Electricity on Demand

2023

1ST QUARTER

The Nigerian Electricity Regulatory Commission (NERC) quarterly report is prepared in compliance with Section 55(3) of the Electric Power Sector Reform Act (EPSRA) 2004, which mandates the Commission to submit quarterly reports of its activities to the President and the National Assembly. The report analyses the state of the Nigerian Electricity Supply Industry (NESI) covering the operational and commercial performance, regulatory functions, consumer affairs as well as the Commission's finances and staff development. The report is directed at a wide spectrum of readers including energy economists, engineers, financial and market analysts, potential investors, government officials and institutions, the private sector as well as general readers. NERC quarterly report is freely available to stakeholders of NESI, government agencies and corporations. Individuals can also access any issue freely from the Commission's Website: www.nerc.gov.ng

Please direct all inquiries, comments, and suggestions on the report to:

The Commissioner
Planning, Research and Strategy Division
Nigerian Electricity Regulatory Commission
Plot 1387, Cadastral Zone A00
Central Business District
P.M.B 136, Garki, Abuja
Nigeria
NERC website: www.nerc.gov.ng

Contact Centre:
Tel: +234 (09) 462 1400, +234 (09) 462 1410
Email: info@nerc.gov.ng

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List of Abbreviations

ADR	Alternative Dispute Resolution
AEDC	Abuja Electricity Distribution Company Plc
ATC&C	Aggregate Technical, Commercial & Collection Loss
BEDC	Benin Electricity Distribution Company Plc
CAPEX	Capital Expenditure
CCU	Customers Complaint Unit
CEET	Compagnie Energie Electrique du Togo
CTC	Competition Transaction Charge
DisCos	Distribution Companies
DSOs	Distribution System Operators
ECR	Eligible Customer Regulations
EEDC	Enugu Electricity Distribution Company Plc
EKEDC	Eko Electricity Distribution Company Plc
EPSRA	Electric Power Sector Reform Act
GenCos	Generation Companies
GWh	Gigawatt hour
IBEDC	Ibadan Electricity Distribution Company Plc
IEDN	Independent Electricity Distribution Network
IE	Ikeja Electric Plc
JEDC	Jos Electricity Distribution Company Plc
KAEDC	Kaduna Electricity Distribution Company Plc
KEDC	Kano Electricity Distribution Company Plc
kWh	Kilowatt hour
MAP	Meter Assets Provider
MDA	Ministries, Departments and Agencies
MO	Market Operator
MTS	MYTO Target Sales
MW	Megawatts
MWh	Megawatt hour
MYTO	Multi-Year Tariff Order
NBET	Nigerian Bulk Electricity Trading plc
NERC	Nigerian Electricity Regulatory Commission
NESI	Nigerian Electricity Supply Industry
NICE	Notices of Intention to Commence Enforcement
NIGELEC	Nigerien Electricity Society
NIPP	National Integrated Power Project
NMMP	National Mass Metering Program
PAC	Partial Activation of Contract
PCC	Partial Contracted Capacity
PHEDC	Port Harcourt Electricity Distribution Company Plc
PP	Percentage points
SBEE	Société Béninoise d'Energie Electrique
TCN	Transmission Company of Nigeria Plc
TLF	Transmission Loss Factor
YEDC	Yola Electricity Distribution Company Plc

01 Executive Summary

1.0 Summary

In line with the regulatory authority vested on the Commission through the mandates derived from the EPSRA 2004, the Nigerian Electricity Regulatory Commission (NERC or the Commission) continued the function of regulating the technical, operational, and commercial performance of the Nigerian Electricity Supply Industry (NESI). As such, the Commission oversees the performance of all licensees in the NESI to ensure the delivery of stable, reliable, and safe electricity to all consumers.

Operational Performance

The Operational performance parameters covered in 2023/Q1 report include - the available generation capacity, average hourly generation, total quarterly generation, load factor and generation mix of grid-connected power plants as well as the grid frequency and voltage profiles.

The average available generation capacity in 2023/Q1 was 4,605.72MW.

a. **Available Generation Capacity:** In 2023/Q1, the twenty-six (26) grid-connected and operational power stations had an average available capacity of 4,605.72MW, which was a 2.27% (102.14MW) increase over 4,503.59MW achieved in 2022/Q4 (Figure A). The twenty-six (26) generation stations which injected energy to the national grid in the quarter under review included eighteen (18) gas, four (4) hydro, two (2) steam, and two (2) gas/steam-powered plants.

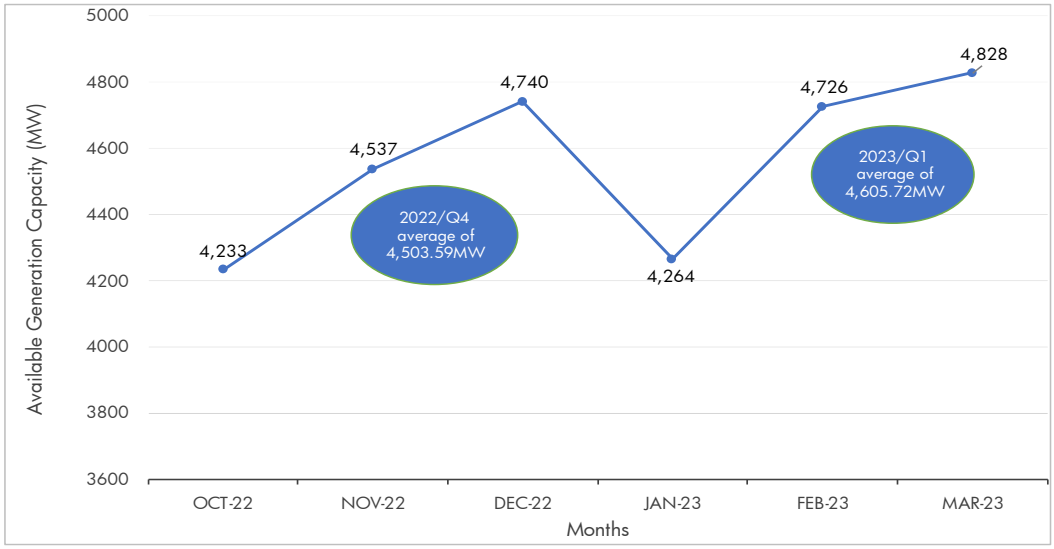


Figure A: Available Generation Capacity (Oct 2022 – Mar 2023)

The total electricity generated in 2023/Q1 was 9,350.24GWh (0.16% lower than 2022/Q4)

b. **Average Hourly Generation:** In 2023/Q1, the average hourly generation of all available units increased by 92.05MWh/h (2.17%) from 4,242.36MWh/h in 2022/Q4 to 4,334.41MWh/h. However, the Plant Load Factor across the generation plants decreased by 9.04 pp from 95.43% in 2022/Q4 to 86.39% (2023/Q1). The decline in load factor is as a result of the marginally lower increase in average hourly generation when compared to the increase in average available capacity recorded in 2023/Q1 relative to 2022/Q4.

c. **Total Quarterly Generation:** Figure B shows that the total quarterly generation in 2023/Q1 was 9,350.24GWh. This represents a decrease of -15.41GWh (-0.16%) from 9,365.65GWh generated in 2022/Q4.

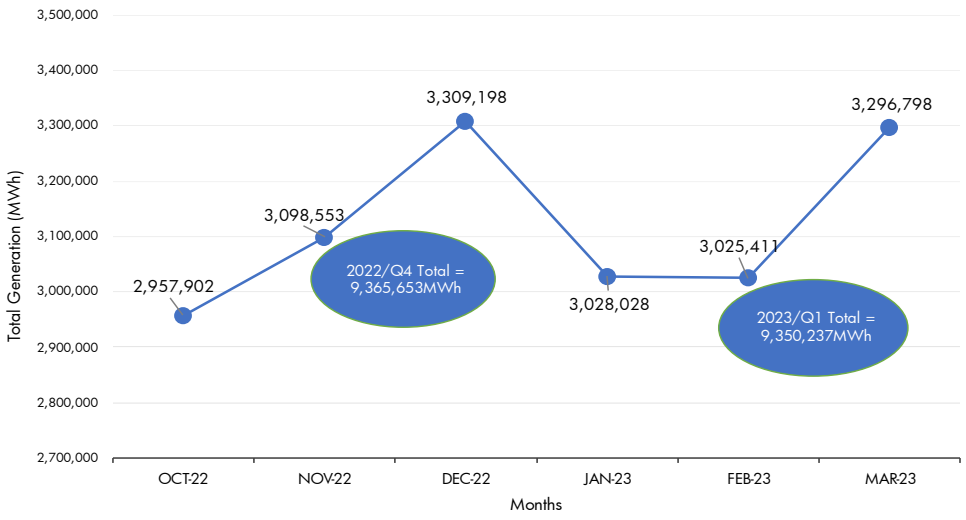


Figure B: Total Generation (Oct 2022 – Mar 2023)

d. **Grid Performance:** In 2023/Q1, the averages of daily maximum and minimum system frequency were 50.86Hz and 49.08Hz. Similar to the averages recorded in 2022/Q4[1], both frequencies are outside the higher and lower bounds of the normal operational limit (50Hz±0.25Hz) approved in the grid code. The averages of daily maximum and minimum system voltage in 2023/Q1 were 352.96kV and 299.97kV respectively. Both were also outside the limits set in the grid code (330kV±16.5kV).

[1] The average upper and lower bounds of the system frequency in 2022/Q4 were 50.55Hz and 49.08Hz respectively.

There was no grid collapse in 2023/Q1.

The continual operation of the grid outside the normal operational limits contained in the grid code remains a major problem for the System Operator (SO) who has an obligation to operate the system as close as possible to the set targets for the respective parameters. Operating the system with deviations from these set targets reduces the quality of electricity being supplied to consumers (this is particularly important to industrial customers that operate highly sensitive equipment). Such operations also compromise the long-term health of power system infrastructures at both the transmission and distribution levels.

The SO must invest in infrastructures and incorporate operational procedures that will improve its real-time grid visibility thereby enabling it to enforce grid discipline among the various market participants.

Commercial Performance

The commercial performance of 2023/Q1 report covers – DisCo's energy offtake ratio, DisCos' Billing efficiency, DisCos' Collection efficiency, DisCos' Aggregate technical, commercial, and collection loss, as well as the Market remittance of relevant participants. The Commission monitors the financial performance of the NESI to ensure efficient and commensurate cash flow along the value chain for sustainability of the industry.

a. **DisCos' Energy Offtake Performance:** In 2023/Q1, the total energy offtake by DisCos at their trading points was 3,470.13MWh/h which is identical to the 3,470.09MWh/h recorded in 2022/Q4 (difference is below 0.002%).

A total of ₦247.09 billion was collected by all DisCos in 2023/Q1 out of the ₦359.38 billion billed to customers.

b. **Billing Efficiency:** The total energy received by all DisCos in 2023/Q1 was 7,495.49GWh while the energy billed to end-use customers was 5,844.21GWh, translating into an average billing efficiency of 77.97%. This represents an increase of 1.81 pp relative to the 76.16% recorded in 2022/Q4.

c. **Collection Efficiency:** The total revenue collected by all DisCos in 2023/Q1 was ₦247.09 billion out of ₦359.38 billion billed to customers. This corresponds to a collection efficiency of 68.75% which represents a decline of 4.58 pp when compared to 2022/Q4 (73.33%). This marks the first time in the last five (5) quarters where DisCos

cumulatively recorded a reduction in their quarter-on-quarter collection efficiency.

Relative to 2022/Q4, the improvement recorded in the total billing ₦27.10 billion (8.15%) does not correspond to the improvement recorded in total collections ₦3.44 billion (1.41%). This resulted in the decline in collection efficiency recorded in the quarter. With increased collections representing 17.30% of increased billing, collection efficiency is bound to reduce. This puts an impetus on the DisCos to employ technologies and operational procedures that will increase both billing and collection performances to forestall long-term financial challenges.

d. Aggregate Technical, Commercial and Collection (ATC&C) Loss: ATC&C provides a consolidated report of how much revenue a DisCo is able to collect relative to how much it should have collected based on the volume of energy it received (and sold to customers). It is the indicator that evaluates the actual energy and revenue loss in electricity distribution systems.

The ATC&C loss in 2023/Q1 was 46.39% comprising - technical and commercial loss (22.03%) and collection loss (31.25%). The ATC&C loss increased by 2.24 pp compared to 2022/Q4 (44.15%). It is evident that the cause of the increased ATC&C loss is its collection loss component as earlier explained – technical/commercial losses actually reduced by 1.81 pp between 2022/Q4 and 2023/Q1.

The trend of all DisCos failing to achieve the efficient loss targets allowed in their tariffs continued in 2023/Q1. This translates into an inability to collect the revenues that are required to finance the sustainable long-term operations of the business, while also providing reasonable returns for investors.

e. Market remittance: In 2023/Q1, the cumulative upstream invoice payable by DisCos was ₦252.92 billion, consisting of ₦209.26 billion for generation costs from NBET and ₦43.66 billion for transmission and administrative services by the Market Operator (MO). Out of this amount, the DisCos collectively remitted a total sum of ₦170.59 billion (₦141.51 billion for NBET and ₦29.04 billion for MO) with an outstanding balance

of ₦82.33 billion. This translates to a remittance performance of 67.43% in 2023/Q1 compared to the 78.69% recorded in 2022/Q4.

Relative to 2022/Q4, the cumulative DisCo under-remittance to the market increased by ₦11.19 billion which translated to a -6.16 pp reduction in the remittance performance in 2023/Q1. The disaggregated DisCos remittance performance to the market for 2023/Q1 is presented in Figure C.

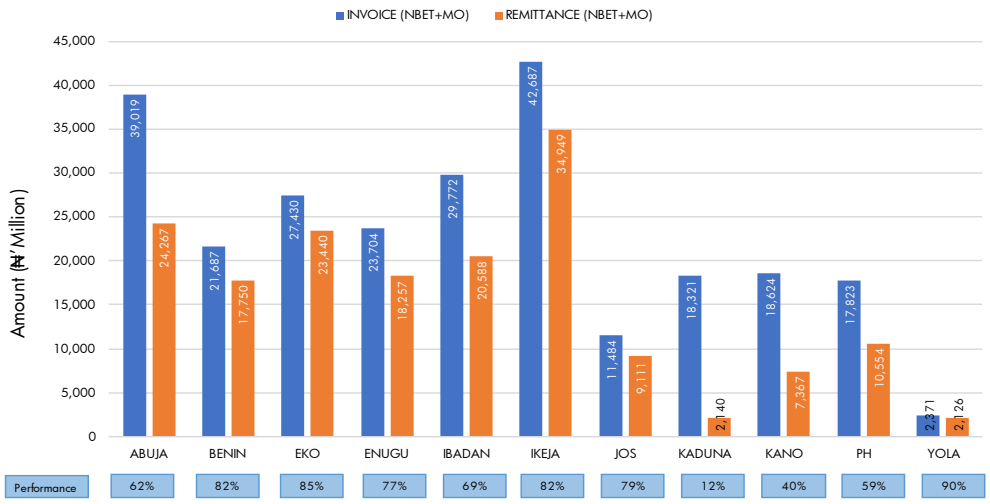


Figure C: MRO adjusted invoices and remittances in 2023/Q1

International customers had a remittance performance of 0% to the MO in 2023/Q1.

f. Remittance by Special and Cross-border Customers: None of the underlisted international customers made any payment against the cumulative $16.11 million invoice issued to them in 2023/Q1; Paras-SBEE ($3.46 million), Transcorp-SBEE ($3.85 million), Mainstream-NIGELEC ($5.48 million) and Odukpani-CEET ($3.32 million). Out of ₦842.38 million invoice issued by MO to all the eight (8) bilateral customers in the NESI, only North South/Star Pipe made a remittance of ₦15.38 million against its invoice of ₦24.69 million. The non-remittance by bilateral consumers continues a trend that was highlighted in the past quarterly reports. The MO must invoke the provision of the market rules to curtail the payment indiscipline being exhibited by the various market participants.

Regulatory Functions

In carrying out the functions of regulating the activities of licensees and monitoring performance for compliance with industry standards for a fair, safe, and viable electricity market, the Commission assesses market entry or exit by sector players and issues Guidelines/Orders to licensees accordingly. This is part of the authority vested on the Commission in the EPSRA 2004.

a. Regulations/Orders: The Commission issued one (1) new Regulation; the Customer Protection Regulations (NERC-R-001-2023), and eleven (11) new Orders in 2023/Q1.

b. Licensing and Permits: The Commission approved the issuance of two (2) new generation licenses with a combined capacity of 723MW in 2023/Q1. It also authorised the issuance of two (2) new Independent Electricity Distribution Network (IEDN) licences and amendment of an existing Independent Electricity Distribution licence.

Five (5) captive power generation permits were issued alongside five (5) permits and four (4) registrations for mini-grid. The Commission also certified six (6) Meter Service Providers within the quarter under review.

Consumer Affairs

a. Consumer Education and Enlightenment: The Commission continued to implement customer enlightenment programs within the quarter. This is in keeping with its commitment to ensure continuous customer education and enlightenment of their rights and obligations as well as keeping them informed of other general service delivery matters in the industry.

b. Metering: A total of 171,107 meters were installed in 2023/Q1, representing an increase of 6,495 installations (+3.95%) compared to the 164,612 meters installed in 2022/Q4. The new installations resulted in a 1.06 pp increase in net end-user metering rate in the NESI between 2022/Q4 (42.25%) and 2023/Q1 (43.31%). 158,634 meters were installed under the MAP intervention while 9,931 meters were installed under the NMMP scheme. The metering by the respective DisCos in the quarter under review is presented in Figure D.

A total of 171,107 meters were installed in 2023/Q1.

The Commission expects DisCos to utilise any of the five (5) meter financing mechanisms that have been provided in the 2021 Meter Asset Provider and National Mass Metering Regulations (NERC – R – 113 – 2021) to close their respective metering gaps. As a safeguard for customers against exploitation due to the lack of meters, the Commission has continued to issue monthly energy caps for all feeders in each DisCo. This sets the maximum amount of energy that may be billed to an unmetered customer for the respective month based on gross energy received by the DisCo and the consumption by metered customers.

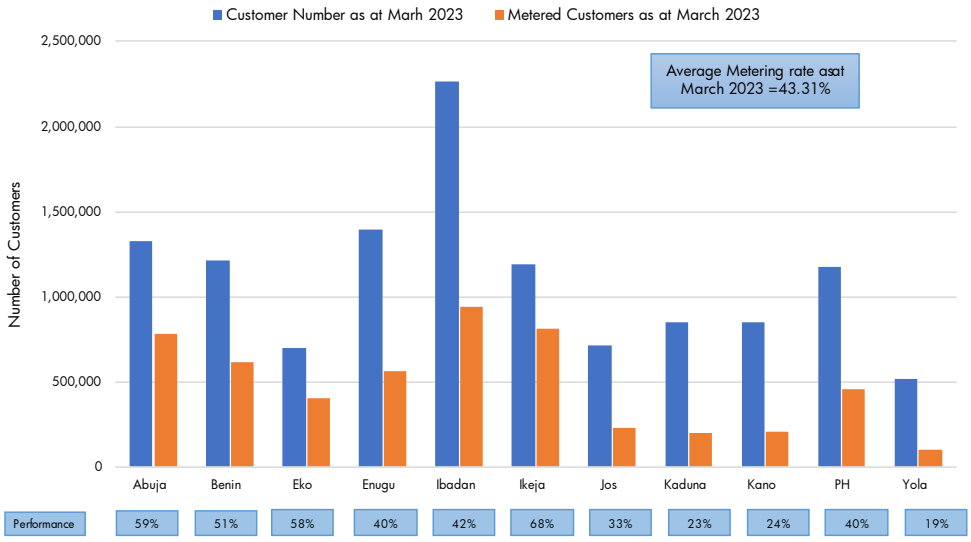


Figure D: Status of Customer metering as at March 2023

c. Customer Complaints: The DisCos cumulatively received 249,683 complaints from consumers in 2023/Q1. This is 11,595 (4.44%) complaints less than those received in 2022/Q4. In total, the DisCos resolved 229,101 complaints corresponding to a 91.76% resolution rate which is similar to the 91.38% recorded in 2022/Q4. Metering, billing, and service interruption were the prevalent sources of customer complaints, accounting for more than 79% of the total complaints during the quarter.

In 2023/Q1, the Forum Offices resolved 64.38% of total complaints at fifty-seven (57) sittings.

d. Forum Offices: Pursuant to the provisions of its Customer Complaints Handling Standards and Procedure Regulations, the Commission set up forum panels across the country to review unresolved disputes from the DisCos' Complaint Handling Units. The Forum Offices had a total of 2,569

active complaints (inclusive of the pending 1,242 complaints from 2022/Q4) in 2023/Q1 from customers who were dissatisfied with DisCos' decision on the complaints lodged at the CCU. During the period, the Forum Panels held fifty-seven (57) sittings and resolved 1,654 (64.38%) of the complaints filed at Forum Offices nationwide; this was 5.77 pp higher than 58.60% achieved in 2022/Q4.

