

Electricity on Demand

QUARTERLY REPORT

SECOND QUARTER 2022

NIGERIAN ELECTRICITY REGULATORY COMMISSION

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The Nigerian Electricity Regulatory Commission (NERC) quarterly report is prepared in compliance with Section 55(3) of the Electric Power Sector Reform Act (EPSRA) 2005, 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 particular issue freely from the Commission's Website: www.nerc.gov.ng

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List of Abbreviations

ADR Alternative Dispute Resolution

AEDC Abuja Electricity Distribution Company Plc

ATC&C Average Technical, Commercial & Collection Losses

BEDC Benin Electricity Distribution Company Plc

CAPEX Capital Expenditure
CCU Customers Complaint Unit

CTC Compagnie Energie Electrique du Togo
CTC Competition Transaction Charge

DisCos Distribution Companies
DSOs Distribution System Operators
ECR Eligible Customer Regulations

EKEDC Enugu Electricity Distribution Company Plc
EKEDC Eko Electricity Distribution Company Plc
EPSRA Electric Power Sector Reform Act

GenCos Generation Companies

GWh Gigawatt's hour

IBEDC Ibadan Electricity Distribution Company Plc
IEDN Independent Electricity Distribution Network

Ikeja Electric Plc

JEDC Jos Electricity Distribution Company Plc
KEDC Kaduna Electricity Distribution Company Plc
KEDCO 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's 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

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

1. EXECUTIVE SUMMARY

1.0 SUMMARY

The Nigerian Electricity Regulatory Commission (NERC or the Commission), in line with the mandates enshrined in the Electric Power Sector Reform Act (EPSRA) 2005, continued the function of regulating the technical, operational, and commercial performance of the Nigerian Electricity Supply Industry (NESI). Through this regulatory oversight function, the Commission ensures the implementation of regulatory interventions to deliver first-rate services to electricity consumers.

Operational Performance

The average available generation capacity in 2022/Q2 was 4,508.38 MW The Operational performance parameters reported in 2022/Q2 cover 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 during the quarter.

a. Available Generation Capacity: There were twenty-six (26) grid-connected power stations in 2022/Q2 consisting of eighteen (18) gas, four (4) hydro, two (2) steam, and two (2) gas/steam-powered plants. The plants' average available generation capacity during the quarter was 4,508.38MW representing a 4.33% decrease (-203.96MW) compared to 4,712.34MW recorded in 2022/Q1, represented in figure A.

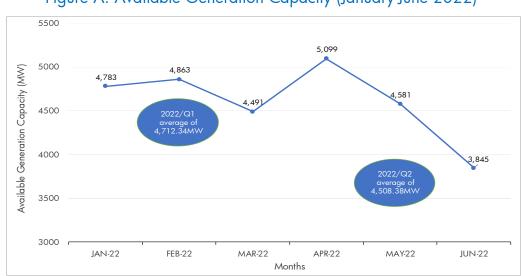


Figure A: Available Generation Capacity (January-June 2022)

b. Average Hourly Generation: In 2022/Q2, the average hourly generation of all available units decreased by 540.15MWh/h (-13.19%) from 4,096.31MWh/h in 2022/Q1 to 3,556.16MWh/h. Incessant technical faults, gas constraints, maintenance as well as undulating load demand patterns have continued to affect the amount of energy generated by power plants. The reduced generation was also due to an overall reduction in available capacity. To mitigate further reductions in available capacity and resultant hourly generation, the Commission directed that planned maintenance of power plants should be coordinated by the System Operator (SO).

The electricity generated in 2022/Q2 was 7,766.66 GWh

c. Total Quarterly Generation: Figure B shows that the total quarterly generation in 2022/Q2 was 7,766.66GWh. This represents a decrease of 1,081.38GWh (-12.22%) from 8,848.04GWh of energy generated in 2022/Q1.



Figure B: Total Generation (January-June 2022)

d. Grid Performance: In 2022/Q2, the system frequency was outside the normal operating limits ($50Hz \pm 0.25Hz$) but remained within the higher and lower bound stress limits ($50Hz \pm 1.25Hz$). The system voltage was however outside the prescribed regulatory boundaries ($330kV \pm 16.5kV$). Continuous operations outside these boundaries could have detrimental impacts on the overall health and reliability of the grid in the short and long term. Therefore,

the SO needs to invest and incorporate operational procedures that will improve its real-time visibility and ability to enforce grid discipline among the GenCos and Discos to ensure that frequency and voltage are maintained within designed operational limits.

Commercial Performance

a. **Billing Efficiency:** The total energy received by all DisCos in 2022/Q2 was 6,344.14GWh while the energy billed to end-use customers was 4,959.53GWh, indicating an average billing efficiency of 78.17%. This represents an increment of 0.79 pp from the 77.38% recorded in 2022/Q1.

