commercial & Collection (ATC&C) losses. It is the difference between the amount of electricity received by a DisCo from the Transmission Company and the amount of electricity for which it invoices its customers plus the adjusted collection losses. These losses have considerably contributed to the colossal amount of market shortfalls in the electricity market as well as the inability of the DisCos to meet their market obligations to the Nigerian Bulk Electricity Trading Plc (NBET) and the Market Operator (MO). In addition, many of the DisCos face a paucity of funds which has inhibited their ability to provide critical electricity infrastructure such as pre-paid meters (PPM), transformers, feeders, etc., to their customers.

Consumer malpractices that attribute to high ATC&C losses are widespread across all the DisCos and have continued to have devastating and life-threatening impacts on their business charters. Urgent measures are being taken to reduce these malpractices. In 2021, the average ATC&C losses were about 45 percent. In essence, the DisCos are still plagued with inadequate infrastructure, vandalism, and theft of equipment, as well as the inability to accurately meter and invoice their customers and collect revenues.

6.2.1 Technical and Commercial Losses

Loses from energy theft account for a substantial part of the ATC&C losses currently experienced by the DisCos. In the Nigerian Electricity Market, energy theft has led to poor collection efficiency for the DisCos, low remittance up the value chain, and high estimated billings to unmetered customers due to stolen and unaccounted energy.

To ensure the sustainability of the DisCos, it is imperative to reduce the ATC&C losses within the electricity distribution network. There was also an exigency for DisCos to formulate strategies to reduce losses and improve billing efficiency, as well as revenue collection. For the period under review, the average recorded ATC losses for all the DisCos during electricity distribution in Q4 was about 46.91 percent. The technical and commercial losses are 23.4 percent while the collection losses were 30 percent. In Q2 and Q3, the ATC&C for the DisCos was 49.25 percent and 44.10 percent respectively. The technical and commercial losses were 24.25 percent and 22.87 percent whilst the collection losses were 33 percent and 27.52 percent respectively. This implies that the ATC&C losses

6.2.2 Collection Losses

The low billing and collection efficiencies of the DisCos have led to huge ATC&C losses in the sector. This is due to the inability of the DisCos to collect and assure their monthly revenue from their teeming customers, most of whom are residential. Major contributors to the high collection losses experienced by the DisCos include the huge metering gap, the inability of the DisCos' representatives to adequately cash-drive in areas where post-paid meters are prevalent, customer apathy, high estimated billing, massive MDA debts, and the unwillingness to pay electricity bills. As of 2021 Q4, only about 79,978 meters were deployed under the MAP and NMMP meter deployment programs across the eleven DisCos. Yola DisCo did not meter

any customers during this period. Bear in mind that the Commission has capped the price for meters at N117,910.69 and N63,061.32 for the 3-phase meters and single-phase PPMs respectively. As a result, the MAPs are now unable to recover their costs due to the recent hike. The low production capacity of local meter manufacturers has further compounded the current situation because most of the manufacturers are also participating mainly as MAPs. It will also be difficult for the MAPs to unlock and access future finances since the current model is no longer viable. As it stands, financing for local meter manufacturing, while also reviewing the local content requirement (currently at 30%) could provide viable solutions to this problem. Fittingly, DisCos will need to close the metering gap by providing meters to registered consumers that are under the weight of estimated billing. This is also logical, as consumers will now pay for only the electricity they consume. Concerning estimated billing, the general perception is that the situation translates to several outcomes. These outcomes include consumer complaints about exorbitant bills; avenues for illegal activities from DisCos' marketing staff to defraud and extort consumers; consumer apathy in paying for electricity; and hostility, assault, and physical harm on the staff of the DisCos. Ultimately, there is a lack

of transparency and accountability between the DisCos and consumers. For resolution, consumer enumeration exercises can ensure that all existing and potential customers are registered, identified, and categorized. One of the advantages of this exercise is that it would ensure that customers are properly classified as there are several instances of wrong customer classification by DisCos, which causes massive revenue leakages. It would also allow for effective planning for future infrastructural development and allow the Meter Asset Providers (MAPs) to effectively roll out pre-paid meters to registered customers.

Consumers also need to be better sensitized and protected. This can improve their willingness to pay for electricity consumed.

The DisCos with the highest collection efficiencies for Q4 in 2021 are Ikeja, Eko, and Abuja DisCos with collection efficiencies of 89.52%, 82.17%, and 85.41% respectively. Conversely, the DisCos with the least collection efficiencies for Q4 in 2021 are Jos, Kaduna, and Yola DisCos with collection efficiencies of 43.75%, 34.53%, and 52.63% respectively. Table 2 below shows the revenue performances of the DisCos for Q4 in 2021.

Table 5: DisCos Revenue Performance for 2021/Q4

DisCos	Total Billing in 2021/Q4 (N/ Billion)	Revenue Collected in 2021/ Q4 (N/Billion)	Collection Efficiency in 2021/ Q4 (%)	Energy Received in 2021/ Q3	Energy Received in 2021/ Q4
Abuja	37.42	31.96	85.41	823	1,057
Benin	28.52	15.44	54.14	644	693
Eko	40.19	33.02	82.17	787	927
Enugu	27.32	18.65	68.26	644	734
Ibadan	38.23	24.76	64.77	930	1,079
Ikeja	47.48	42.50	89.52	1,074	1,167
Jos	15.04	6.58	43.75	394	379
Kaduna	24.97	8.62	34.53	573	628
Kano	19.82	13.36	67.38	573	541
Port Harcourt	19.07	12.62	66.18	465	489
Yola	5.05	2.66	52.63	251	217

Source: NERC Quarterly Reports

The DisCos with the least ATC&C losses for Q4 in 2021 are Ikeja, Eko, and Abuja DisCos with collection efficiencies of 20%, 27%, and 44% respectively. Conversely, the DisCos with the highest collection efficiencies for Q4 in 2021 are Jos, Kaduna, and Yola DisCos with collection efficiencies of 67%, 74%, and 73% respectively.

Table 6 below shows the average ATC&C losses of the DisCos for 2021

Table 6: Quarterly ATC&C by the DisCos for 2021

DisCos	ATC&C in 2020/Q4	ATC&C in 2021/Q1	ATC&C in 2021/Q2	ATC&C in 2021/Q3	ATC&C in 2021/Q4
Abuja	43%	48%	40%	40%	44%
Benin	55%	55%	50%	50%	54%
Eko	31%	29%	25%	25%	27%
Enugu	54%	54%	51%	51%	53%
Ibadan	56%	56%	46%	46%	54%
Ikeja	31%	27%	21%	21%	20%
Jos	67%	65%	63%	63%	67%
Kaduna	79%	76%	73%	73%	74%
Kano	48%	53%	47%	47%	48%
Port Harcourt	59%	54%	51%	51%	46%
Yola	73%	79%	75%	75%	73%

Source: NERC Quarterly Reports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