The Commission continues to take measures that will ensure a more efficient customer complaint resolution process starting with improvements in the quality of complaint resolution at the CCU of the DisCos. Furthermore, additional Forum Offices are to be established across the country while alternative complaint resolution channels have also been introduced.

Investigations have been launched into all reported accidents.

e. Health & Safety: The Commission has initiated new processes to track licensees' compliance with the submission of statutory incidents reporting obligations. The total number of incidents in 2023/Q1 was thirty-three (33) resulting in 16 injuries and 17 fatalities (compared to 27 injuries and 18 fatalities in 2022/Q4). The Commission has launched investigations into all the incidents and will continue to work with all sector stakeholders to improve the overall health and safety in the NESI.

The Commission

a. Financial Report: The total revenue realised by the Commission in 2023/Q1 was ₦4,709.02 million representing an increase of ₦193.03 million (4.27%) compared to the ₦4,515.99 million realised in 2022/Q4. During the same period, the total expenditure of the Commission decreased by ₦1,872.17 million (48.34%) from ₦3,873.13 million in 2022/Q4 to ₦2,000.96 million. The decrease in expenditure was largely due to decreased personnel costs and regulatory expenses during the quarter.

The Commission realised ₦4.71 billion as revenue and expenditure of ₦2.00 billion in 2023/Q1.

The Commission recorded a positive net cash flow of ₦2,708.06 million in the quarter. This is the 15th consecutive quarter in which the Commission has recorded a positive cash flow.

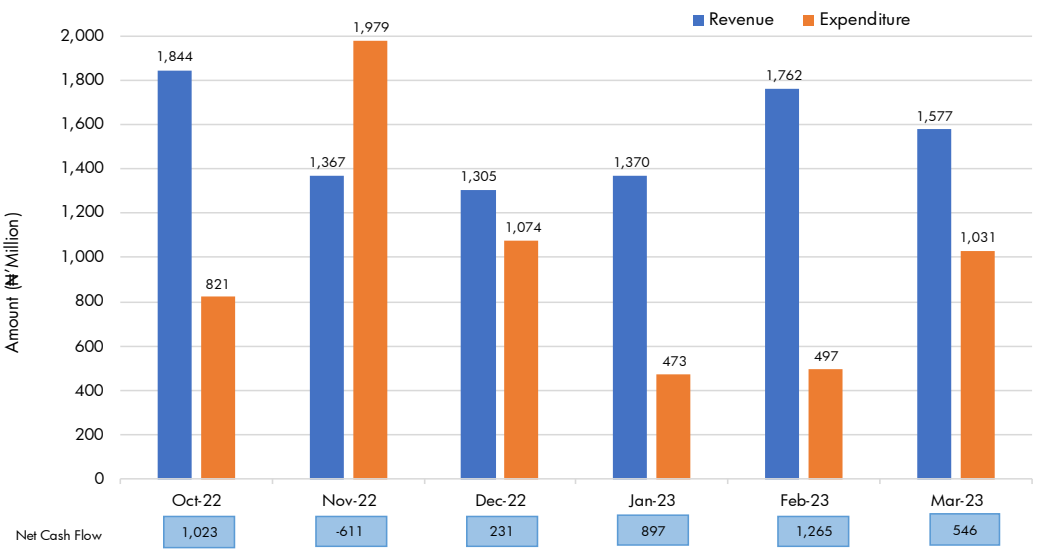
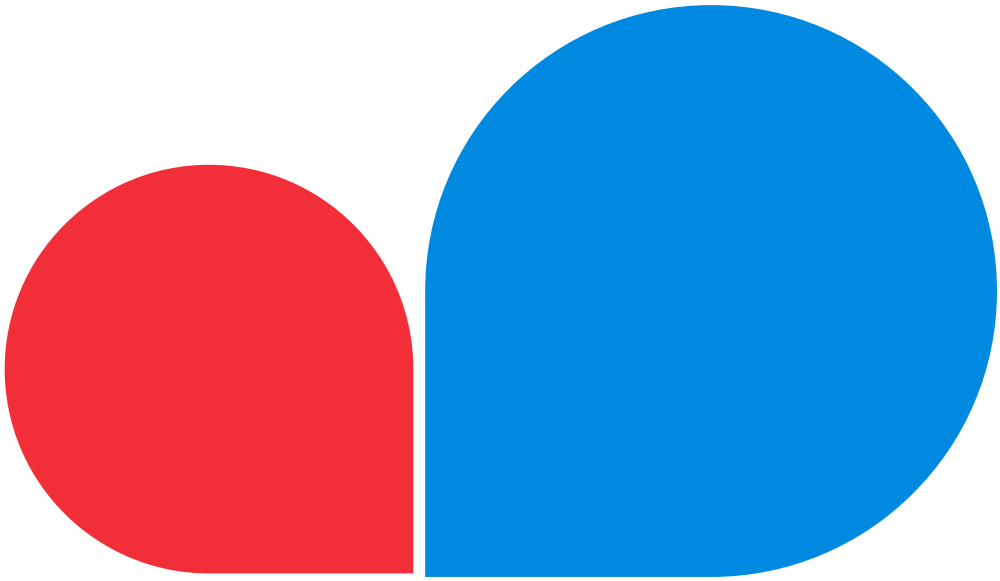


Figure E: Commission's Revenue and Expenditure (Oct 2022 – Mar 2023)

Key facts on NESI Performance in Q1 of 2023

4,605.72MW	Average Available Generation Capacity; 4,605.72MW, which was a 102.14MW (2.27%) increase compared to 2022/Q4 – 4,503.59MW
9,350.24GWh	Total Quarterly Generation; 15.41GWh (0.16%) decrease compared to 2022/Q4 – 9,365.65GWh
4,334.41MWh/h	Average Hourly Generation; 92.05MWh/h (2.17%) increase compared to 2022/Q4 – 4,242.36MWh/h
86.39%	Average Load Factor: 9.04 pp decrease compared to 2022/Q4 – 95.43%
25.35%	Share of total quarterly generation from Hydropower Plants; -4.75 pp decrease compared to 2022/Q4 – 30.10%
7.91%	Transmission Loss Factor: 0.60 pp increase compared 7.31% in 2022/Q4 and 0.41 pp above the MYTO allowance of 7.50%
0	Number of grid collapses; same as 2022/Q4
93.42%	DisCos Energy Offtake Performance; 2.28 pp decrease compared to 2022/Q4 – 95.70%
5,844.21GWh	Energy Billed; 8.59GWh (0.15%) increase compared to 2022/Q4 —5,835.62GWh
₦247.09 billion	Total Revenue Collected by the Discos; ₦3.44 billion (1.41%) increase compared to 2022/Q4 – ₦243.65 billion
77.97%	Cumulative Billing Efficiency across all DisCos; 1.81 pp improvement compared to 2022/Q4 —76.16%
68.75%	Cumulative Collection Efficiency across all DisCos; 4.58 pp decrease compared to 2022/Q4 —73.33%.
46.39%	Aggregate Technical, Commercial and Collection Loss; 2.24 pp increase compared to 2022/Q4 —44.15%

67.62%	DisCos' Remittance Performance to NBET; 9.69 pp decrease compared to 2022/Q4 – 77.31%
66.52%	DisCos' Remittance Performance to MO; 18.33 pp decrease compared to 2022/Q4 – 84.85%
67.43%	Discos' Average Remittance Performance: 11.26 pp decrease compared to 2022/Q4 - 78.69%
171,107	Number of New Meters Installed; 6,495 (+3.95%) increase compared to 2022/Q4 – 164,612
91.76%	Average DisCo complaint resolution rate: 0.38 pp increase compared to 2022/Q4 – 91.38%
64.38%	Forum Office Complaint Resolution Rate: 5.77 pp increase compared to 2022/Q4 —58.60%
17	Number of Fatalities; 1 less death compared to 2022/Q4 – 18
16	Number of Injuries; 11 less injuries compared to 2022/Q4 — 27
₦4.71 billion	Total revenue realised by the Commission; 0.19 billion (4.27%) increase compared to 2022/Q4 – ₦4.51 billion
₦2.00 billion	Total Expenditure by the Commission; 1.87 billion (48.34%) decrease compared to 2022/Q4 – ₦3.87 billion



02 State of the Industry

2.0 State of the Industry

Pursuant to its statutory mandate as enshrined in the EPSRA 2004, the Nigerian Electricity Regulatory Commission (NERC) continues to monitor the technical, operational, and commercial performance of the Nigerian Electricity Supply Industry (NESI). Through this regulatory function, the Commission oversees all licensed operators in the NESI in a bid to ensure that they provide stable, reliable, and safe electricity to all consumers.

2.1. Operational Performance

In 2023/Q1, the average available generation capacity was 4,605.72MW, the average hourly generation stood at 4,334.41MWh/h while the total quarterly generation was 9,350.23GWh from 26 grid-connected generating plants across the country.

2.1.1 Average Available Capacity: The average available generation capacity increased by 2.27% from 4,503.59MW in 2022/Q4 to 4,605.72MW in 2023/Q1. The average available capacity of the top seven (7) power plants in 2022/Q4 and 2023/Q1 are presented in Figure 1. The increase recorded was driven by improved availability in eleven out of the twenty-six grid-connected power plants. However, the only plant that recorded a substantial improvement in availability across the quarters was Egbin where available capacity increased by 48.48% from 476MW to 706MW. Overall, the remaining 15 plants each recorded minor reductions in available capacity with only Delta Gas (-13.51%) exceeding a 10% drop.

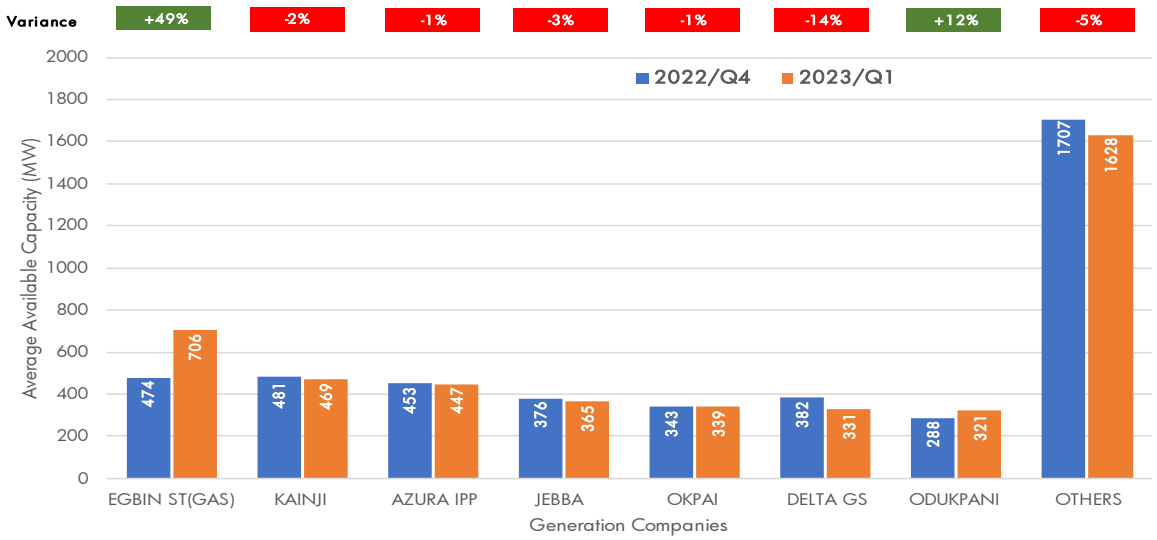


Figure 1: Average Available Capacity (MW) in 2022/Q4 vs. 2023/Q1

Note: The relative performances of all GenCos across the two quarters are contained in appendix I.
The "Others" consist of the 19 lowest performing power plants with 2023/Q1.

2.1.2 Average Hourly Generation: The hourly output produced by all the units in a power plant fluctuates based on grid demand, mechanical operability of the unit(s) and the availability of feedstock. Plants are only dispatched when the load on the grid is sufficient to offtake the energy while operating within acceptable technical limits. The factors that determine the dispatch of a plant are:

- Plant availability (mechanical and feedstock)
- Load offtake on the grid
- Financial competitiveness of the plant in the economic merit order dispatch.

In 2023/Q1, the average hourly generation on the grid was 4,334.41MWh/h, which indicates an increase of 92.05MWh/h (2.16%) compared to 4,242.36MWh/h in 2022/Q4. Figure 2 shows the quarter-by-quarter performance of the seven (7) plants with the highest average hourly generation performance in 2023/Q1. Only 3 of these 7 plants recorded increases in their average hourly generation over the 2 quarters - Afam VI (+142.12%), Egbin ST (+50.63%), and Odukpani (+19.19%). Conversely, Delta GS (-15.23%), Azura (-3.24%), Jebba (-3.49%) and Kainji (-2.52%), had reduced hourly generation in 2023/Q1 compared to 2022/Q4. Cumulatively, the average hourly generation of the remaining nineteen (19) powerplants decreased by 15.35% in 2023/Q1 compared to 2022/Q4.

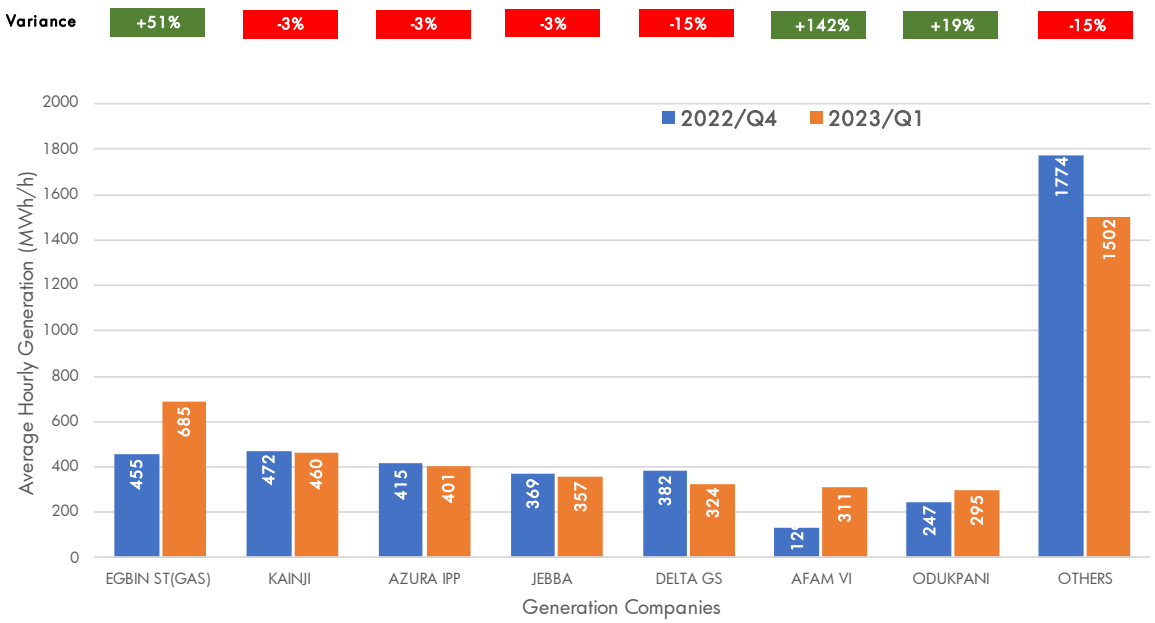


Figure 2: Average Hourly Generation (MWh/h) 2022/Q4 vs. 2023/Q1

Note: The relative performances of all GenCos across the 2 quarters are contained in appendix I.
The "Others" consist of 19 lowest performing power plants in 2023/Q1.

The overall increase in average hourly generation within the quarter was due to an increase in the available capacity of Egbin, Afam VI, Geregu and Sapele power plants. The biggest improvement noticed in Egbin's hourly output is virtually proportional to the improvement in its availability. This is to be expected because Egbin plays a critical role in meeting demand in the Lagos region which regularly accounts for 25% - 30% of national consumption.

As reported in prior quarters, the unavailability of feedstock especially gas remains a challenge limiting electricity generation on the grid. In 2023/Q1, Rivers IPP and Afam VI reported gas shortage induced outages. Similarly, Shiroro reported outages due to water management to maintain its reservoir through the dry season. Another challenge that continues to limit output on the grid is the prevalence of unscheduled corrective outages. Alaoji NIPP lost one of its units (GT2) throughout the quarter due to emergency repair works on the unit following a fire outbreak.

2.1.3 Total Quarterly Generation: The total electricity generated was 9,350.24GWh in 2023/Q1, which indicates a decrease of -15.41GWh (-0.16%) from the 9,365.65GWh generated in 2022/Q4. Ten (10) power plants reported increased generation in 2023/Q1 compared to 2022/Q4 (Table 1).

Table 1: Total Quarterly Generation (GWh) in 2022/Q4 and 2023/Q1

Plant	Total Generation 2022/Q4 (GWh)	Total Generation 2023/Q1 (GWh)	Net Change (GWh)
EGBIN ST(GAS)	1,004.02	1,479.28	475.26
AFAM VI	286.89	663.83	376.94
GEREGU	272.08	434.49	162.41
SAPELE ST	65.55	204.87	139.32
ODUKPANI	546.28	639.63	93.35
OMOTOSHO	206.20	256.43	50.23
PARAS	114.59	136.77	22.18
OLORUNSOGO	203.00	214.02	11.02
OLORUNSOGO NIPP	89.36	97.68	8.32
EGBIN ST6	0.00	4.34	4.34
OMOKU	110.66	104.54	-6.12
TRANS AMADI	88.05	66.27	-21.78
OMOTOSHO NIPP	139.84	117.56	-22.28
IBOM	91.89	67.97	-23.92
DADIN KOWA HYDRO	80.79	43.18	-37.61
AFAM IV - V	132.97	94.38	-38.59
OKPAI	650.41	610.55	-39.86
JEBBA	814.37	766.67	-47.70
AZURA IPP	916.41	867.29	-49.12
KAINJI	1,043.26	989.96	-53.30
IHOVBOR NIPP	124.23	63.02	-61.21
SAPELE GT NIPP	97.10	22.29	-74.81
GEREGU NIPP	157.69	69.24	-88.45
ALAOJI NIPP	173.92	58.15	-115.77
RIVERS IPP	137.43	6.52	-130.91
DELTA GS	844.60	700.40	-144.20
SHIRORO	974.05	570.95	-403.10
TOTAL	9,365.65	9,350.24	-15.40

2.2. Generation Load Factor

The Load Factor is a measure of the utilisation of a power plant's capacity, calculated as the ratio of the average electricity generated to the maximum possible generation over the period, based on the available capacity. A higher load factor results in better capacity utilisation, reducing the cost per unit of energy and increasing profitability, as fixed costs are spread over a larger amount of dispatched energy. The Load Factor reflects both demand for energy and a plant's ability to supply it. The formula for Load Factor is represented by equation 1 below:

$$Load\ Factor = \frac{Total\ Energy\ Generated\ (MWh)}{Ave.Available\ Capacity\ (MW) \times 24hrs \times period\ (in\ days)} \quad (1)$$

The average load factor for all grid-connected power plants was 86.39% in 2023/Q1, meaning that 13.61% of available capacity was unutilised. The 86.39% load factor recorded in 2023/Q1 represents a decrease of 9.04 percentage points (pp) from the 95.43% average load factor recorded in 2022/Q4.

The load factors of the highest performing power plants in 2022/Q4 and 2023/Q1 are presented in Figure 3. Eighteen (18) power plants recorded dispatch rates of at least 90% in 2023/Q1. Omoku (100.00%), Trans Amadi (100.00%), Ihovbor NIPP (100.00%) and Afam VI (100.00%) are the four (4) plants that had highest utilisation rates. All the hydro plants except Shiroro, continued to experience high dispatch rate (> 90%) in line with the Commission's order (Order No: NERC/182/2019) on mandatory and priority dispatch of hydro power plants. The Order mandates that hydro plants which are the cheapest energy generation source, should be dispatched with priority to reduce wholesale energy costs for consumers.

There are also environmental considerations for the prioritisation of the hydro-plants as they have a major impact on water flows further downstream. The reason why Shiroro had a dispatch rate below 90% was due to water management initiatives being implemented by the System Operator to guarantee the plant can run through Q2 ahead of the rainy season.