A total of

№ 188.29

billion was

collected by

all DisCos in

2022/Q2 out

of the

№ 265.68

billion billed

to customers

b. Collection Efficiency: The total revenue collected by all DisCos in 2022/Q2 was ¥188.29 billion out of ¥265.68 billion billed to customers—this corresponds to a collection efficiency of 70.87% which represents a 1.53 pp increase compared to 2022/Q1 where the average collection efficiency was 69.34%. In monetary terms, both the billings and collections reduced at almost the same rate when compared with 2022/Q1—billing reduced by ¥30.02 billion (-10.15%) and collections reduced by ¥21.88 billion (-10.41%).

The Commission has emphasised the imperative for DisCos to employ technologies and operational procedures to increase both billing and collection performances, in order to forestall long term financial challenges. These could include holistic energy accounting procedures, customer and infrastructure metering, among others.

c. Aggregate Technical, Commercial and Collection (ATC&C) Losses: The ATC&C loss in 2022/Q2 was 44.60% comprising technical and commercial loss (21.83%) and collection loss (29.13%). The ATC&C loss decreased by 3.28 pp compared to 2022/Q1 (47.88%). All DisCos did not meet their allowed ATC&C loss targets as specified in the MYTO —this means that all DisCos did not meet their loss reduction targets, and were therefore unable to earn the revenue requirement upon which their approved tariffs for the period were set. Persistent inability in meeting loss reduction targets could prevent DisCos from meeting their upstream market obligations and adversely affect their long-term financial positions.

The Commission granted a total of fifty (50) licenses and permits in 2022/Q2

- d. Market remittance: The combined invoices from NBET¹ and MO to DisCos in 2022/Q2 was №185.01 billion split as follows: i) generation costs: №149.89 billion; ii) transmission and administrative services: №35.12 billion. Out of this amount, the DisCos collectively remitted a total sum of №126.69 billion (№102.35 billion for NBET and №24.34 billion for MO) with an outstanding balance of №58.32 billion; this corresponds to a remittance performance of 68.48% during the quarter. Poor remittance is a direct consequence of the DisCos recording higher than allowed ATC&C performance as established above.
- i. Remittance to NBET: In 2022/Q2, out of the total invoice of ¥184.91 billion issued to NBET by GenCos, NBET was only able to invoice ¥149.89 billion to DisCos because of the MRO adjustments made owing to the allowed end user tariffs. However, NBET only received ¥102.35 billion during the quarter which represents an overall DisCo remittance performance of 68.28%. This 1.58pp higher than the 66.70% (¥109.96 billion remitted against an MRT adjusted invoice of ¥164.86 billion) in 2022/Q1. It is worthy to note that the Government is responsible for providing NBET with the ¥35.02 billion it could not invoice to the DisCos because non-cost reflective tariffs across all DisCos in the form of energy subsidies.
- ii. Remittance to MO: The total invoice from MO to DisCos in 2022/Q2 for which a 100% remittance is expected was ₹35.12 billion. However, only ₹24.34 billion was received across all the DisCos, meaning that the remittance performance to MO for the quarter was 69.30%. This represents a 6.18 pp increase compared to 63.12% (₹25.73 billion remitted against an invoice of ₹40.77 billion) recorded in 2022/Q1.
- iii. Remittance by Special/International Customers: In 2022/Q2, Transcorp-SBEE and Mainstream-NIGELEC received invoices of \$2.42 million and \$5.56 million from MO and remitted \$2.42 million (100%) and \$5.55 million (98%) respectively. During the same period, Ajaokuta Steel Company was invoiced ₹264.76 million and ₹66.71 million by NBET and MO

remittance
was made by
Ajaokuta
Steel
Company,
Paras-SBEE
and
OdukpaniCEET in
respect of
invoices
issued to
them by MO
and NBET in
2022/Q2

¹ NBET invoice is adjusted to reflect a Minimum Remittance Threshold (MRT) which is the portion of the remittance a DisCo is obligated to cover based on its allowed tariff as determined by the Commission in line with the MYTO. The obligation to pay the MRT is issued in the Commission's Minimum Remittance Order (MRO) to Discos.

respectively, however it made no remittance. Paras-SBEE and Odukpani-CEET also received invoices of \$2.39 million and \$2.03 million respectively from MO during the period but no payment was made by these customers. The non-settlement of market obligations by this category of market participants should be a cause for MO and NBET to activate relevant safeguards for remittance shortfalls.