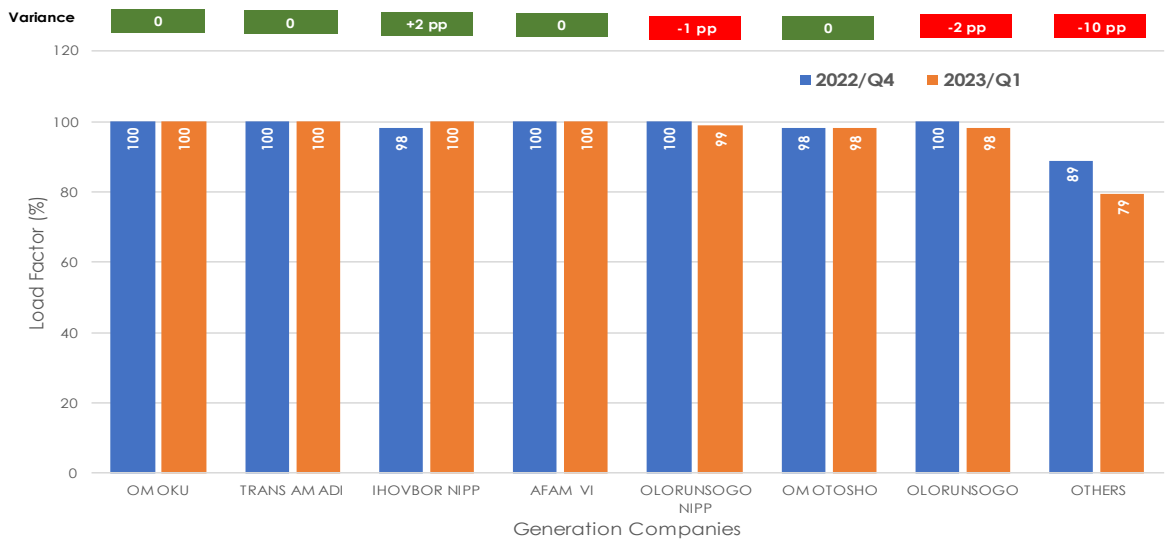


Figure 3: Plants Load Factor (%) in 2022/Q4[2] vs. 2023/Q1

[2] The Commission notes an error in the declared capacity reported in 2022/Q4, potentially affecting load factor values compared to the previously published data.

2.3. Generation Mix

The electricity generation mix refers to the combination of fuel used to generate electricity over a period. The composition of the generation mix varies across countries and is influenced by factors such as natural resource availability, government policies, environmental considerations, type of power plants, energy demand, and seasonal fluctuations. An ideal energy mix must balance the three key objectives of the energy trilemma: cost reduction, reliability, and energy security. The formula for the share of electricity generated by fuel source is given by equation 2 below:

$$Share\ of\ fuel_i = \frac{Total\ electricty\ generated\ from\ fuel\ i\ (MWh)}{Total\ electricity\ generated\ from\ all\ fuel\ sources\ (MWh)} \quad (2)$$

The share of electricity generated from different fuel sources in 2022/Q4 and 2023/Q1 are presented in Figure 4. There was a decrease in hydro power contribution to the energy mix from 31.10% (2,912.47GWh) in 2022/Q4 to 25.35% (2,713.43GWh) in 2023/Q1. The decrease is consistent with expectations regarding Nigeria's energy mix. Energy generated by hydro power plants are limited by water availability in the months of January to July.

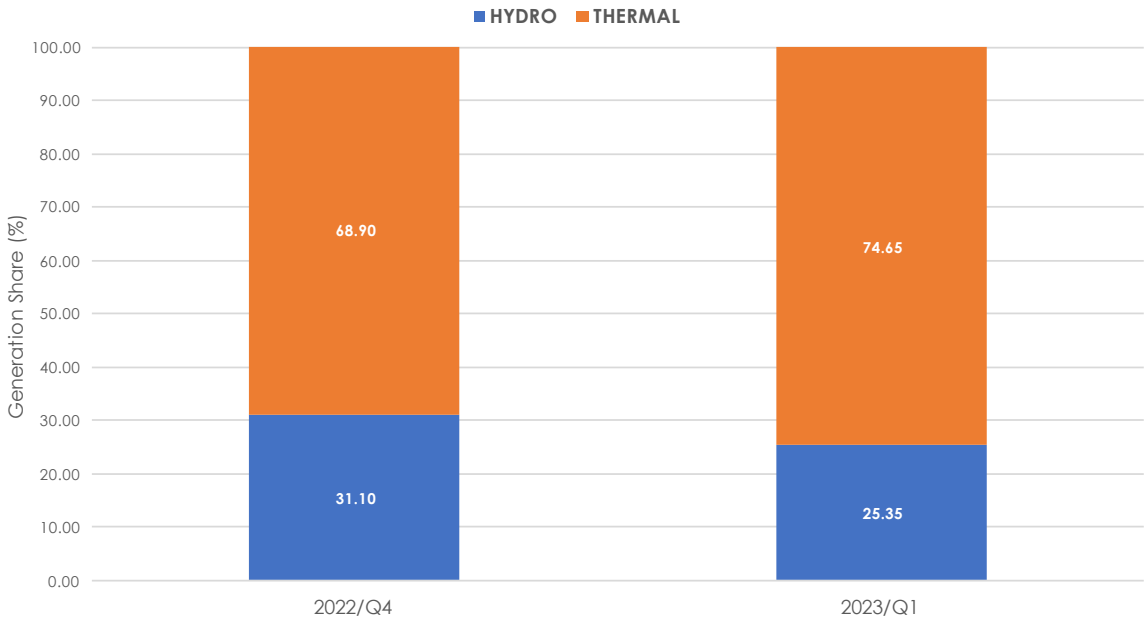


Figure 4: Electricity Generated by Energy Sources in 2022/Q4 vs 2023/Q1.

2.4. Grid Performance

The Transmission Company of Nigeria (TCN) which has the responsibility of wheeling energy from power plants to DisCos holds two licenses; Transmission Service Provider (TSP) and System Operator (SO). The TSP owns and maintains the transmission infrastructure while the SO is responsible for maintaining system stability, load balance and load dispatch. To assess the performance of the grid, the Commission focuses on four (4) Key Performance Indicators (KPI) that relate to power transmission. These are:

- Transmission loss factor
- Stability of grid frequency
- Voltage fluctuation
- Incidence of system collapse

2.4.1 Transmission Loss Factor

Transmission Loss Factor (TLF) refers to the proportion of the total energy sent out by the power plants that was either lost in transmission or utilised in the transmission station i.e., neither delivered to the DisCos nor exported to international customers. There is an inverse relationship between the TLF and the efficiency of the transmission system; a decline in the TLF indicates an improvement in transmission efficiency. The formula for TLF is represented by equation 3 below:

$$TLF = \left(1 - \frac{Energy\ delivered\ to\ all\ DisCos + Energy\ Exported}{Energy\ Sent\ out\ by\ all\ GenCos}\right) \times 100 \qquad (3)$$

The average TLF in 2023/Q1 was 7.91%, as shown in Figure 5. This represents a negative variance (under-performance) of 0.41 pp relative to the MYTO target for the period (7.25%) as well as an increase of 0.60 pp from the TLF of 7.31% in 2022/Q4, indicating a decline in the TSP's overall operational performance. A TLF of 7.91% indicates that for every 100MWh of energy injected into the grid, 7.91MWh of energy was undelivered to the DisCos and international customers due to losses in the transmission network or consumption by transmission substations.

The TSP recorded high TLF in February (8.22%) and March (8.19%) indicating major decline in performance within the period. The 7.25% TLF target set by the Commission for 2023/Q1 represent the maximum efficient loss in transmission that is paid by customers. Exceeding the TLF means that the TSP will not recover the revenue allowed

to it by the Regulator for its operations because there is no provision for it to earn revenue from consumers for the excess (inefficient) losses.

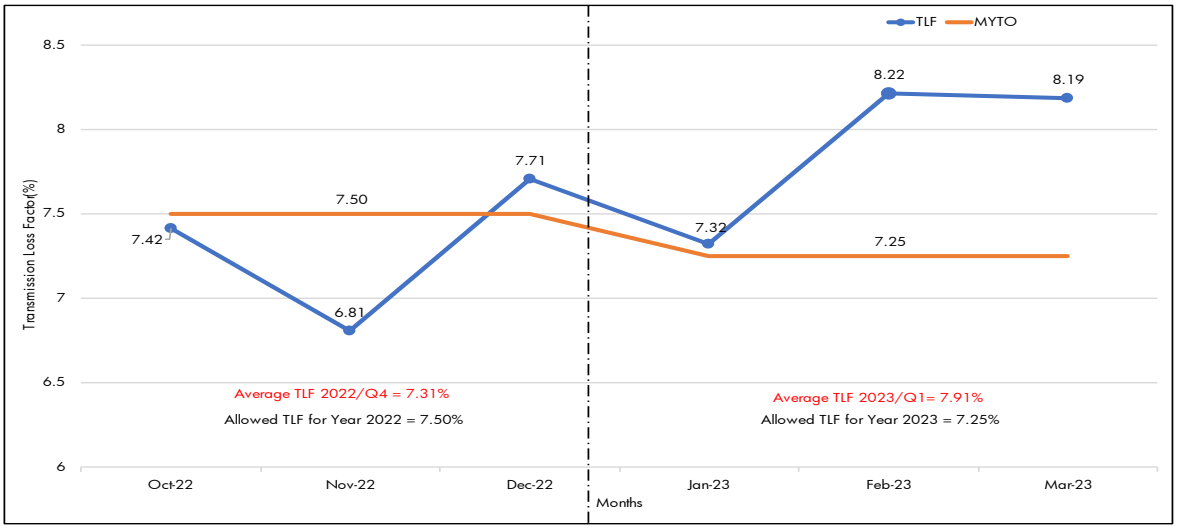


Figure 5: Transmission Loss Factor vs. MYTO Assumption (%) Oct 2022 - March 2023

2.4.2 Grid Frequency

Frequency is a major power quality parameter that consumers, especially industrial customers, are concerned about because of the sensitivity of their machines. Most industrial production assembly lines have machines that are sensitive to slight changes in frequency and would not operate outside the pre-set frequency tolerance limits. As specified in the Grid Code, the system frequency under normal circumstances is expected to be between a lower limit of 49.75Hz and an upper limit of 50.25Hz (allowance of +/- 0.5% in normal circumstances) but may reach an upper bound stress limit of 51.25Hz and a lower bound stress limit of 48.75Hz in extreme circumstances (allowance of +/- 2.5% in extreme circumstances).

The highest and lowest daily system frequency readings in 2023/Q1 were 51.72Hz and 48.70Hz (10th and 11th March) respectively. During the quarter, the average upper daily system frequency was 50.86Hz while the average lower daily system frequency was 49.08Hz which translates to a range of 1.78Hz. Comparatively, in 2022/Q4 the average upper daily system frequency was 50.55Hz while the average lower daily system frequency was 49.08Hz which translates to a range of 1.47Hz. The divergence of range (an increase of 21.09% in 2023/Q1) indicates a decline in system operation performance during the quarter.

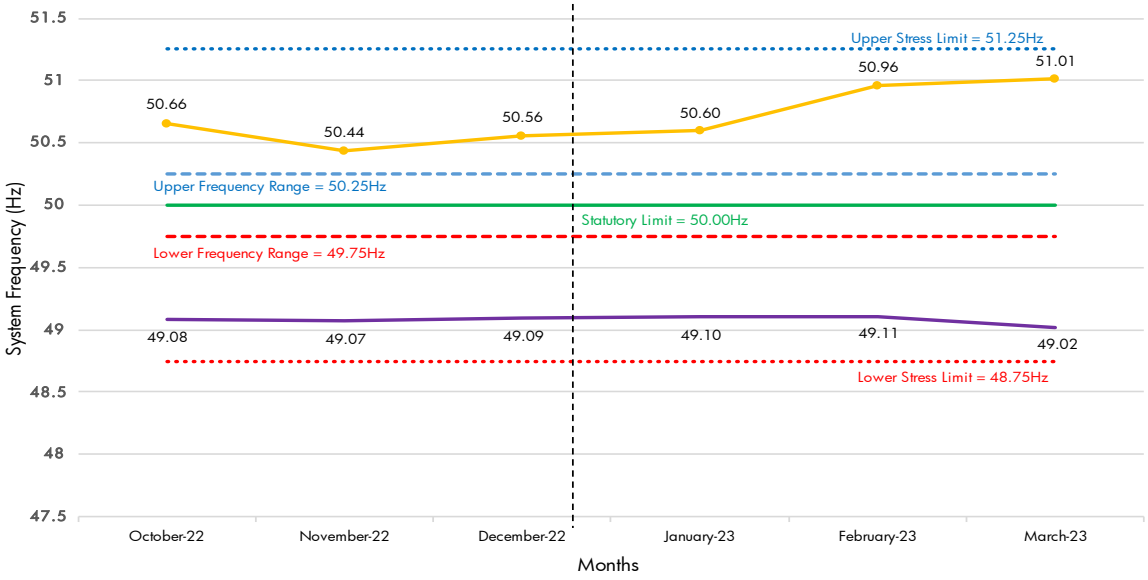


Figure 6: Average Daily System Frequency from Oct 2022 – March 2023

As shown in Figure 6, throughout the quarter the upper and lower bounds of the system frequency were all outside the normal operation limits but within the stress limits. It is interesting to note that even within the quarter, February and March during which the system recorded high TLF also had the highest upper and lower bound ranges reinforcing the fact that these were the months of the highest instability and inefficient operation of the grid.

The Commission will continue to monitor the system coordination by the SO to ensure grid frequency is maintained within the statutory limits and attain the envisaged quality of electricity acceptable for all consumers.

2.4.3 Voltage Fluctuation

To guarantee high-quality power, the Grid Code specifies a nominal system voltage of 330kV with a tolerance range of +/- 5% (313.5kV to 346.5kV). Fluctuations in grid voltage, including spikes, dips, flickers, brownouts, can cause significant harm to consumers and result in substantial commercial losses. Extreme cases of voltage fluctuations, particularly at the distribution network level can cause severe damage to industrial machines thereby compelling the industrial customers to seek alternative sources of power supply.

The system voltage pattern from October 2022 to March 2023 is illustrated in Figure 7. In 2023/Q1, the average upper and lower operating voltage bounds for the transmission network were 353.78kV and 297.47kV respectively, with a range of 56.30kV. Both were outside their respective allowable limits which indicates that the grid performance did not meet the limits contained in the grid code. Comparatively, the upper and lower operating voltage bounds of the network in 2022/Q4 were 352.96kV and 299.97kV respectively with a range of 53.03kV. The increase in the voltage range from 2022/Q4 to 2023/Q1 indicates a decline in the grid performance within the quarter and is consistent with the poor grid performance indicated by high TLF and frequency as discussed above.

To ensure that the grid operates under approved frequency and voltage levels as contained in the Grid Code, the Commission is actively working with TCN and other stakeholders to encourage GenCos compliance. This includes compliance with the free governor control operation, TCN installation of capacitor banks at low voltage nodes on the grid, and reactors at high voltage nodes. The Commission through the Situation Room continues to monitor and ensure adherence of GenCos and DisCos to their declared and off-take capacities, respectively.

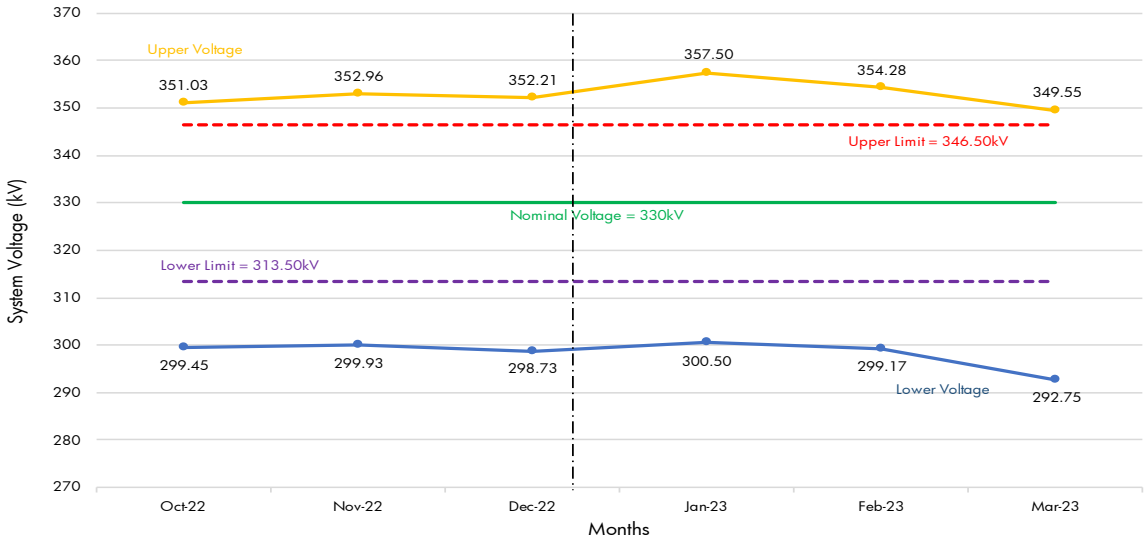


Figure 7: Monthly System Voltage from Oct 2022 - March 2023

2.4.4 System Collapse

The national power grid is a vast network of electrical transmission lines that link power stations to the customers across the nation. It is designed to function within specific stability boundaries, including voltage (330kV ± 5.0%) and frequency (50Hz ± 0.5%). Any deviation from these stability ranges can result in decreased power quality and, in severe cases, cause widespread power outages. This can range from a partial collapse of a section of the grid to a full system-wide blackout.

The SO is responsible for ensuring that the frequency remains within a ±0.5% tolerance threshold. When demand for electricity is higher than the supply, the grid frequency drops, which can cause some power plants to shut down automatically. This further exacerbates the frequency imbalance and can lead to a partial or full system collapse. Conversely, if supply surpasses demand, the frequency increases, and in severe cases, some power plants may shut down, causing a sudden drop in generation.

Just as in 2022/Q4, there were no incidences of system collapse in 2023/Q1. These are much welcome improvements in system stability following challenges experienced between Q1 – Q3 2022. The Commission will continue to accord all necessary support to the SO to allow it sustain the improvements in grid stability and prevent system collapses. In furtherance of this, the Commission shall continue to monitor compliance with the SO's directives to generators on free governor and frequency control mode in line with the provisions of the subsisting operating codes in the NESI.

2.5. Commercial Performance

The commercial performance of the NESI is a measure of the flow of funds from customers to upstream electricity industry players. The financial performance is critical because funds are required to keep all the players along the value chain operational. In evaluating the commercial performance of the NESI for 2023/Q1, the following parameters have been considered:

- Energy offtake performance
- Energy billed and billing efficiency
- Revenue and collection efficiency
- Aggregate Technical, Commercial and Collection (ATC&C) loss
- Remittances to the Market Operator (MO) and the Nigerian Bulk Electricity Trading Company (NBET).

2.5.1 Energy offtake performance

Since July 2022 when the NESI transitioned to the Partial Activation of Contract (PAC) regime, the target volume of energy to be off-taken by DisCos at any time has been defined as their Partially Contracted Capacity (PCC). As explained in prior reports, under the PAC regime, DisCos have a take-or-pay obligation, ensuring GenCos receive capacity payments regardless of actual energy received. The PAC also allows for Liquidated Damages (LD) payment by GenCos or TCN for capacity shortfalls. This contractual framework provides a basis for NBET to earn revenues that will be used to compensate DisCos for shortfalls in generation.

When there is sufficient generation capacity, every DisCo will be directed by the SO to offtake its entire PCC. When generation falls below the required target, the SO pro-prates the available capacity among all DisCos based on their respective PCCs – "Available PCC". The ratio between a DisCo's energy offtake and the available PCC is a measure of operational efficiency. It is expected that even at full PCC, DisCos should off-take maximum load before the demand within their franchise is substantially greater than supply. A DisCo's energy offtake performance is represented by equation 4 below:

$$Energy\ Offtake\ performance\ (\%) = \left(\frac{Energy\ Offtake}{Available\ PCC}\right) \times 100 \quad (4)$$

However, it has been observed that most DisCos do not take their full PCC due to a combination of technical limitations as well as load rejection by the DisCos largely due to commercial reasons i.e., high losses in certain areas. In an effort to curtail this practice, the Commission included load offtake as a key metric in its KPI order —Order on Performance Monitoring Framework (NERC/316-326/2022) which was issued to DisCos effective October 2022. Per the provisions of the Order, persistent load non-offtake to certain thresholds may trigger regulatory actions against the management of the DisCos.

In 2023/Q1, total energy off-taken by DisCos at their trading points was 3,470.13MWh/h compared to 3,470.09MWh/h[3] recorded in 2022/Q4. While these numbers are identical, the energy offtake performance of DisCos actually reduced in 2023/Q1 (93.42%) compared to 95.70% in 2022/Q4. When considering 2023/Q1 alone, Enugu and Jos DisCos had the lowest energy offtake performance each at ~89%

[3] Although the total energy received between 2022/Q4 and 2023/Q1 decreased by 166.48GWh, this did not significantly influence the MWh/h equivalent of the energy received because of differences in the number of days in the two quarters.

(full information contained in Table 2). When comparing 2022/Q4 with 2023/Q1, Benin, Kaduna and Eko had the largest drop in their offtake ratios with -4.94 pp, -5.72 pp and -3.03 pp respectively.

It is worthy to note that when DisCos have offtake ratios below 100%, this means that the DisCos has incurred increased wholesale energy cost as they still had to pay NBET/GenCos for unused capacity for which they have no avenue to recover revenues.

Table 2: DisCo energy offtake performance in 2022/Q4 and 2023/Q1(MWh/h)

DisCos	2022/Q4			2023/Q1		
	Energy Offtake (MWh/h)	Available PCC (MWh/h)	Offtake Performance %	Energy Offtake (MWh/h)	Available PCC (MWh/h)	Offtake Performance %
Abuja	503.17	530.04	94.93	505.09	538.60	93.78
Benin	311.38	312.75	99.56	294.08	310.81	94.62
Eko	412.59	427.64	96.48	429.17	459.23	93.45
Enugu	290.76	325.76	89.26	296.30	331.78	89.31
Ibadan	410.54	431.59	95.12	396.32	427.95	92.61
Ikeja	504.54	511.81	98.58	532.59	552.28	96.43
Jos	198.53	215.53	92.11	189.55	212.33	89.27
Kaduna	245.47	245.69	99.91	227.78	241.83	94.19
Kano	244.04	248.23	98.31	234.46	242.82	96.56
Port Harcourt	248.23	265.10	93.64	253.62	276.48	91.73
Yola	101.12	111.19	90.94	111.17	120.41	92.33
All DisCos	3,470.09	3,625.90	95.70	3,470.13	3,714.54	93.42

The Commission will utilise its Order on Performance Monitoring Framework to enforce appropriate regulatory actions against DisCos that have failed to meet the KPI targets for offtake ratio. Furthermore, the situation room set up the Commission undertakes a daily retroactive analysis of the energy offtake performance of DisCos and intervenes with the management of DisCos as required.

2.5.2 Energy Billed and Billing Efficiency

Billing Efficiency measures the proportion of energy billed to customers (including metered and unmetered sales) relative to the total energy supplied to a given area over a period. One reason for billing losses is the inability of DisCos to identify all energy users, caused by factors such as poor customer enumeration, insufficient metering, inaccurate meters, and energy theft (commercial loss).

This efficiency indicator encompasses both technical factors, such as energy loss in transmission lines, and commercial factors like meter bypass and the DisCo's inability to account for energy supplied. For example, a billing efficiency of 70% means that

₦30.00 worth of electricity, out of ₦100.00 worth of electricity received by DisCos cannot be billed due to issues like energy theft, inadequate distribution infrastructure, and poor customer enumeration. The formula for billing efficiency is represented by equation 5 below:

$$Billing\ Efficiency = \left(\frac{Total\ energy\ billed\ to\ customers\ (kWh)}{Total\ energy\ received\ by\ the\ Network\ (kWh)}\right) \times 100 \quad (5)$$

The total energy offtake by all DisCos was 7,495.49GWh in 2023/Q1 compared to 7,661.97 GWh in 2022/Q4. Eight (8) Discos recorded decline in energy offtake between 2022/Q4 and 2023/Q1. The DisCos with the highest decrease in energy offtake are Kaduna (-9.22%), Benin (-7.60%), Kano (-6.02%) and Ibadan (-5.56%).

The total energy billed in 2023/Q1 was 5,844.21GWh which translates to a billing efficiency of 77.97%. A billing efficiency of 77.97% implies that for every ₦100 worth of energy received by DisCos in 2023/Q1, ₦22.03 was not billed to end users. Comparatively, the total energy received and billed in 2022/Q4 were 7,661.97 GWh and 5,835.62 GWh respectively, which translates to a billing efficiency of 76.16%. Cumulatively, the DisCos recorded a 1.81 pp improvement in billing efficiency between 2022/Q4 and 2023/Q1.

Eko Disco recorded the highest billing efficiency of 88.89% in 2023/Q1 while Kaduna DisCo recorded the lowest billing efficiency of 54.43%. Eight (8) DisCos recorded improvements in their billing efficiencies relative to 2022/Q4 with the highest increase recorded by Yola (65.55%), Kaduna (54.43%), and Kano (72.66%) corresponding to 8.09 pp, 6.77 pp, and 5.51 pp improvements (Table 3). Conversely, three (3) DisCos recorded reductions in their billing efficiency relative to 2022/Q4. These are Ikeja, Benin, and Eko DisCos which recorded billing efficiencies of 85.52%, 86.03% and 88.89% respectively corresponding to 3.36 pp, 1.26 pp, and 0.13 pp reductions.

Table 3: Energy Received and Billed by DisCos in 2022/Q4 vs. 2023/Q1

DisCos	Total Energy Received (GWh)		Total Energy Billed (GWh)		Billing Efficiency (%)	
	2022/Q4	2023/Q1	2022/Q4	2023/Q1	2022/Q4	2023/Q1
Abuja	1,111.00	1,091.00	750.00	783.00	67.51%	71.77%
Benin	687.52	635.22	600.11	546.47	87.29%	86.03%
Eko	911.00	927.00	811.00	824.00	89.02%	88.89%
Enugu	642.00	640.00	451.00	463.00	70.25%	72.34%
Ibadan	906.47	856.05	681.19	666.78	75.15%	77.89%
Ikeja	1,113.4	1150.4	992.33	983.74	89.12%	85.52%
Jos	438.34	409.43	351.88	332.18	80.28%	81.13%
Kaduna	542.00	492.00	258.31	267.79	47.66%	54.43%
Kano	538.84	506.44	361.82	367.97	67.15%	72.66%
Port Harcourt	548.09	547.83	449.67	451.82	82.04%	82.47%
Yola	223.28	240.12	128.30	157.41	57.46%	65.55%
All DisCos	7,661.97	7,495.49	5,835.62	5,844.21	76.16%	77.97%

The Commission is concerned about the low billing efficiency reported by the DisCos and its impact on the financial sustainability of the NESI[4]. DisCos have the responsibility of developing strategies to improve their billing efficiencies including reinforcing DisCos' infrastructure to reduce technical losses, improving consumer enumeration and customer service, improving metering systems, and implementing measures that will drive timely bill payments and the rolling out of initiatives to curb energy theft.

2.5.3 Revenue and Collection Efficiency

Collection efficiency is the ratio of the proportion of the amount that has been collected from customers relative to the amount billed to them by the DisCos. Many customers continue to default in payment of their billed amounts due to a lack of willingness to pay and unsatisfactory DisCos services. This has led to mounting collection losses recorded by the DisCos. Collection efficiency of 70% for instance implies that for every ₦100.00 worth of energy billed to customers by DisCos, approximately ₦30.00 remained unrecovered from the billed customers. The formula for collection efficiency is represented by equation 6 below:

$$Collection\ Efficiency = \left(\frac{Total\ Revenue\ Collected\ (₦)}{Total\ Billed\ Amount\ (₦)}\right) \times 100 \qquad (6)$$

[4] By comparison, the average billing efficiencies for India is 85.36%.

The total revenue collected by all DisCos in 2023/Q1 was ₦247.09 billion out of ₦359.38 billion billed to customers. This translates to a collection efficiency of 68.75%. The DisCos cumulative collection efficiency reduced by 4.58 pp from 73.33% in 2022/Q4 to 68.75% in 2023/Q1. While the total collections increased by 1.41% (compared to ₦243.65 billion in 2022/Q4), the total energy billed increased by 8.15% (compared to ₦332.28 billion in 2022/Q4).

The summary of the revenue performance of all DisCos in 2022/Q4 and 2023/Q1 is contained in Table 4. The 2022/Q4 to 2023/Q1 decline in collection efficiency was largely driven by Ibadan, Yola, Kaduna, and Abuja whose collection efficiencies decreased by 15.50 pp, 10.20 pp, 8.49 pp and 5.29 pp respectively. Conversely, only Jos DisCo recorded improved collection efficiency of 4.48 pp.

Table 4: Revenue Collection Performance (%) of DisCos in 2022/Q4 vs. 2023/Q1

DisCos	Total Billings (₦'Billion)		Revenue Collected (₦'Billion)		Collection Efficiency (%)	
	2022/Q4	2023/Q1	2022/Q4	2023/Q1	2022/Q4	2023/Q1
Abuja	44.64	51.28	36.40	39.10	81.55	76.25
Benin	33.15	32.57	20.33	19.54	61.33	59.98
Eko	46.48	50.45	38.97	40.96	83.85	81.20
Enugu	25.93	27.77	19.05	19.03	73.46	68.55
Ibadan	36.44	38.74	29.02	24.85	79.64	64.15
Ikeja	51.81	56.90	47.42	49.61	91.52	87.19
Jos	23.83	23.95	8.60	9.72	36.10	40.58
Kaduna	14.93	17.24	7.88	7.63	52.76	44.27
Kano	21.00	22.04	14.44	14.19	68.76	64.36
Port Harcourt	26.07	27.55	17.07	17.48	65.47	63.44
Yola	7.99	10.89	4.47	4.98	55.91	45.71
All DisCos	332.28	359.38	243.65	247.09	73.33	68.75

The overall decline in collection efficiency in 2023/Q1 could be attributed to the decline in metering electricity consumers. DisCos continue to implement various collection campaigns to improve remittance for post-paid customers. However, their low collection efficiency is a major threat to the NESI's financial sustainability. To address this, the Commission plans to enhance its monitoring of metering programs, such as the National Mass Metering Program (NMMP) funded by the Central Bank of Nigeria and the Meter Asset Provider (MAP) scheme, being implemented by DisCos.

Furthermore, DisCos must continue to evaluate options for improving the optimisation of their energy delivery in line with the Service Based Tariff (SBT) regime to ensure that

sufficient energy is supplied to customer groups/clusters with the highest collection efficiencies.

2.5.4 Aggregate Technical, Commercial and Collection (ATC&C) Loss

The Aggregate Technical, Commercial and Collection (ATC&C) loss is a summation of billing losses incurred by a DisCo due to its inability to bill 100% of delivered energy to consumers (technical and commercial losses) and the collection losses arising from the DisCo's inability to collect against 100% of the invoices issued out to consumers. The ATC&C loss is a critical performance setting parameter for tariff determination because it represents the efficient loss which the DisCos are allowed to recover from Customers. The MYTO makes allowance for specific ATC&C loss level targets for each DisCo which usually reduces over time as investments are made with a view of reducing the efficient losses.

ATC&C losses are broken into the following 3 components:

1. *Technical Loss* - heat losses due to load flow in electrical lines and transformation loss in transformers.
2. *Commercial Loss* - due to discrepancy in meter reading, erroneous billing, unmetered consumption, or energy theft.
3. *Collection Loss* – unpaid bills.

The formula for ATC&C loss is represented by Equation 7 below:

$$ATC\&C\ Loss = [1 - (billing\ efficiency \times collection\ efficiency)] \times 100 \quad (7)$$

Any DisCo that can outperform its allowed ATC&C (i.e., has a lower actual ATC&C than the target used to compute its cost reflective tariff) will earn more returns on its set tariffs. Conversely, any DisCo that fails to meet its allowed ATC&C (i.e., has a higher actual ATC&C than the target), will be unable to earn the expected returns on its set tariffs and could risk long term financial challenges.

The ATC&C loss in 2023/Q1 was 46.39% composed of 22.03% technical and commercial losses, and 31.25% in collection loss (Table 5). This level of ATC&C loss implies that over the course of 2023/Q1, on average, as much as ₦46.40 in every ₦100.00 worth of energy received by a DisCo was unrecovered due to a combination of inefficient distribution networks, energy theft, low revenue collection and unwillingness of customers to pay their bills.

By way of comparison, the ATC&C loss for 2023/Q1 increased by 2.24 pp from the 44.15% recorded in 2022/Q4. This means that on the average, the financial performance of the DisCos declined between 2022/Q4 and 2023/Q1. This increase

in ATC&C loss was largely driven by Ibadan (50.04%), Ikeja (25.44%), Yola (70.04%) and Benin (48.40%) DisCos which had increased losses of 9.89 pp, 7.01 pp, 2.17 pp, and 1.93 pp respectively between 2022/Q4 and 2023/Q1.

The overall ATC&C loss of 46.39% is significantly higher than the expected ATC&C loss (20.06%) provided for in the MYTO for the quarter; none of the DisCos achieved its target. The failure of the DisCos to meet their allowed loss targets means they are unable to meet revenue requirements, thereby compromising their long-term financial position. There is an urgent need for all the DisCos to take remedial actions through customer enumeration and increased revenue assurance to improve their ATC&C loss. Failure to resolve this will not only prevent the DisCos from being able to meet their upstream obligations, but it will also saddle them with excess debt and erode their equity.

Table 5: ATC&C Loss (%) by DisCos in 2022/Q4 vs. 2023/Q1

DisCo	MYTO Target (%)	Average ATC&C (%)	
	2023	2022/Q4	2023/Q1
Abuja	19.27	44.95	45.27
Benin	17.37	46.47	48.40
Eko	14.18	25.35	27.82
Enugu	11.31	48.39	50.41
Ibadan	15.47	40.15	50.04
Ikeja	11.37	18.43	25.44
Jos	27.27	71.02	67.08
Kaduna	6.60	74.85	75.91
Kano	15.85	53.83	53.23
Port Harcourt	21.45	46.29	47.68
Yola	60.60	67.87	70.04
All DisCos			
MYTO Level	20.06		
Total Technical, Commercial & Collection losses	-	44.15	46.39
Technical & Commercial losses	-	23.84	22.03
Collection losses	-	26.67	31.25

2.5.5 Market Remittance

In 2013, the CBN set up an escrow mechanism as part of the conditions for the Nigerian Electricity Market Stabilisation Facility (NEMSF) intervention that was extended to the DisCos. Under this arrangement, all the revenues of the DisCos are escrowed, with DisCos only having access to these funds after relevant deductions to meet their loans

have been made. This escrow mechanism also provided visibility into the financial performance of the DisCos with respect to collections.

In June 2020, the remit of the fund manager responsible for the escrow was expanded to include the implementation of the payment waterfall framework which was designed by the Commission to increase upstream market remittance to NBET. This was to cover the cost of energy taken from GenCos, transmission charges (payable to the TSP) and the MO's administrative charges. Prompt payment of upstream invoices is critical for securing the availability of generation and transmission capacities. The waterfall regime pushes DisCos to boost their collections because most of their allowed revenues rank low in the waterfall.

2.5.5.1 Market Remittance to NBET

In the absence of cost-reflective tariffs, the Government undertakes to cover the resultant gap (between the cost-reflective and allowed tariff) in the form of tariff shortfall funding. This funding is applied to the NBET invoices that are to be paid by DisCos. The amount to be covered by the DisCo is based on the allowed tariff determined by the Commission and set out as their Minimum Remittance Obligation (MRO) in the periodic Tariff Orders issued by the Commission.

The applicable MROs (%), total NBET invoices and final obligation for each DisCo during 2023/Q1 are summarised in Table 6. It is important to note that due to the absence of cost reflective tariffs across all DisCos, the Government was saddled with a subsidy obligation of ₦36.02 billion over 3 months, (₦30.51 billion in 2022/Q4) which translates to ₦12.00 billion per month during the quarter. For ease of administration of the subsidy, the MRO is limited to NBET only with the MO being allowed to always recover 100% of its revenue requirement from the DisCos.

The NBET issues invoices to DisCos to cover for energy generation costs. The average remittance performance to NBET in 2023/Q1 was 67.62% compared to 77.31% in 2022/Q4 (-9.69 pp change). The 32.37% that was not remitted to NBET poses a challenge to the sector because this shortfall translates to GenCo underpayments which could affect their ability to finance critical maintenance activities required for sustaining generation availability.

Table 6: NBET Invoice and MRT Adjusted final Obligation for 2023/Q1.

DisCos	NBET Invoice (₦' billion)	MRO (%)	Final Obligation (₦'billion)
Abuja	34.87	94.17	32.84
Benin	20.10	88.84	17.86
Eko	24.01	95.07	22.83
Enugu	20.82	96.09	20.00
Ibadan	27.39	89.65	24.56
Ikeja	36.08	99.57	35.93
Jos	13.65	64.87	8.85
Kaduna	15.66	97.82	15.32
Kano	16.25	95.75	15.56
Port Harcourt	17.63	82.29	14.51
Yola	7.85	12.88	1.01
All DisCos	234.32		209.26

Figure 8 shows that in 2023/Q1, five (5) DisCos recorded remittance performance over 80%; Yola, 88%; Eko, 85%; Ikeja, 83%; Benin, 81% and Jos 81%. Eko and Jos had improved remittance to NBET (2.59 pp and 0.61 pp respectively). Conversely, nine (9) DisCos recorded declines in their remittance to NBET with Ibadan, Kano, Ikeja, and Benin DisCos having the highest decline at -23.31 pp, -18.86 pp, -14.04 pp, and -11.11 pp respectively, compared to 2022/Q4.

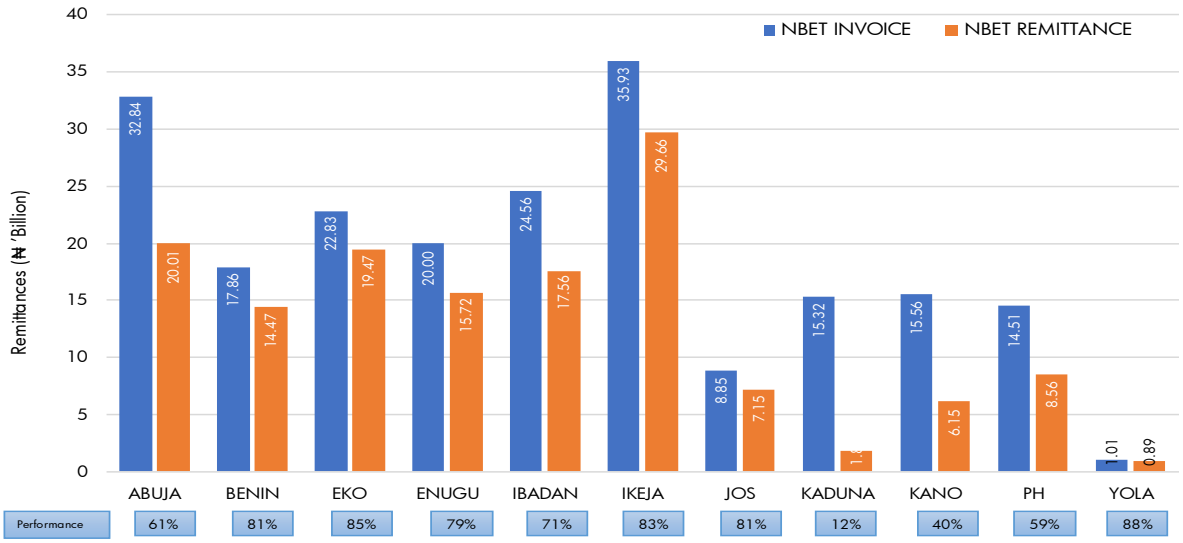


Figure 8: DisCos Remittance Performances to NBET in 2023/Q1

To sustain sector operations, the Commission recognises the significance of enhancing market remittances, and is providing DisCos with revenue-boosting initiatives. The

introduction of the SBT and opportunities for DisCos to improve customer service through better energy supply quality is a clear path to increased revenue without broad-based tariff increases. The ongoing DisCos investments in infrastructure and metering initiatives will result in a greater volume of reliable energy supplied to customers, improved revenue assurance, collections, and market remittances.

2.5.5.2 Market Remittance to MO

The Market Operator issues invoices to DisCos for energy transmission and administrative services. The average remittance performance to the MO in 2023/Q1 was 66.52% compared to 84.85% in 2022/Q4 (18.33 pp decrease). Yola recorded an MO remittance rate of 90.84% (₦1.24 billion against an invoice of ₦1.36 billion), while Kaduna had the lowest remittance performance with 9.00% (₦0.27 billion against an invoice of ₦3.01 billion) as shown in Figure 9.