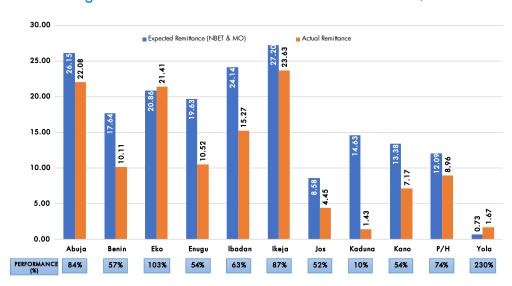


Figure C: DisCo invoices and remittances in 2022/Q2

Regulatory Functions

- a. Licensing and Permits: In 2022/Q2, the Commission approved the issuance of two (2) new generation licenses, one (1) trading license, renewal of one (1) existing license and amendment of one (1) on-grid generation license. The Commission also approved twenty-three (23) mini-grid registration/permits and granted captive power generation permits to eight (8) new companies with an aggregate capacity of 174.08MW. Fourteen (14) Meter Service Providers (MSP) consisting of nine (9) meter installers, three (3) meter manufacturers, one (1) meter importer and one (1) meter vendor, were also approved by the Commission in 2022/Q2.
- b. Compliance and Enforcement: Enforcement actions against violations, breaches and infractions of Regulations, Orders and Technical codes of the NESI are key mandates of the Commission. In this regard, during the quarter,

the Commission continued with enforcement actions brought forward from the preceding quarters against some licensees for violations of rules and infractions.

Consumer Affairs

Three (3) town
hall/customer
complaints
resolution
meetings were
held in
2022/Q2

a. Consumer Education and Enlightenment: To ensure continuous education of customers on their rights and obligations, as well as on other general service delivery matters in the industry, the Commission continued to implement customer enlightenment programs. Town Hall/Customer Complaints Resolution meetings were held in Lagos, Port Harcourt and Sokoto during the quarter— this is among the mechanisms put in place by the Commission to enlighten customers on the activities of the Commission, discuss recent events in the NESI and highlight customer rights and obligations.

A total of 167,956 meters were installed in 2022/Q2 b. Metering: The huge metering gap for end-use customers remains a key challenge in the industry – it is estimated that of the 12,643,630 registered energy customers as at June 2022, only 4,898,721 (38.74%) have been metered. A total of 167,956 meters were installed in 2022/Q2 compared to the 85,510 meters installed in 2022/Q1. By comparison, the net metering rate increased from 37.79% metering in March 2022 to 38.74% in June 2022. The meter installations increased compared to 2022/Q1 despite the winding down of the National Mass Metering Program (NMMP) phase 0² as a result of the uptake of the MAP metering scheme by most DisCos.

The Commission continues to engage relevant stakeholders to ensure monthon-month increments in metering rate while instituting safeguards against overbilling of unmetered customers (by setting maximum limits to the amount of energy that may be billed to an unmetered customer every month).

2

² The number of meter installations through the NMMP phase 0 was 158,889 in 2021/Q1, 308,016 in 2021/Q2, 279,917 in 2021/Q3, 70,676 in 2021/Q4, 20,016 in 2022/Q1 and 34,390 in 2022/Q2.

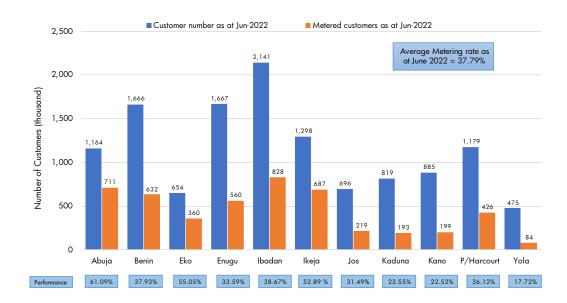


Figure D: Status of Customer metering as at June 2022

c. Customer Complaints: In 2022/Q2, cumulatively, the DisCos received 251,007 complaints from consumers —this is 7,620 (+3.13%) more complaints than those received in 2022/Q1. In total, the DisCos resolved 231,905 complaints corresponding to a 92.39% resolution rate. Metering, billing, and service interruption were the prevalent sources of customer complaints, accounting for more than 72% of the total complaints during the quarter. The Commission has introduced initiatives to address this category of complaints such as the independent verification of DisCos compliance with the capping regulation that protects unmetered customers from overbilling.

In 2022/Q2, the Forum Offices resolved 50.04% of total complaints at fifty-one (51) sittings d. Forum Offices: As enshrined in the Commission's Customer Complaints Handling Standards and Procedure Regulations, Forum panels are set up to review unresolved disputes at DisCos Complaint Handling Units. In 2022/Q2, the Forum Offices had a total of 2,442 active complaints (inclusive of the pending 904 complaints from 2022/Q1) from customers who were dissatisfied with DisCos' decision on their lodged complaints. During the period, the Forum Panels held fifty-one (51) sittings and resolved 1,222 (50.04%) of the complaints lodged at Forum Offices nationwide, this means 1,220 complaints were yet to be resolved as at the end of the quarter.