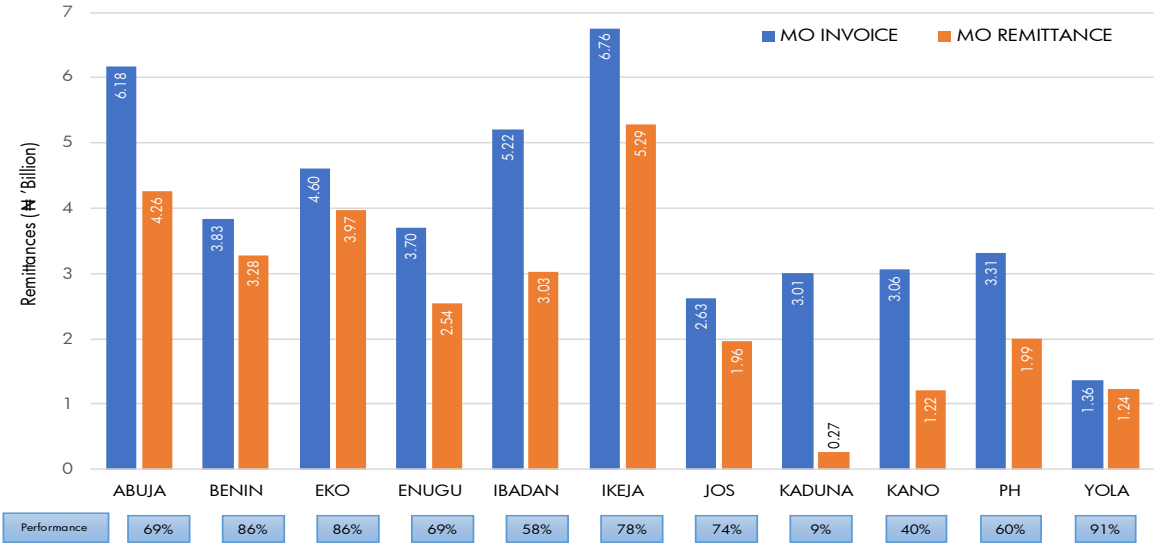


Figure 9: DisCos Remittance Performances (%) to MO in 2023/Q1

Between 2022/Q4 and 2023/Q1, only Eko and Jos DisCos recorded improvements in the MO remittance performance of 2.59 pp and 0.61 pp respectively. The DisCo that recorded the highest decline in MO remittance performance in 2023/Q1 relative to 2022/Q4 was Ibadan with 23.31 pp; other DisCos that had appreciable declines include - Kano (-18.86 pp), Ikeja (-14.04 pp) and Benin (-11.11 pp). The decreased remittance to the MO by Ibadan can be attributed to the low collection efficiency from customers which dropped by 15 pp between 2023/Q1 and 2022/Q4. It is noteworthy that during 2023/Q1, customers nationwide experienced cash crunch as a result of the naira redesign policy enforced during the quarter which may have affected DisCos' collections.

2.5.5.2 Market Remittance to NBET to MO

The cumulative DisCos' remittance to NBET and MO in 2023/Q1 is presented in Table 7.

Table 7: DisCos Remittance Performances to NBET and MO in 2023/Q1

DisCos	Invoice(₦'Billion)		MRT Adjusted Invoice (₦'Billion)		Actual Remittance (₦'Billion)		Remittance Performance (%)	
	NBET	MO	NBET	MO	NBET	MO	2022/Q4	2023/Q1
Abuja	34.87	6.18	32.84	6.18	20.01	4.26	68.27	62.20
Benin	20.10	3.83	17.86	3.83	14.47	3.28	91.54	81.85
Eko	24.01	4.60	22.83	4.60	19.47	3.97	84.20	85.45
Enugu	20.82	3.70	20.00	3.70	15.72	2.54	88.02	77.00
Ibadan	27.39	5.22	24.56	5.22	17.56	3.03	98.28	69.15
Ikeja	36.08	6.76	35.93	6.76	29.66	5.29	98.11	81.87
Jos	13.65	2.63	8.85	2.63	7.15	1.96	79.45	79.34
Kaduna	15.66	3.01	15.32	3.01	1.87	0.27	22.74	11.68
Kano	16.25	3.06	15.56	3.06	6.15	1.22	59.34	39.56
Port Harcourt	17.63	3.31	14.51	3.31	8.56	1.99	64.39	59.22
Yola	7.85	1.36	1.01	1.36	0.89	1.24	96.59	89.67
All DisCos	234.32	43.66	209.26	43.66	141.51	29.04	78.69	67.43

2.5.5.3 Market Remittance by other Customers

The remittances made in 2023/Q1 by international, bilateral, and special customers are presented in Table 8. In 2023/Q1, none of the under listed international customers made any payment against the cumulative $16.11 million invoice issued to them; Paras-SBEE ($3.46 million), Transcorp-SBEE ($3.85 million), Mainstream-NIGELEC ($5.48 million) and Odukpani-CEET ($3.32 million).

The MO issued invoices to all the eight (8) bilateral customers in the NESI in 2023/Q1 which amounted to ₦842.38 million. During the quarter, only North South/Star Pipe made remittance of ₦15.38 million against an invoice of ₦24.69 million issued to them. This means that for the period, the cumulative remittance performance of bilateral customers was 1.83%. The non-remittance by international and bilateral customers continues a trend that should prompt the MO to invoke the provision of the market rules to curtail the payment indiscipline being exhibited by the various market participants.

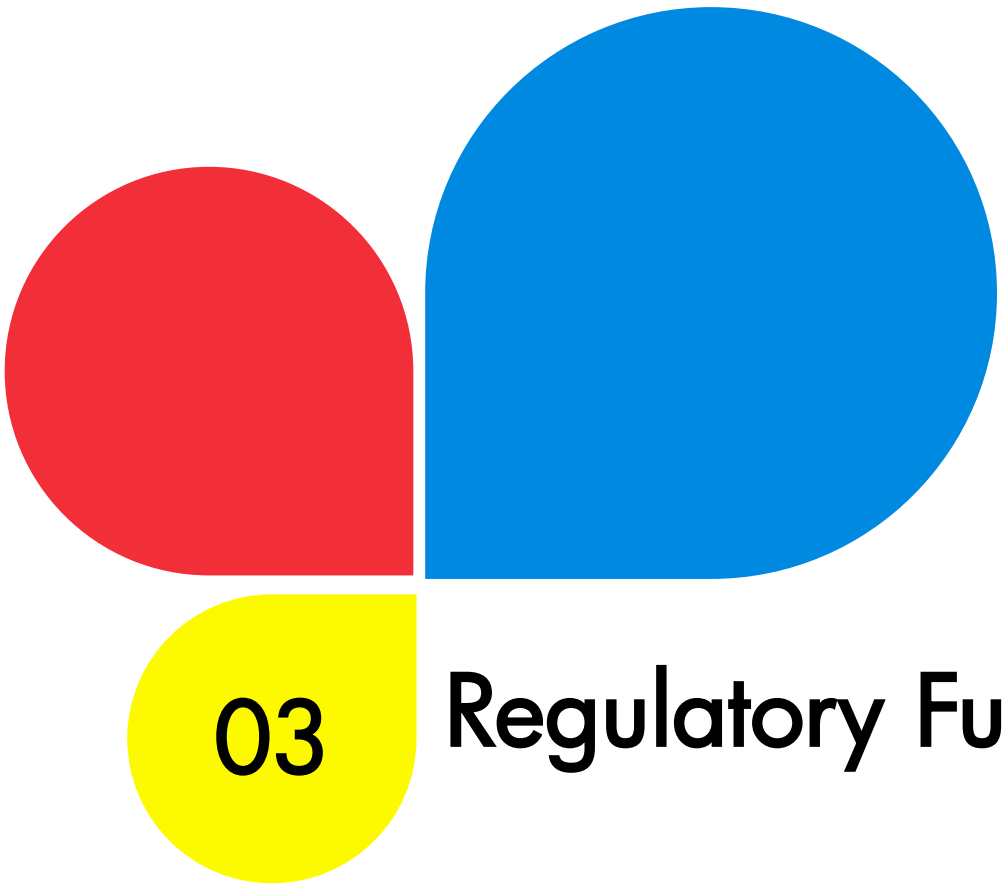
Table 8: Special Customer Invoices and Remittances in 2023/Q1

Customers	NBET				MO			
	Invoice (Million) 2023 /Q1	Remittance (Million) 2023 /Q1	Performance (%) 2022 /Q4	Performance (%) 2023 /Q1	Invoice (Million) 2023 /Q1	Remittance (Million) 2023 /Q1	Performance (%) 2022 /Q4	Performance (%) 2023 /Q1
International Customers								
PARAS-SBEE ($)	-	-	-	-	3.46	0	0	0
TRANSCORP-SBEE ($)	-	-	-	-	3.85	0	27	0
MAINSTREAM-NIGELEC ($)	-	-	-	-	5.48	0	99	0
ODUKPANI-CEET ($)	-	-	-	-	3.32	0	0	0
Total	-	-	-	-	16.11	0	46	0
Bilateral Customers								
EKO EGBIN (₦)	_	_	_	_	_	_	_	_
EKO PARAS ((₦)	_	_	_	_	_	_	_	_
IKEJA EGBIN (₦)	_	_	_	_	_	_	_	
MSTM/INNER GALAXY (₦)	-	-	-	-	605.31	0	100	0
MSTM/KAM IND. (₦)	-	-	-	-	39.35	0	100	0
MSTM/CFM	_	_	_	_	_	_	_	-
MSTM/LORD'S	_	_	_	_	_	_	_	
MSTM/KAM INT. (₦)	-	-	-	-	86.18	0	100	0
KAM STEEL SHAGAMU (₦)	-	-	-	-	0	0	100	0
NDPHC/SUNFLAG (₦)	-	-			28.73	0	170	0
NDPHC/WEEWOOD (₦)	_	_	_	_	_	_	_	0
TRANS/PREM STEEL (₦)	_	_	_	_	_	_	_	0
NORTH SOUTH/ STAR P (₦)	-	-	-	-	24.69	15.38	75	75
NORTH SOUTH/ OAU (₦)	-	-	-	-	27.70	0	23	0
MSTM/ADFV (₦)	-	-	-	-	30.42	0	100	0
OMOTOSHO II/EKEDC (₦)	_	_	_	_	1020	0	62	0
OMOTOSHO II/PULKIT (₦)	_	_	_	_	17.51	0	0	0
OMOTOSHO II/PRISM (₦)	_	_	_	_	218.96	0	60	0
APLE (₦)	_	_	_	_	595.51	0	33	0
TAOPEX/KAM STEEL (₦)	_	_	_	_	65.08	0	0	0
Total	-	-	-	-	842.38	15.38	65	1.83
Special Customer								
AJAOKUTA STEEL (₦)	383.4	0	0	0	76.02	0	0	0

1. NBET, MO, SBEE, CEET and NIGELEC are Nigeria Bulk Electricity Trader, Market Operator, Société Beninoise d'Energie Electrique, Compagnie Energie Electrique du Togo and Société Nigerienne d'electricite, respectively.

It is worth noting that special customers (Ajaokuta Steel Co. Ltd and the host community) did not make any payment towards the ₦0.38 billion (NBET) and ₦0.08 billion (MO) invoices received in 2023/Q1. This continues a longstanding[5] trend of non-payment by this customer and the Commission has communicated the need for intervention on this issue to the relevant FGN ministries.

[5] As at March 2023, Ajaokuta Steel Company Limited had a total outstanding debt of ₦26,715,043,905.73 to NBET and ₦1,739,966,505.69 to the MO.



03 Regulatory Functions

3.0 Regulatory Functions

3.1 Regulations/Orders

Regulations are a set of rules that the Commission may issue from time to time to optimise the performance of licensees with a view to giving effect to the object of the 2004 EPSRA. In 2023/Q1, the Commission issued one (1) new Regulation; the Customer Protection Regulations (NERC-R-001-2023). Pursuant to the EPSRA, the Objectives of the Regulation are to provide a regulatory framework for:

- The consolidation of existing regulatory instruments of the Commission on the protection of customers in the NESI into one regulatory instrument.
- The reinforcement of frameworks for the protection of end-use customers in the NESI.
- The promotion of electricity access in the NESI.
- The alignment and updating of customer service standards in the NESI to conform with international best practice.
- The protection of the right of end-use customers of distribution licensees by specifying the minimum standards of service delivery.

The Commission also issued eleven (11) new Orders in 2023/Q1. The Orders are: Order Nos: NERC/001–012 /2023 —Order on Reimbursement of Meter Costs for Meters procured under the Meter Asset Provider and National Mass Metering Regulations. The objective of the Order, which was issued on March 20, 2023, is to ensure the refund of the cost of meters to all customers who paid for meters under the MAP and NMMP regulations since its inception in 2018, through a monthly energy credit over a period of 120 months.

The Commission continued to monitor compliance with the provisions of other existing regulations, orders, and standards governing the NESI.

3.2 Licences and Permits Issued or Renewed

The Commission approved the issuance of two (2) new generation licences with a total nameplate capacity of 723MW within the quarter. It also authorised the issuance of two (2) new Independent Electricity Distribution Network (IEDN) licences and approved the amendment of an existing Independent Electricity Distribution licence as contained in Table 9.

Table 9: List of Licences issued in 2023/Q1.

SN	Licensee	Capacity (MW)	Type	Location	Fuel Type
1	Alausa Power Limited	23	Off-grid	Rack Centre, Oregun, Ikeja, Lagos	Gas
2	ABV Utility Limited	20	IEDN	Lekki, Lagos	NA
3	Waltersmith Industrial Park Electricity Distribution Company Limited	NA	IEDN	Ohaji- Egbema, Imo	NA
4	Waltersmith Ugamma Power Company Limited	200	IEDN	Ohaji- Egbema, Imo	Gas
5	Zungeru Hydro Electricity	700	On-grid	Kaduna River, Zungeru, Niger	Hydro

3.3 Captive Power Generation Permits

Captive power plants are plants owned and maintained by the generating entity for its own consumption and not for sale to a third party. In 2023/Q1, the Commission granted approval for the issuance of five (5) captive power generation permits with a total nameplate capacity of 56.77MW. Details of the permit holders, location and plant capacities are listed below in Table 10.

Table 10: Captive Generation Plants Approved in 2023/Q1.

S/N	Company Name	Location/State	Capacity (MW)
1	E.T Energy Enterprises Global Limited	Obiowo Ezeaba Nkamu, West, Enugu State	8.00
2	Rack Centre Nigeria Limited	18 Jagal Close Oregun, Lagos State	10.00
3	Saipem Contracting Nigeria Limited	JV Camp, Rivers State	5.14
4	Saipem Contracting Nigeria Limited	Workers Village Camp, Rivers State	10.05
5	CHI Limited	14 Chivita Avenue, Ajao Estate, Lagos State	23.59

3.4 Mini-grid Operators Registered with the Commission

Following the satisfactory evaluation of mini-grid applications, the Commission approved five (5) Mini-grid permits and issued four (4) registration certificates in 2023/Q1. The details of the successful mini-grid applicants and their locations are presented in Table 11.

Table 11: Mini grid Permits and Registration Certificates Approved in 2023/Q1.

S/N	Name	Location	Type	Capacity (kW)
1	Zylab Technology Nigeria Limited	Ankpa, Kogi	Registration	100
2	Solonic Energy Limited	Bakonu Community, Nasarawa	Registration	100
3	ACOB Lighting Limited	Oretedo, Odigbo, Ondo	Registration	40
4	ACOB Lighting Tech Limited	Sule, Ovia Southwest, Edo	Registration	60
	B. Approved Permits			
5	Darway Coast Nigeria Limited	Ijoko, Ogun	Permit	993.8
6	Nayo Tropical Technical Limited	Rafin Zurfi Community, Gwagwalada	Permit	40
7	Everlink Telecast Limited	Tamigbe, Burutu	Permit	360
8	Ventura Logistics Services Limited	Amaechi Okposo, Ohaozara, Ebonyi	Permit	75
9	Vaya Energy Solutions Limited	Belel Community, Maiha, Adamawa	Permit	200

3.5 Certification of Meter Service Providers/Meter Asset Providers

A Meter Service Provider (MSP) is an entity certified by the Commission as a manufacturer, supplier, vendor, or installer of electric energy meters and/or metering systems. A Meter Asset Provider (MAP) is an entity that is granted a permit by the Commission to provide metering services with roles that may include meter financing, procurement, supply, installation, maintenance, and replacement.

The Commission certified six (6) MSPs - four (4) meter installer companies and two (2) meter manufacturers in 2023/Q1. Further details on the certified MSPs can be found in Table 12.

Table 12: Approved Meter Asset providers in 2023/Q1

S/N	Name	Authorisation Type
1	Dexta Integrated Global Services Limited	Installer A2
2	Zeectric Engineering Nigeria Limited	Installer A1
3	B.M.W	Installer C1
4	Visotek Nigeria Limited	Installer C1
Manufacturers		
5	J. Marine Logistics Limited	Manufacturer
6	Paktim Metering Nigeria Limited	Manufacturer

Class "A1" Certification authorises a holder to undertake installations of (i) Low Voltage single-phase and three-phase Metering systems for installation exceeding 750 metering Systems/Contract, and (ii) Installations at grid voltages exceeding 5 Metering Systems.[1] Class "C1" Certification authorises a holder to undertake installations of Low Voltage Distribution single-phase and three-phase Metering Systems exceeding 500 Metering Systems/Contract.

3.6 Public Consultation and Awareness

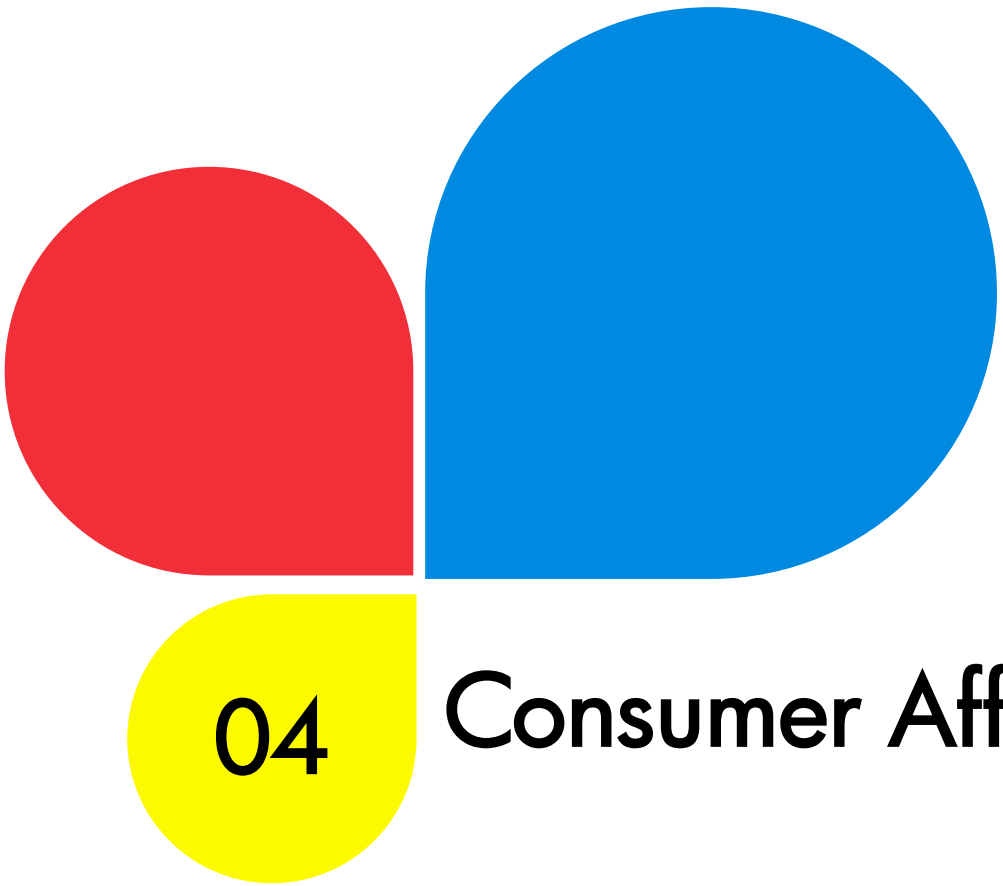
The Commission did not conduct any public consultation during the quarter. However, to increase awareness of existing regulations, consumer rights, and obligations, the Commission continued to engage customers and stakeholders through radio programs such as "Electricity Update."

3.7 Compliance and Enforcement

Section 63 (1) of the EPSRA 2004 mandates all licensees to comply with the provisions of their licence, regulations, codes and other requirements issued by the Commission from time to time. Furthermore, the Commission issued the Enforcement Regulation (ER) in 2014 specifically to enforce, maintain, and ensure the adherence by licensees and other participants in the electricity market to the provisions of the EPSRA and other regulatory instruments. In 2023/Q1 the Commission conducted enforcement actions (payments of penalties and compensations to affected parties) on pending cases, brought forward from the preceding quarters, against several operators for violations of rules and infractions. For instance, Ikeja DisCo was directed to install meters for all 13 customers who had paid for meters under the MAP scheme within the statutory timeline of 10 days following payment. The Commission received a response from Ikeja DisCo on 31st March 2023 that all affected customers have been metered.

3.8 Alternative Dispute Resolution

The Commission has established an Alternative Dispute Resolution (ADR) process to resolve disputes between market participants in the NESI. This includes the constitution of a Dispute Resolution Panel (DRP) and appointment of a Dispute Resolution Counsellor (DRC) to administer the dispute resolution provisions of the Market Rules and Grid Code. No disputes were brought before the DRP during this quarter.



04 Consumer Affairs

4.0 Consumer Affairs

4.1 Consumer Education and Enlightenment

The Commission's main consumer education and enlightenment mechanisms are town hall/customer complaints resolution meetings. These are used to enlighten consumers on its activities, discuss customer rights and obligations as well as ensure swift resolution of complaints. The Commission did not hold any town hall meetings in 2023/Q1.

4.2 Metering End-Use Customers

As of 31st March 2023, there were 12,378,243 registered customers with 43.31% (5,360,434) of them metered (Table 13). Over the course of 2023/Q1, 171,107 end-user customers were metered which increased the metering rate by 1.06 pp relative to the 42.25% recorded in 2022/Q4. As shown in Table 14, compared to 2022/Q4 (164,612), an additional 6,495 (+3.95%) meters were installed in 2023/Q1.

Table 13: Metering Progress as of 2023/Q1

DisCos	Total Number of Registered Customers	No of Metered Customers	Metering Rate
APL	184,348	45,509	24.69%
Abuja	1,323,358	782,344	59.12%
Benin	1,214,377	615,296	50.67%
Eko	701,083	405,087	57.78%
Enugu	1,394,664	562,117	40.30%
Ibadan	2,266,168	942,315	41.58%
Ikeja	1,188,391	812,480	68.37%
Jos	711,589	231,381	32.52%
Kaduna	848,568	198,972	23.45%
Kano	851,550	206,471	24.25%
Port Harcourt	1,179,194	458,915	38.92%
Yola	514,953	99,547	19.33%
Total	12,378,243	5,360,434	43.31%

Out of the 171,107 meters installed in 2023/Q1, 5.80% were metered under the NMMP scheme, 92.71% customers were metered under the MAP intervention, while 1.47% and 0.02% were metered under the Vendor Financed and DisCo Financed schemes respectively.

On a DisCo-by-DisCo basis, Ikeja, Ibadan, Abuja and Enugu led meter installations in 2023/Q1 accounting for 75.47% of total installations. Relative to 2022/Q4, Jos (+681.23%), Yola (+264.08%), Kaduna (+63.68%), and Enugu (+45.53%) recorded increases in the number of meters installed compared to 2022/Q4. Conversely, Abuja (-21.53%), Eko (-14.65%), and Ikeja (-10.32%) recorded decline in the number of meters installed compared to 2022/Q4.

Table 14: Meter Deployment by DisCos 2022/Q4 vs. 2023/Q1

DisCos	Total number of Metered Customers as of 2023/Q1	Customers Metered in 2022/Q4	Customers Metered in 2023/Q1	Change in Metering
APL	45,509	0	0	0.00%
Abuja	782,344	32,969	25,870	-21.53%
Benin	615,296	0	4,486	-
Eko	405,087	15,974	13,634	-14.65%
Enugu	562,117	16,139	23,487	45.53%
Ibadan	942,315	34,209	32,808	-4.10%
Ikeja	812,480	52,177	46,790	-10.32%
Jos	231,381	373	2,914	681.23%
Kaduna	198,972	1,520	2,488	63.68%
Kano	206,471	338	481	42.31%
Port Harcourt	458,915	9,248	12,087	30.70%
Yola	99,547	1,665	6,062	264.08%
Total	5,360,434	164,612	171,107	39.46%

Further details on the metering progress under the NMMP and MAP between 2022/Q4 and 2023/Q1 are presented in appendix VII and VIII respectively. Under the MAP intervention, a total of 158,634 meters were installed in 2032/Q1 representing 1.92% (-1,480) decrease in metering compared to the 160,114 installations recorded in 2022/Q4. Ikeja DisCo recorded the highest number of installations (46,790) representing 15.81% of the total number of customers metered under the MAP scheme. Yola DisCo did not record any installation under the MAP scheme in 2023/Q1.

In the same period, a total of 9,931 customers were metered under the NMMP scheme, representing an increase of 259.23% from 3,831 customers metered in 2022/Q4. Except for Eko and Yola DisCos, all other DisCos reported a decrease in customer

metering under the NMMP in 2023/Q1 compared to 2022/Q4. This is because of the winding down of the NMMP Phase zero.

4.3 Customers Complaints

The complaints received and resolved by DisCos in 2022/Q4 and 2023/Q1 are presented in Table 15. The total number of complaints received in 2023/Q1 was 249,683 across all DisCos. Port Harcourt Disco had the highest number of complaints (47,777 representing 19.14% of total complaints received) while Yola Disco had the least number of complaints (2,305 representing 0.92% of total complaints received).

Out of the 249,683 cases received in 2023/Q1, 229,101 were resolved yielding an average resolution of 91.76%. All the DisCos had over 90% resolution rate for the complaints received within the quarter with exception of Ikeja DisCo (66.13%). Kano DisCo recorded the highest resolution rate of 99.38%.

Table 15: Complaints Received and Resolved by DisCos in 2022/Q4 vs. 2023/Q1

DisCos	2022/Q4			2023/Q1		
	Complaints Received	Complaints Resolved	Resolution Rate	Complaints Received	Complaints Resolved	Resolution Rate
Abuja	30,662	30,107	98.19%	26,104	25,686	98.40%
Benin	4,606	4,225	91.73%	5,871	5,576	94.98%
Eko	43,997	40,733	92.58%	41,582	39,061	93.94%
Enugu	24,601	22,729	92.39%	24,597	22,607	91.91%
Ibadan	40,178	36,068	89.77%	37,987	34,533	90.91%
Ikeja	29,282	19,536	66.72%	28,348	18,746	66.13%
Jos	14,815	13,950	94.16%	14,698	13,806	93.93%
Kaduna	7,258	6,845	94.31%	7,179	6,776	94.39%
Kano	13,727	13,632	99.31%	13,235	13,153	99.38%
PH	49,449	48,291	97.66%	47,777	46,901	98.17%
Yola	2,703	2,649	98.00%	2,305	2,256	97.87%
Total	261,278	238,765	91.38%	249,683	229,101	91.76%

Compared to 2022/Q4, the number of complaints received, number of cases resolved, and average resolution rate changed by -11,595 (4.44%), -9,664 (4.05%) and +0.38 pp respectively. Only Benin DisCo recorded an in increase in the number of customer complaints (+27.46%). Conversely, the remaining ten (10) DisCos recorded decreases in the number of customer complaints with significant decreases recorded by Abuja (-4.87%), Eko (-4.10%) and Ibadan (-4.26%).

The most frequently reported issues among the 249,683 complaints received by DisCos in 2023/Q1 were metering (47.66%), billing (22.72%), and service interruption (9.22%). These 3 complaints cumulatively accounted for over 79% of total complaints (Figure 10). To address these customer concerns, the Commission has introduced several initiatives. For instance, the Commission is currently finalising steps to implement the "NESI call centre" which will provide a centralised portal for customers to pass complaints directly to their service providers. Being a centralised portal, the Commission will have near real-time visibility into the filing and resolution of customer complaints by the DisCos. Consequentially, this will allow the Commission to also monitor the DisCos' compliance with customer service standards of the Commission's Customer Protection Regulations.

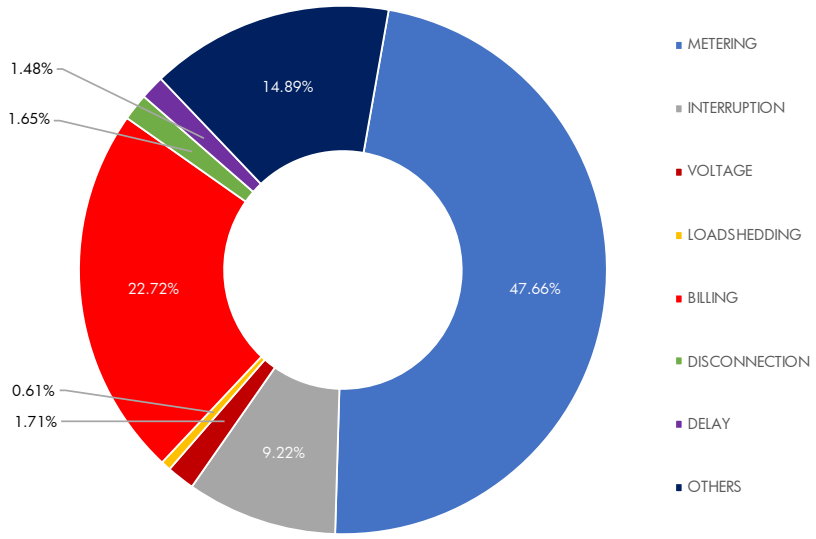


Figure 10: Category of Complaints Received by DisCos in 2023/Q1.

In furtherance of its mandate, the Commission continues to monitor complaint handling and resolution processes adopted by DisCos. In this regard, DisCos submit monthly customer complaints reports which the Commission reviews to identify cases where timely regulatory intervention is necessary. The Customer Protection Regulations (CPR) 2023 was also issued by the Commission to provide a framework pursuant to the Act for the alignment and updating of customer service standards in the NESI to conform with international best practices. This regulation consolidates existing regulatory instruments of the Commission on the protection of customers in the NESI into one regulatory instrument.

4.4 Forum Offices

In line with the Commission's mandate on customer protection, forum offices were set up pursuant to section 80(1)(b) of the EPSRA to hear and resolve customer complaints not satisfactorily resolved at the DisCos' Customer Complaints Units (DisCos-CCU). The forum office is managed by the forum secretariat while the hearings are conducted by five forum panel members who are not Commission staff. Under the new CPR 2023, the composition of the forum has been amended to improve the forum's efficacy in the delivery of its mandate. The new composition is as follows –

1. A legal practitioner with experience in alternative dispute resolution nominated by the Nigerian Bar Association (NBA).
2. A financial expert nominated by either Manufacturers Association of Nigeria, Nigerian Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA) or any other reputable organisation.
3. A qualified electrical engineer nominated by either the Council for Regulation of Engineering in Nigeria (COREN) or the Nigerian Society of Engineers (NSE).
4. A nominee of the Federal Competition and Consumer Protection Commission (FCCPC).
5. A representative of an NGO based in the distribution company's operating area nominated by the Commission.

The Forum panels assist in redressing customers' and operators' unresolved disputes as enshrined in the NERC's Customer Complaints Handling Standards and Procedures (CCHSP) Regulations. As of 31st March 2023, the Commission had thirty (31) operational Forum Offices in twenty-nine (29) states and the FCT, Abuja. The details including names, addresses and contacts of the Commission's Forum Offices are presented in the Appendix X.

The summary of the complaints across the Forum Offices is represented in Table 16. A total of 2,569 (1,327 new complaints and 1,242 pending complaints from 2022/Q4) complaints were received across all Forum Offices, which is a decrease of 25 (0.96%) compared to 2,594 complaints in the previous quarter (2022/Q4). The Forum Offices serving Ikeja DisCo received the highest number of complaints (793) while the office serving Yola DisCo received the fewest (50). The total number of Forum sittings in 2023/Q1 was 57 compared to 81 sittings in 2022/Q4.

Cumulatively, the Forum Offices resolved 64.38% of the total active complaints in 2023/Q1, which is a slight improvement of 5.7 pp from the 2022/Q4 resolution rate

(58.60%). In total, 100 (12.3%) of the undecided cases at the Forum Offices were due to incomplete submissions or withdrawal of complaints by consumers. The Commission will continue its efforts to ensure that the forums sit more regularly to reduce the number of pending cases carried over across quarters.

Table 16: Complaints Handled by Forum Offices in 2023/Q1.

Forum Offices	Accountable DisCos	Complaint Received[1]	Complaint Resolved[2]	Complaint Pending[3]	No of Sittings
Abuja, Lafia & Lokoja	Abuja	68	44	24	3
Asaba & Benin	Benin	124	66	58	4
Eko	Eko	70	38	32	0
Abakaliki, Akwa, Enugu, Owerri, & Umuahia	Enugu	294	169	125	11
Ibadan, Abeokuta, Ilorin & Osogbo	Ibadan	632	454	178	13
Ikeja	Ikeja	793	546	247	8
Bauchi, Gombe, Jos & Makurdi	Jos	49	18	31	0
Gusau, Kaduna, Kebbi & Sokoto	Kaduna	123	76	47	5
Jigawa, Kano & Katsina	Kano	45	13	32	1
Calabar, Port Harcourt & Uyo	P/Harcourt	321	192	129	9
Yola	Yola	50	38	12	3
All Forum Offices	All DisCos	2569	1654	915	57

[1]Complaint received includes outstanding complaints from the preceding quarter. [2.] Complaint resolved excludes complaints withdrawn or rejected. [3.] Complaints are still within the regulatory timeframe of 2 months to resolve.

Figure 11 shows the breakdown of the various categories of complaints received at the Forum Offices in 2023/Q1. Billing complaints were the most prevalent, accounting for 63.14% of the total complaints received. Complaints about metering and disconnection represented 24.76% and 4.17% of the complaints, respectively. The Commission is working on interventions to compel DisCos to resolve customer complaints effectively and reduce the number of complaints escalated to the Forum Offices.

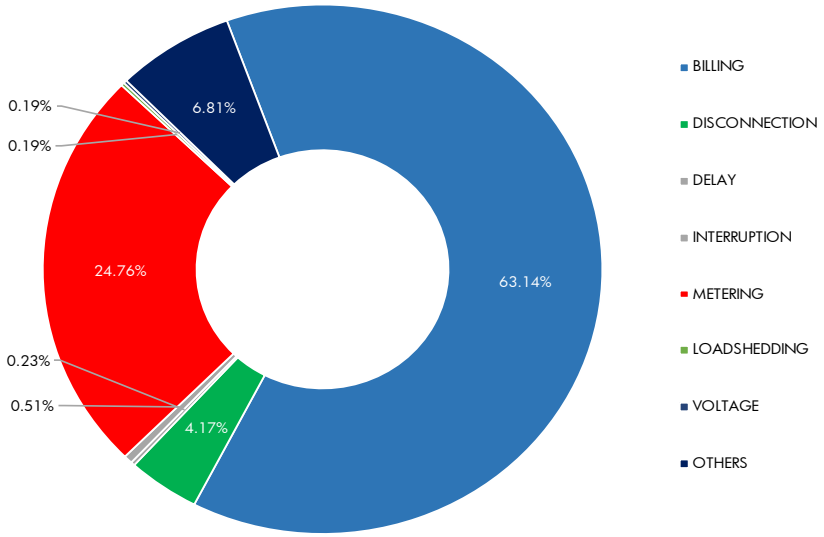


Figure 11: Category of Complaints Received by Forum Offices in 2023/Q1.

In addition to establishing additional Forum Offices and other customer complaint resolution channels, the Commission will continue to explore strategies to improve the operational efficiency of Forum Offices. This will improve overall customer complaint management in the NESI, helping the Commission achieve its strategic objective of providing high-quality customer service.

4.5 Health and Safety

Pursuant to its objective "to ensure the provision of safe and reliable electricity to consumers" as specified in Section 32(1)(e) of the ESPRA, the Commission monitors health and safety performance of the NESI. Out of the 93 mandatory health and safety reports expected to be received in 2023/Q1, 85 reports were received from licensees. Omotosho Power station and Ikeja DisCo have one outstanding report each in January. Dadinkowa and Geregu Power stations did not submit any reports in the quarter. The Commission has commenced enforcement actions against the licensees that have failed to meet their regulatory reporting requirements.

Accident statistics for the NESI in 2022/Q4 and 2023/Q1 are presented in Table 17. There were thirty-three (33) incidents resulting in 16 injuries and 17 fatalities, compared to 25 incidents in 2022/Q4 with 27 injuries and 18 fatalities. While the number of incidents increased by 32.00%, the number of casualties reduced by 5.55% in 2023/Q1 compared to 2022/Q4. This could be an indication that the incidents recorded in 2023/Q1 were less severe and there were applications of improved early response systems to prevent incidents from resulting in casualties.

Table 17: Health and Safety (H&S) Reports in 2022/Q4 vs. 2023/Q1

Item	2022/Q4	2023/Q1	Net Change
Number of Expected H&S Reports	87	93	+6
Number of H&S Reports Submitted	83	85	-2
Number of Incidents	25	33	+8
Number of Fatalities (employees & third parties)	18	17	-1
Number of Injuries	27	16	-11

Out of the thirty-three incidents reported in the quarter, the licensees with the highest share were TCN - 7, Eko DisCo - 6 and Ikeja DisCo – 4 which represented 21%, 18% and 12% (cumulative – 51%). Conversely, Yola DisCo had the least number of incidence (1) within the quarter. As shown in Figure 12, Eko and Yola DisCos experienced significant incidents, with Eko reporting 6 casualties (3 fatalities and 3 injuries) and Yola recording 5 casualties (1 fatality and 4 injuries).

The root causes of incidents reported by the licensees include illegal/unauthorised connections, unsafe condition/act, wire snap, vandalism, explosion, electrocution, fire outbreak, vehicular collision, and fall from height. The Commission has initiated investigations into all reported incidents and will enforce relevant actions against licensees where necessary.

In line with its 2021-2023 strategic plan, the Commission has intensified efforts at implementing various safety programmes aimed at eliminating accidents in the industry. Some of the safety programmes implemented by the Commission include the standardisation of protective schemes, public enlightenment on health & safety, engagement of government agencies on Right of Way (RoW) violations, and a review of an operational procedure for distribution system operators on fault clearing.

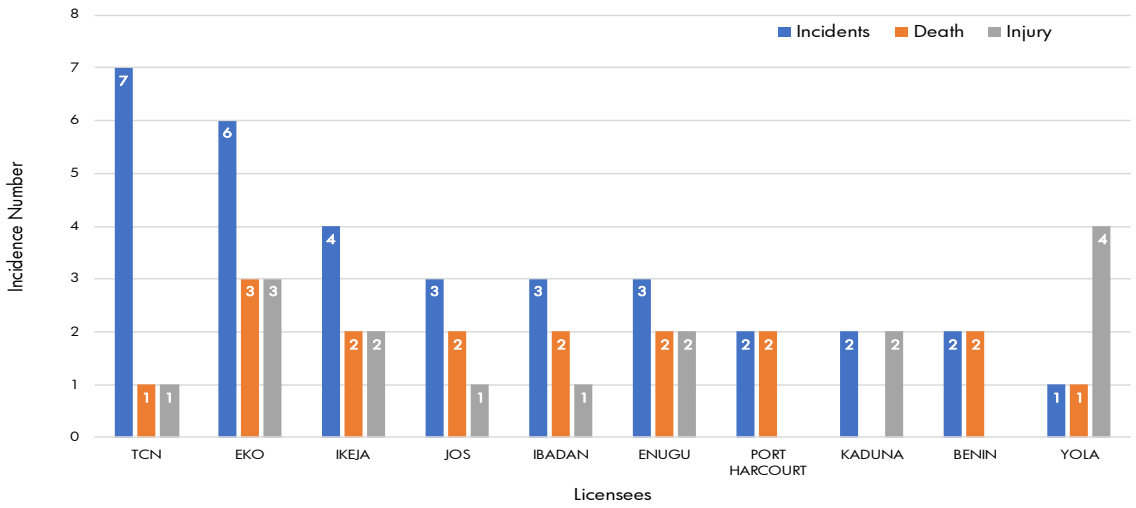
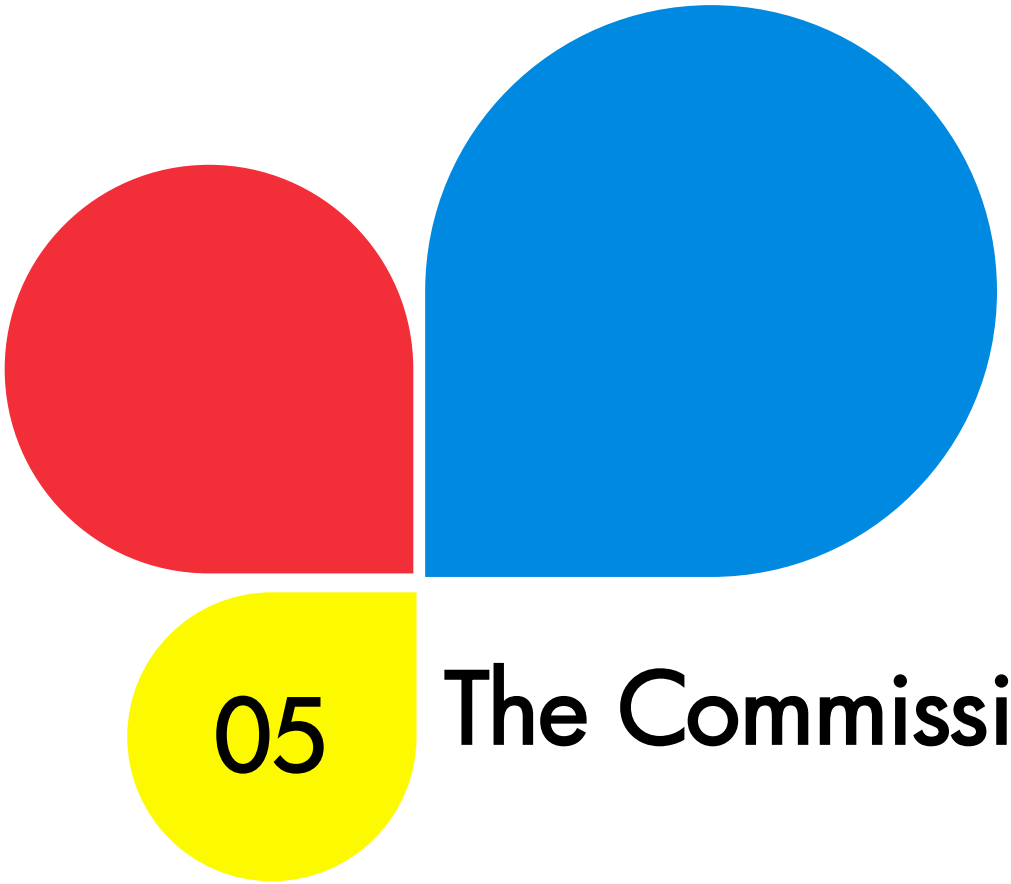


Figure 12: Incidence Report in 2023/Q1



05 The Commission

5.0 Commission

5.1 Financial Report

The summary of the Commission's revenue and expenditure in 2023/Q1 and 2022/Q4 is presented in Table 18. The Commission had a total revenue of ₦ 4,709.02 million and a total expenditure of ₦2,000.96 million in 2023/Q1.

The total revenue in 2023/Q1 was ₦193.03 million (4.27%) higher than the ₦4,515.99 million realised in 2022/Q4. This improvement in revenue is primarily attributable to the significant increase by 93.50% in Other Internally Generated Revenue from ₦196.93 million in 2022/Q4 to ₦380.77million in 2023/Q1. Furthermore, there was a marginal increase in operating levy (market charges) which improved by ₦9.2 million (0.21%), from ₦4,319.06 realised in 2022/Q4 to ₦4,328.26 million in 2023/Q1.

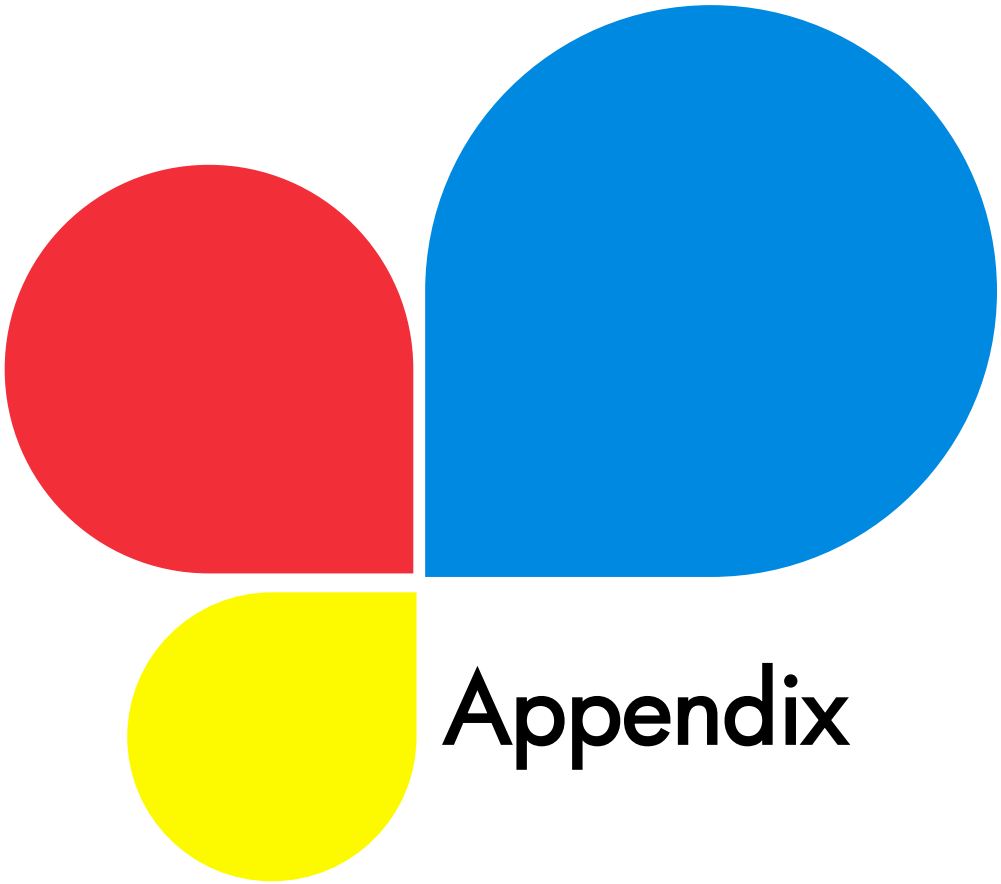
Table 18: Quarterly Cash Flow of the Commission in 2023/Q1

	Summary for 2023/Q1 (₦' Million)				
A. Revenue	January	February	March	2022/Q4	2023/Q1
Operating Levy (MC)	1,323.48	1,562.03	1,442.75	4,319.06	4,328.26
Other IGR	46.60	199.58	134.58	196.93	380.77
Total Revenue	1,370.08	1,761.61	1,577.33	4,515.99	4,709.02
B. Expenditure					
Personnel Cost	416.42	355.43	809.95	2,406.92	1,581.80
Regulatory Expenses	40.61	120.84	157.20	1,347.99	318.65
Admin & General	16.08	20.46	63.97	118.22	100.51
Maintenance					
Total Expenditure	473.11	496.73	1,031.12	3,873.13	2,000.96
C. Net Cash Flow (A-B)	896.97	1,264.88	546.21	642.86	2,708.06
Outstanding Liabilities[6]					

The Commission's total expenditure (capital and recurrent) in the period decreased by ₦1,872.17 million (48.34%) from ₦3,873.13 million in 2022/Q4 to ₦2,000.96 million. This decrease can be attributed to a significant reduction in personnel costs and regulatory expenses. In terms of cashflow, the Commission recorded a +₦2,708.06 million net balance. This represents a 321.25% increase compared to the +₦642.86 million recorded in 2022/Q4. It is noteworthy that 2023/Q1 makes it the 15th

[6] Based on feedback received from Finance and Accounts, the Commission's Outstanding liabilities were not available at the time of this report.

consecutive quarter in which the Commission has recorded a positive quarterly cash flow position.



Appendix

Appendix I: Energy Generation in 2022/Q4 and 2023/Q1

GenCos	*Available Capacity (MW)*		*Average Daily Generation (MWh)*		*Quarterly Generation (GWh)*	
	2022/Q4	2023/Q1	2022/Q4	2023/Q1	2022/Q4	2023/Q1
AES	-	-	-	-	-	-
Afam IV_V	60.11	44.57	1442.76	1,069.67	132.97	94.38
Afam _VI	128.71	311.21	3,089.05	7,468.98	286.89	663.83
Alaoji NIPP	78.63	26.05	1,887.08	625.24	173.92	58.15
Azura-Edo IPP	415.06	401.44	9,961.50	9,634.57	916.41	867.29
Dadin Kowa	36.61	19.81	878.55	475.36	80.79	43.18
Delta	383.01	323.69	9,192.20	7,768.56	844.60	700.40
Egbin	454.46	685.43	10,906.97	16,450.27	1,004.02	1,479.28
Egbin ST-6	-	-	-	46.63	-	4.34
Gbarain NIPP	-	-	-	-	-	-
Geregu Gas	123.56	202.68	2,965.41	4,864.23	272.08	434.49
Geregu NIPP	71.95	31.02	1,726.81	744.51	157.69	69.24
Ibom Power	41.70	30.97	1,000.88	743.37	91.89	67.97
Ihovbor NIPP	56.39	28.39	1,353.26	681.38	124.23	63.02
Jebba	368.94	356.55	8,854.57	8,557.19	814.37	766.67
Kainji	472.45	459.77	11,338.71	11,034.44	1,043.26	989.96
Odukpani	247.08	294.80	5,929.84	7,075.26	546.28	639.63
Okpai	294.06	284.11	7,057.54	6,818.62	650.41	610.55
Olorunsogo Gas	92.08	98.84	2,209.90	2,372.13	203.00	214.02
Olorunsogo NIPP	40.72	45.51	977.23	1,092.21	89.36	97.68
Omoku	50.17	48.34	1,204.10	1,160.13	110.66	104.54
Omotosho Gas	93.54	118.23	2,244.89	2,837.60	206.20	256.43
Omotosho NIPP	63.84	54.30	1,532.06	1,303.31	139.84	117.56
Paras Energy	51.92	63.40	1,246.03	1,521.53	114.59	136.77
Rivers IPP	62.36	2.92	1,496.73	70.07	137.43	6.52
Sapele GT NIPP	43.97	10.12	1,055.18	242.82	97.10	22.29
Sapele ST	29.52	94.60	708.51	2,270.48	65.55	204.87
Shiroro	441.50	264.44	10,596.04	6,346.60	974.05	570.95
Trans Amadi	40.03	31.27	960.73	750.53	88.05	66.27
Total	4,242.36	4,334.41	101,816.53	104,025.74	9,365.65	9,350.24

Appendix II: Monthly Energy Offtake and Billed by DisCos in 2022/Q4 and 2023/Q1

DisCos	Energy Offtake (GWh)						Energy Billed (GWh)						Billing Efficiency	
	2022/Q4			2023/Q1			2022/Q4			2023/Q1			2022/Q4	2023/Q1
	Oct	Nov	Dec	Jan	Feb	March	Oct	Nov	Dec	Jan	Feb	March		
Abuja	364	373	374	347	344	400	255	251	244	245	261	277	67.51%	71.77%
Benin	228	239	220	210	206	219	205	193	202	185	176	186	87.29%	86.03%
Eko	267	306	338	295	299	333	240	271	300	262	266	296	89.02%	88.89%
Enugu	193	213	236	213	219	208	138	152	161	156	158	149	70.25%	72.34%
Ibadan	281	303	322	278	277	301	216	226	239	214	214	239	75.15%	77.89%
Ikeja	343	365	406	361	370	420	302	327	363	319	323	342	89.12%	85.52%
Jos	142	154	142	137	141	132	114	123	115	111	114	108	80.28%	81.13%
Kaduna	182	176	184	166	162	164	82	89	88	86	90	92	47.66%	54.43%
Kano	180	179	180	166	157	183	112	126	124	119	114	135	67.15%	72.66%
Port Harcourt	173	178	197	181	188	179	143	148	159	150	155	146	82.04%	82.47%
Yola	72	74	77	74	72	94	42	43	44	47	50	60	57.46%	65.55%
All Discos	2,426	2,560	2,676	2,428	2,435	2,632	1,849	1,948	2,039	1,893	1,920	2,031	76.16%	77.97%

Appendix III: Monthly Revenue Performance by DisCos in 2022/Q4 and 2023/Q1

DisCos	Total Billing (₦' Million)						Revenue Collected (₦' Million)						Collection Efficiency (%)	
	2022/Q4			2023/Q1			2022/Q4			2023/Q1			2022/Q4	2023/Q1
	Oct	Nov	Dec	Jan	Feb	March	Oct	Nov	Dec	Jan	Feb	March		
Abuja	14,745	14,807	15,084	16,071	17,067	18,137	12,006	12,391	12,003	11,423	14,695	12,981	81.55%	76.25%
Benin	10,973	10,475	11,708	10,052	11,009	11,511	6,803	6,803	6,727	5,950	7,443	6,145	61.33%	59.98%
Eko	13,214	14,901	18,361	16,172	16,365	17,911	11,593	13,098	14,281	12,440	15,007	13,514	83.85%	81.20%
Enugu	7,716	8,540	9,675	9,373	9,518	8,875	6,044	6,705	6,300	5,842	6,802	6,389	73.46%	68.55%
Ibadan	11,594	12,101	12,746	12,717	12,346	13,675	10,160	10,818	8,045	7,099	9,409	8,341	79.64%	64.15%
Ikeja	15,698	17,082	19,031	17,900	18,140	20,860	14,803	16,211	16,403	15,568	17,791	16,250	91.52%	87.19%
Jos	6,864	8,717	8,248	7,919	8,146	7,890	2,604	3,303	2,696	3,113	3,002	3,605	36.10%	40.58%
Kaduna	4,503	4,908	5,524	5,451	5,784	6,010	2,561	2,796	2,523	2,348	2,837	2,449	52.76%	44.27%
Kano	6,195	7,201	7,601	7,448	7,259	7,337	4,173	4,782	5,483	4,399	5,074	4,716	68.76%	64.27%
Port Harcourt	8,077	8,454	9,542	9,159	9,444	8,948	5,249	5,835	5,986	5,523	6,183	5,772	65.47%	63.44%
Yola	2,386	2,633	2,971	3,229	3,465	4,197	1,359	1,545	1,562	1,408	1,967	1,603	55.91%	45.71%
All DisCos	101,966	109,819	120,491	115,491	118,543	125,350	77,356	84,289	82,008	75,116	90,208	81,764	73.33%	68.75%

Appendix IV: Monthly DisCos Invoices & Remittances to NBET in 2022/Q4 and 2023/Q1

DisCos	Invoice (₦' Billion)						Remittance (₦' Billion)						Remittance Performance	
	2022/Q4			2023/Q1			2022/Q4			2023/Q1			2022/Q4	2023/Q1
	Oct	Nov	Dec	Jan	Feb	March	Oct	Nov	Dec	Jan	Feb	March		
Abuja	10.46	11.03	11.21	11.14	10.93	12.80	6.91	6.94	6.60	4.58	8.32	7.11	63%	61%
Benin	6.38	6.81	6.59	6.58	6.45	7.07	5.49	5.45	5.14	4.54	5.31	4.61	81%	81%
Eko	6.41	6.92	7.75	8.23	7.40	8.38	5.29	5.01	5.75	6.71	5.92	6.85	76%	85%
Enugu	5.98	6.50	7.09	6.81	6.97	7.03	5.38	5.52	5.29	4.90	5.50	5.32	83%	79%
Ibadan	8.23	8.98	9.50	8.77	8.77	9.86	7.83	6.86	7.27	5.24	6.37	5.95	82%	71%
Ikeja	9.67	10.72	11.83	11.40	11.53	13.15	9.34	8.77	9.72	9.81	10.79	9.06	86%	83%
Jos	4.15	4.27	4.66	4.56	4.42	4.67	2.42	2.32	2.16	2.26	2.45	2.45	53%	81%
Kaduna	5.10	5.12	5.38	5.23	5.08	5.34	1.17	1.11	0.72	0.53	0.97	0.37	19%	12%
Kano	5.06	5.21	5.41	5.34	5.09	5.82	2.56	2.30	3.15	2.22	2.30	1.63	51%	40%
Port Harcourt	4.96	5.29	5.86	5.75	5.93	5.95	3.04	3.08	2.60	3.88	2.73	1.95	54%	59%
Yola	2.10	2.23	2.37	2.42	2.32	3.11	0.22	0.23	0.22	0.31	0.30	0.28	10%	88%
All DisCos	68.51	73.08	77.66	76.23	74.91	83.18	49.67	47.61	48.63	44.98	50.95	45.57	63%	68%
Ajaokuta Steel (₦'M)	117.45	129.37	125.35	129.80	130.23	144.04	0.00	0.00	0.00	0.00	0.00	0.00	0%	0%
Other Bilateral($'M)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%	0%

Notes: 1. Where the remittance by a DisCo for a given period is more than the invoice received (Remittance performance >100%), it reflects payment for outstanding bills/arrears
2. Other bilaterals consist of PARAS-SBEE, TRANSCORP/SBEE, MAINSTREAM/NIGELEC, and ODUKPANI/CEET

Appendix V: Monthly DisCos Invoices & Remittances to MO in 2022/Q4 and 2023/Q1

DisCos	*Invoice (₦' Billion)*						*Remittance (₦' Billion)*						*Remittance Performance*	
	2022/Q4			*2023/Q1*			*2022/Q4*			*2023/Q1*			*2022/Q4*	*2023/Q1*
	Oct	*Nov*	*Dec*	*Jan*	*Feb*	*March*	*Oct*	*Nov*	*Dec*	*Jan*	*Feb*	*March*		
Abuja	2.00	2.06	1.93	2.04	1.86	2.28	1.54	1.65	1.60	1.04	1.69	1.53	80%	69%
Benin	1.29	1.39	1.16	1.30	1.20	1.33	1.10	1.24	1.07	0.87	1.08	1.33	89%	86%
Eko	1.52	1.38	1.47	1.60	1.40	1.60	1.33	1.17	1.47	1.39	1.20	1.38	91%	86%
Enugu	1.23	1.23	1.30	1.29	1.25	1.16	1.06	1.20	1.07	0.80	0.94	0.80	89%	69%
Ibadan	1.54	1.77	1.78	1.73	1.62	1.87	1.73	2.08	2.01	0.88	1.16	1.00	114%	58%
Ikeja	1.92	2.11	2.22	2.22	2.14	2.40	1.32	2.53	2.72	1.82	1.92	1.54	105%	78%
Jos	0.85	0.86	0.86	0.90	0.85	0.87	0.47	0.92	0.59	0.57	0.73	0.65	77%	74%
Kaduna	1.03	1.02	1.02	1.03	0.95	1.02	0.23	0.27	0.32	0.07	0.17	0.03	27%	9%
Kano	1.02	1.03	1.01	1.04	0.94	1.08	0.52	0.57	0.86	0.45	0.45	0.32	64%	40%
Port Harcourt	0.92	1.03	1.10	1.10	1.06	1.15	0.64	0.75	0.66	0.92	0.61	0.47	67%	60%
Yola	0.40	0.42	0.43	0.43	0.37	0.55	0.38	0.44	0.38	0.47	0.37	0.39	97%	91%
All DisCos	13.70	14.30	14.27	14.68	13.65	15.33	10.31	12.81	12.75	9.28	10.32	9.45	85%	67%
Ajaokuta Steel (₦'M)	21.35	23.20	22.36	24.46	24.76	26.8	0.00	0.00	0.00	0.00	0.00	0.00	0%	0%
Int'l Customers ($'M)	4.00	4.65	5.21	5.10	5.10	5.91	0.00	0.00	0.00	0.00	0.00	0.00	0%	0%

Notes: 1. Where the remittance by a DisCo for a given period is more than the invoice received (Remittance performance >100%), it reflects payment for outstanding bills/arrears
2. Other bilaterals consist of PARAS-SBEE, TRANSCORP/SBEE,Mainstream/NIGELEC, and Odukpani/CE

Appendix VI: Meter Installation through the MAP and NMMP Interventions

DisCos	*Meters contracted*	*Meters installed in 2019*	*Meters installed in 2020*	*Meters installed in 2021*	*Meters installed in 2022*	*Meters installed in 2023/Q1*	*Total number installations*
Abuja	1,000,475	63,925	105,253	87,987	83,834	25,870	366,869
Benin	664,646	1,169	11,154	72,256	6,781	4,486	95,846
Eko	283,178	5,422	32,353	71,362	37,902	13,634	160,673
Enugu	713,926	17,410	54,603	97,433	57,751	23,487	250,684
Ibadan	1,103,867	4,771	38,403	94,309	146,044	32,808	316,335
Ikeja	1,186,114	22,876	160,469	126,051	145,364	46,790	501,550
Jos	593,473	15	4,673	87,977	19,190	2,914	114,769
Kaduna	519,152	43	8,258	18,236	34,385	2,488	63,410
Kano	562,747	22	3,314	87,736	3,476	481	95,029
Port Harcourt	220,044	7,775	36,546	92,543	33,549	12,087	182,500
Yola	749,376	-	478	5,565	30,384	6,062	42,489
Total	7,596,998	123,428	455,504	841,455	598,660	171,107	2,190,154

Appendix VII: Meter Installation through the NMMP Intervention

DisCos	*Meters contracted*	*Meters installed in 2019*	*Meters installed in 2020*	*Meters installed in 2021*	*Meters installed in 2022*	*Meters installed in 2023/Q1*	*Total number installations*
Abuja	100,475	-	17,777	82,698	-	-	100,475
Benin	90,870	-	-	71,152	6,690	-	77,842
Eko	79,178	-	55	63,659	9,031	3,551	76,296
Enugu	92,381	-	-	92,025	194	-	92,219
Ibadan	114,952	-	4,985	93,761	18,036	7	116,789
Ikeja	111,703	-	24	111,679	-	-	111,703
Jos	93,473	-	983	87,977	2,339	265	91,564
Kaduna	69,152	-	1,555	15,835	29,391	46	46,827
Kano	87,747	-	11	87,736	-	-	87,747
Port Harcourt	82,720	-	14,212	68,508	-	-	82,720
Yola	85,376	-	478	5,565	25,839	6,062	37,944
Total	1,008,026	-	40,080	780,595	91,520	9,931	922,126

Appendix VIII: Meter Installation through the MAP Intervention

DisCos	*Meters contracted*	*Meters installed in 2019*	*Meters installed in 2020*	*Meters installed in 2021*	*Meters installed in 2022*	*Meters installed in 2023/Q1*	*Total number installations*
Abuja	900,000	63,925	87,476	5,289	82,788	25,084	264,562
Benin	573,776	1,169	11,154	1,104	323	2,761	16,511
Eko	204,000	5,422	32,298	7,703	28,883	10,083	84,389
Enugu	621,545	17,410	54,603	5,408	57,403	23,487	158,311
Ibadan	988,915	4,771	33,418	548	115,635	32,801	187,173
Ikeja	1,074,411	22,876	160,445	14,372	145,364	46,790	389,847
Jos	500,000	15	3,690	-	575	2,649	6,929
Kaduna	450,000	43	6,703	2,401	3,303	2,411	14,861
Kano	475,000	22	3,303	-	955	481	4,761
Port Harcourt	137,324	7,775	22,334	24,035	33,549	12,087	99,780
Yola	664,000	-	-	-	0	0	0
Total	6,588,971	123,428	415,424	60,860	468,778	158,634	1,227,124

Appendix IX: Category of Complaints Received by Discos in 2023/Q1

DisCos	Complaints Received	Complaints Resolved	Unresolved Complaints	Resolution Rate	Complaint Categories							
					Metering	Interruption	Voltage	Loadshedding	Billing	Disconnection	Delay	Others
Abuja	26,104	25,686	418	98%	10,510	1,841	241	834	2,316	1,706	-	8,656
Benin	5,871	5,576	295	95%	173	178	27	-	1,018	7	1	4,296
Eko	41,582	39,061	2,521	94%	32,837	2,085	448	6	3,373	261	335	2,237
Enugu	24,597	22,607	1,990	92%	14,593	1,733	302	-	1,935	-	-	6,034
Ibadan	37,987	34,533	3,454	91%	480	192	126	-	36,199	2	-	988
Ikeja	28,348	18,746	9,602	66%	12,262	2,018	232	395	2,439	829	2,739	7,434
Jos	14,698	13,806	892	94%	8,608	1,010	381	281	3,700	405	-	313
Kaduna	7,179	6,776	403	94%	2,061	3,715	448	3	553	233	1	165
Kano	13,235	13,153	82	99%	7,961	4,155	92	-	889	47	-	91
Port Harcourt	47,777	46,901	876	98%	28,575	5,344	1,577	-	4,301	614	611	6,755
Yola	2,305	2,256	49	98%	939	747	399	-	4	9	3	204
All DisCos	249,683	229,101	20,582	92%	118,999	23,018	4,273	1,519	56,727	4,113	3,690	37,173

Appendix X: List and Addresses of NERC Forum Offices as at March 2023

S/N	Forum Office	Location	Telephone	Email
1	*Abakaliki, Ebonyi State*	3, Ezekuna Crescent, Off Nsugbe Street, Abakaliki Ebonyi State	9037808590	abakalikiforum@nerc.gov.ng
2	*Abeokuta, Ogun State*	33, First Avenue, Ibara Housing Estate, Ibrar GRA, Abeokuta	9139381008	abeokutaforum@nerc.gov.ng
3	*Abuja, FCT*	14, Road 131, Gwarinpa, Federal Capital Territory, Abuja	8146862225	abujaforum@nerc.gov.ng
4	*Asaba, Delta State*	Denis Osadebe Way, Beside Mobil Filling Station, Asaba, Delta State	9062277247	asabaforum@nerc.gov.ng
5	*Awka, Anambra State*	Plot 80, Aroma Junction Layout, Opp. CBN, Awka, Anambra State	9037808594	awkaforum@nerc.gov.ng
6	*Bauchi, Bauchi State*	37, Old Jos Road, GRA, Bauchi, Bauchi State	9062924607	bauchiforum@nerc.gov.ng
7	*Benin, Edo State*	34, Akpakpava Street, Benin City, Edo State	9037808592	beninforum@nerc.gov.ng
8	*B/Kebbi, Kebbi State*	8, Ahmadu Bello Way, Opp. Kebbi State Govt House, Kebbi State	9062863161	birninkebbiforum@nerc.gov.ng
9	*Calabar, C/Rivers State*	Plot 109, MCC Road by Ibok Street, Calabar, Cross River State	9062863159	calabarforum@nerc.gov.ng
10	*Dutse, Jigawa State*	Dutse G.R.A, Dutse, Jigawa State	7031704827	jigawaforum@nerc.gov.ng
11	*Eko, Lagos State*	61, Odunlami Street, Off Marina, Lagos Island, Lagos State	8106807261	ekoforum@nerc.gov.ng
12	*Enugu, Enugu State*	John Anichukwu Close, Plot 7 Mkpokiti Pocket Layout, Enugu, Enugu State	8146862230	enuguforum@nerc.gov.ng
13	*Gombe, Gombe State*	Government Layout GDP/2, Along Ministry of Education Road, Gombe State	8140440079	gombeforum@nerc.gov.ng
14	*Gusau, Zamfara State*	2 Canteen Daji, J. B. Yakubu Road, Gusau, Zamfara State	9062863163	gusauforum@nerc.gov.ng
15	*Ibadan, Oyo State*	Jibowu Str, Opp. Magara Police Station, Iyaganku, G.R.A, Ibadan, Oyo State	8146862252	ibadanforum@nerc.gov.ng
16	*Ikeja, Lagos State*	199, Obafemi Awolowo Way, Alausa, Ikeja, Lagos State	8106807298	ikejaforum@nerc.gov.ng
17	*Ilorin, Kwara State*	30, Stadium Road, Off Taiwo Road, Ilorin, Kwara State	9062924603	ilorinforum@nerc.gov.ng
18	*Jos, Plateau State*	5a, Ray-field Road, Jos, Plateau State	9037808597	josforum@nerc.gov.ng
19	*Kaduna, Kaduna State*	22, Ahmadu Bello Way, Opposite NNDC Building, Kaduna, Kaduna State	8106807299	kadunaforum@nerc.gov.ng
20	*Kano, Kano State*	2, Miller Road, Bompai, Nasarawa G.R.A, Kano, Kano State	8146862222	kanoforum@nerc.gov.ng
21	*Katsina, Katsina State*	7, Abuja Crescent, Off Hassan Usman Katsina Road, Katsina, Katsina State	7031704821	katsinaforum@nerc.gov.ng
22	*Lafia, Nasarawa State*	Manyi Street, Off Jos Road, Bukan Sidi, Lafia, Nasarawa State	9062924599	lafiaforum@nerc.gov.ng
23	*Lokoja, Kogi State*	Hassan Kastina Rd, Opp. State Civil Service Commission, Zone 8 Police HQ, Lokoja, Kogi State.	9062924601	lokojaforum@nerc.gov.ng
24	*Makurdi, Benue State*	Hephzibah Plaza, Atom Kpera Road, Opp. Makurdi Int'l School, Benue State	9062277249	makurdiforum@nerc.gov.ng
25	*Osogbo, Osun State*	51, Isiaka Adeleke Way, Along Okefia-Alekuwodo Rd, Osogbo, Osun State	9062924604	osogboforum@nerc.gov.ng
26	*Owerri, Imo State*	1, C.B Anyanwu Rd, Housing Area B, Exclusive Garden, Owerri	9062277245	owerriforum@nerc.gov.ng
27	*P/Harcourt, Rivers State*	The Vhelberg Imperial Hotel, Plot 122 & 122a, Bank Anthony Avenue, Off Ordinance Rd, P/Harcourt	8146862223	phforum@nerc.gov.ng
28	*Sokoto, Sokoto State*	1, Garba Duba Road, Sokoto, Sokoto State	9062863157	sokotoforum@nerc.gov.ng
29	*Umuahia, Abia State*	House 2, Adelabu Str., Amaokwe Housing Estate, Umuahia Ibeku, Abia State	9062277251	umuahiaforum@nerc.gov.ng
30	*Uyo, Akwa Ibom State*	63, Osongama Road, Off Oron/Uyo Airport Road, Uyo, Akwa Ibom State	9062863165	uyoforum@nerc.gov.ng
31	*Yola, Adamawa State*	5, Nguroje Str., Karewa Extension, Jimeta, Yola, Adamawa State	9037808535	yolaforum@nerc.gov.ng

Appendix XI: Complaints Handled by Forum Offices in 2022/Q4 and 2023/Q1

		2022/Q4				2023/Q1			
S/N	Forum Offices	Appeals Received	Appeals Resolved	Appeals Pending	Resolution Rate	Appeals Received	Appeals Resolved	Appeals Pending	Resolution Rate
1	Abakaliki, Ebonyi State	63	32	31	50.79%	46	32	14	69.57%
2	Abeokuta, Ogun State	94	55	8	58.51%	76	30	46	39.47%
3	Abuja, FCT	65	49	16	75.38%	47	28	19	59.57%
4	Asaba, Delta State	67	61	6	91.04%	124	66	58	53.23%
5	Awka, Anambra State	92	77	15	83.70%	80	40	40	50.00%
6	Bauchi, Bauchi State	5	5	0	100.00%	5	4	1	80.00%
7	Benin, Edo State	54	54	0	100.00%	0	0	0	-
8	Birnin Kebbi, Kebbi State	10	2	8	20.00%	24	6	18	25.00%
9	Calabar, C/Rivers State	73	40	33	54.79%	53	47	6	88.68%
10	Dutse, Jigawa State	15	1	0	6.67%	15	0	15	0.00%
11	Eko, Lagos State	69	47	22	68.12%	70	38	32	54.29%
12	Enugu, Enugu State	128	44	84	34.38%	124	74	50	59.68%
13	Gombe, Gombe State	8	1	7	12.50%	16	4	12	25.00%
14	Gusau, Zamfara State	29	16	13	55.17%	31	19	12	61.29%
15	Ibadan, Oyo State	157	81	76	51.59%	137	85	52	62.04%
16	Ikeja, Lagos State	906	500	406	55.19%	793	546	247	68.85%
17	Ilorin, Kwara State	63	32	31	50.79%	60	53	7	88.33%
18	Jos, Plateau State	7	7	0	100.00%	6	1	5	16.67%
19	Kaduna, Kaduna State	65	47	18	72.31%	46	38	8	82.61%
20	Kano, Kano State	45	33	12	73.33%	26	13	13	50.00%
21	Katsina, Katsina State	3	0	3	0.00%	4	0	4	0.00%
22	Lafia, Nasarawa State	26	14	12	53.85%	21	16	5	76.19%
23	Lokoja, Kogi State	2	1	1	50.00%	0	0	0	-
24	Makurdi, Benue State	22	0	22	0.00%	22	9	13	40.91%
25	Osogbo, Osun State	140	52	88	37.14%	359	286	73	79.67%
26	Owerri, Imo State	11	6	5	54.55%	19	3	16	15.79%
27	Port Harcourt, Rivers State	142	119	23	83.80%	123	84	39	68.29%
28	Sokoto, Sokoto State	27	20	7	74.07%	22	13	9	59.09%
29	Umuahia, Abia State	37	25	12	67.57%	25	20	5	80.00%
30	Uyo, Akwa Ibom State	143	80	63	55.94%	145	61	84	42.07%
31	Yola, Adamawa State	26	19	7	73.08%	50	38	12	76.00%
	All Forum Offices	2594	1520	1074	58.60%	2569	1654	915	64.38%

Appendix XII: Category of Complaints Received by Forum Offices in 2022/Q4 and 2023/Q1

Forum Office	2022/Q4								2023/Q1							
	Billing	Disconnection	Con. Delay	Interruption	Metering	Load Shedding	Voltage	Others	Billing	Disconnection	Con. Delay	Interruption	Metering	Load Shedding	Voltage	Others
Abakaliki, Ebonyi State	56	2	0	1	4	0	0	0	33	5	0	0	6	0	0	2
Abeokuta, Ogun State	61	5	0	2	14	0	0	12	35	8	0	3	15	1	0	14
Abuja, FCT	13	0	0	0	50	0	0	2	11	0	0	0	33	0	0	3
Asaba, Delta State	57	2	0	0	7	0	0	1	111	3	0	0	10	0	0	0
Awka, Anambra State	71	8	0	0	8	0	0	5	64	5	0	0	11	0	0	0
Bauchi, Bauchi State	5	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0
Benin, Edo State	47	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0
B/Kebbi, Kebbi State	9	0	0	0	1	0	0	0	21	0	0	0	2	0	0	1
Calabar, C/Rivers State	56	7	0	0	3	0	1	6	45	1	0	0	3	0	0	4
Dutse, Jigawa State	14	0	0	0	0	0	0	1	14	0	0	0	0	0	0	1
Eko, Lagos State	44	3	0	0	19	0	0	3	43	3	0	0	21	0	0	3
Enugu, Enugu State	72	16	2	0	32	0	0	6	114	0	0	0	6	0	0	4
Gombe, Gombe State	3	0	0	0	3	0	0	2	8	0	0	0	6	0	0	2
Gusau, Zamfara State	19	4	0	0	3	0	0	3	25	1	0	0	5	0	0	0
Ibadan, Oyo State	98	5	0	1	18	0	1	34	91	6	0	3	6	1	1	29
Ikeja, Lagos State	640	16	1	2	218	3	0	26	481	15	1	2	257	3	0	34
Ilorin, Kwara State	30	1	0	0	29	0	0	3	28	1	0	0	22	0	0	9
Jos, Plateau State	4	1	0	0	1	0	0	1	6	0	0	0	0	0	0	0
Kaduna, Kaduna State	37	5	0	0	21	0	0	2	29	4	0	0	12	0	0	1
Kano, Kano State	16	5	0	0	1	0	0	23	4	1	0	0	10	0	0	11
Katsina, Katsina State	1	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
Lafia, Nasarawa State	6	1	0	2	14	0	0	3	11	5	0	0	5	0	0	0
Lokoja, Kogi State	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Makurdi, Benue State	22	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0
Osogbo, Osun State	71	0	0	0	61	0	0	5	196	2	0	0	137	0	0	24
Owerri, Imo State	7	1	0	0	0	0	0	3	10	1	0	0	3	0	0	5
P/Harcourt, Rivers State	95	21	0	0	22	0	4	0	74	20	0	0	19	0	0	10
Sokoto, Sokoto State	18	5	0	0	0	0	0	4	22	0	0	0	0	0	0	0
Umuahia, Abia State	27	4	1	0	4	0	0	1	17	1	0	0	7	0	0	0
Uyo, Akwa Ibom State	80	22	0	0	23	0	2	16	84	17	5	0	20	0	2	17
Yola, Adamawa State	14	2	0	4	4	0	0	2	17	7	0	5	18	0	2	1
All Forum Offices	1695	139	4	12	566	3	8	164	1,622	107	6	13	636	5	5	175

Appendix XIII: Categories of Complaints Received at the Forum Offices in 2023/Q1

S/N	Forum Offices	Current Complaints	Complaints Received	Complaints Resolved	Complaints Rejected	Complaints Withdrawn	Pending Complaints	No Of Hearings	Billing	Disconnection	Delay	Interruption	Meter	Loadshedding	Voltage	Others	Resolution Rate
1	ABAKALIKI	14	46	32	0	0	14	2	33	5	0	0	6	0	0	2	69.57%
2	ABEOKUTA	59	76	30	45	0	1	2	35	8	0	3	15	1	0	14	39.47%
3	ABUJA	31	47	28	0	0	19	2	11	0	0	0	33	0	0	3	59.57%
4	ASABA	32	124	66	2	1	55	4	111	3	0	0	10	0	0	0	53.23%
5	AWKA	65	80	40	0	0	40	3	64	5	0	0	11	0	0	0	50.00%
6	BAUCHI	4	5	4	0	0	1	0	4	1	0	0	0	0	0	0	80.00%
7	BENIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
8	CALABAR	20	53	47	0	2	4	3	45	1	0	0	3	0	0	4	88.68%
9	EKO	45	70	38	0	0	32	0	43	3	0	0	21	0	0	3	54.29%
10	ENUGU	46	124	74	0	22	28	4	114	0	0	0	6	0	0	4	59.68%
11	GOMBE	8	16	4	0	0	12	0	8	0	0	0	6	0	0	2	25.00%
12	GUSAU	31	31	19	0	0	12	1	25	1	0	0	5	0	0	0	61.29%
13	IBADAN	61	137	85	0	0	52	4	91	6	0	3	6	1	1	29	62.04%
14	IKEJA	387	793	546	0	0	247	8	481	15	1	2	257	3	0	34	68.85%
15	ILORIN	60	60	53	0	0	7	3	28	1	0	0	22	0	0	9	88.33%
16	JIGAWA	0	15	0	0	0	15	0	14	0	0	0	0	0	0	1	0.00%
17	JOS	6	6	1	0	0	5	0	6	0	0	0	0	0	0	0	16.67%
18	KADUNA	21	46	38	0	4	4	3	29	4	0	0	12	0	0	1	82.61%
19	KANO	26	26	13	12	1	0	1	4	1	0	0	10	0	0	11	50.00%
20	KATSINA	1	4	0	0	0	4	0	2	0	0	0	2	0	0	0	0.00%
21	KEBBI	24	24	6	0	0	18	1	21	0	0	0	2	0	0	1	25.00%
22	LAFIA	9	21	16	0	0	5	1	11	5	0	0	5	0	0	0	76.19%
23	LOKOJA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
24	MAKURDI	10	22	9	7	0	6	0	22	0	0	0	0	0	0	0	40.91%
25	OSHOGBO	109	359	286	0	0	73	4	196	2	0	0	137	0	0	24	79.67%
26	OWERRI	14	19	3	0	0	16	0	10	1	0	0	3	0	0	5	15.79%
27	P/H	123	123	84	0	0	39	4	74	20	0	0	19	0	0	10	68.29%
28	SOKOTO	22	22	13	0	0	9	0	22	0	0	0	0	0	0	0	59.09%
29	UMUAHIA	15	25	20	0	4	1	2	17	1	0	0	7	0	0	0	80.00%
30	UYO	40	145	61	0	0	84	2	84	17	5	0	20	0	2	17	42.07%
31	YOLA	44	50	38	0	0	12	3	17	7	0	5	18	0	2	1	76.00%
	TOTAL	1,327	2,569	1,654	66	34	815	57	1,622	107	6	13	636	5	5	175	64.38%

Appendix XIV: Monthly Cash Flow of the Commission between Oct 2022 and March 2023

	Summary for 2022/Q4 (₦' Million)				*Summary for 2023/Q1 (₦' Million)*			
	Oct.	*Nov.*	*Dec.*	*Total*	*Jan.*	*Feb.*	*Mar.*	*Total*
A. Revenue								
Operating Levy (i.e., MC)	1,734.38	1,323.84	1,251.84	4,319.06	1,323.48	1,562.03	1,442.75	4,328.26
Other IGR	100.26	43.64	53.03	196.93	46.60	199.58	134.58	380.77
Total Revenue	1,843.64	1,367.48	1,304.87	4,515.99	1,370.08	1,761.61	1,577.33	4,709.02
B. Expenditure								
Personnel Cost	474.62	1,470.50	461.80	2,406.92	416.42	355.43	809.95	1,581.80
Regulatory Expenses	323.73	450.91	573.35	1,347.99	40.61	120.84	157.20	318.65
A & G Maintenance	22.64	57.15	38.43	118.22	16.08	20.46	63.97	100.51
Total Expenditure	820.99	1,978.56	1,073.58	3,873.13	473.11	496.73	1,031.12	2,000.96
C. Net Cash Flow (A-B)	1,022.65	(611.08)	231.29	642.86	896.97	1,264.88	546.21	2,708.06
Outstanding Liabilities								-

Notes: MC is Market Charges; IGR is internally Generated Revenue; and A&G is admin and general.

Nigeria Electricity
Regulatory Commission
Plot 1387 Cadastral
Zone A00 Central
Business District
PMB 136, Garki Abuja