To ensure a more efficient customer complaint resolution process, the Commission continues to push for an improvement in the quality of complaint resolution at the CCU of the DisCos, the establishment of additional Forum Offices across the country as well as the creation of alternative complaint resolution channels.

Investigations have been launched into all reported accidents e. Health & Safety: Out of the eighty-seven (87) mandatory health and safety reports expected from licensees in 2022/Q2, the Commission received a total of eighty-six (86) reports from licensed operators compared to seventy-eight (78) reports received in 2022/Q1. Investigations have been launched into all reported accidents. The Commission has also initiated new processes to track licensees' compliance with the submission of statutory incidents reporting obligation.

The total number of incidents in 2022/Q2 was fifty-three (53); 24 injuries and 29 deaths compared to the fifty-five (55) incidents recorded in 2022/Q1; 18 injuries and 37 deaths. 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 realized by the Commission in 2022/Q2 was \4,949.76 million representing an increase of \1,367.54 million (+38.18%) from the \3,582.22 million realized in 2022/Q1. During the same period, the total expenditure also increased by \739.86 million (+50.94%) from \1,452.47 million in 2022/Q1 to \2,192.33 million. It is noteworthy that the MO made 2 remittances to the Commission in June 2022 covering the March³ and June receivables – this explains the appreciable increase in the Commission's revenues in 2022/Q2 relative to 2022/Q1.

³ As explained in the 2022/Q1 report, the MO was unable to remit the Commission's market receivables for March 2022.

The increase in expenditure was largely due to increased operating and regulatory expenses during the quarter.

The Commission realised ₩4.95 billion as revenue and expenditure of ₩2.19 billion in 2022/Q2

A comparison of the revenue and expenditure patterns of the Commission in 2022/Q2 shows a positive net cash flow of \(\mathbb{\text{

Figure E: Commission's Revenue and Expenditure (January-June 2022)



Key facts on NESI Operational Performance in Q2 of 2022

4,508.38 MW	Average Available Generation Capacity; 203.96 MW (-4.33%) decrease compared to 2022/Q1 – 4,712.34 MW		
7,766.66 GWh	Total Quarterly Generation; 1,081.38 GWh (-12.227%) decrease compared to 2022/Q1 – 8,848.04 GWh		
3,555.35 MWh/h	Average Hourly Generation; 540.96 MWh/h (-13.21%) decrease compared to 2022/Q1 – 4,096.31 MWh/h		
75.95%	Average Load Factor; 11.07 pp decrease compared to 2022/Q1 – 87.02%		
18.56%	Share of total quarterly generation from Hydropower Plants; 8.0 pp decrease compared to 2022/Q1 –26.56%		
8.69%	Transmission Loss Factor; 0.67 pp increase compared 8.02% in 2022/Q1. 1.19% above the MYTO allowance of 7.50%		
6,344.14 GWh	Total Energy Received by the DisCos; 956.62 GWh (-13.10%) decrease compared to 2022/Q1 – 7,300.76 GWh		
4,959.53 GWh	Energy Billed; 689.71 GWh (-12.21%) decrease compared to 2022/Q1 —5.649.24 GWh		
★ 188.29 billion	Total Revenue Collected by the Discos; ₩11.61 billion (-5.81%) decrease compared to 2022/Q1 – ₩199.90 billion		
78.17%	Cumulative Billing Efficiency across all DisCos; 0.79 pp increase compared to 2022/Q1 —77.38%		
70.87%	Cumulative Collection Efficiency across all DisCos; 1.53 pp increase compared to 2022/Q1 —69.34%.		
44.60%	Aggregate Technical, Commercial and Collection Losses; 3.28 pp decrease compared to $2022/Q1-47.88\%$		

₩185.01 billion	Combined Invoice from NBET (MRO adjusted) and MO to DisCos; №20.62 billion (-10.03%) decrease compared to 2022/Q1 – №205.63 billion		
₩126.69 billion	Total Amount Remitted by DisCos; ₦9.0 billion (-6.63%) decrease compared to 2022/Q1 – ₦135.69 billion		
68.48%	Discos' Average Remittance Performance; 2.49 pp increase compared to 2022/Q1 —65.99%		
167,956	Number of New Meters Installed; 82,446 (+96.41%) increase compared to 2022/Q1 – 85,510		
92.39%	Average DisCo complaint resolution rate; 2.31 pp decrease compared to 2022/Q1 – 94.70%		
50.04%	Forum Office Complaint Resolution Rate; 20.74 pp decrease compared to 2022/Q1 —70.78%		
29	Number of Fatalities; 8 less deaths compared to 2022/Q1 – 37		
24	Number of Injuries; 6 more injuries compared to 2022/Q1 — 18		
₦4.95 billion	Total revenue Realized by the Commission; 1.37 billion (+38.18%) increase compared to 2022/Q1 − ₦3.59 billion		
₩1.45 billion	Total Expenditure by the Commission; 0.74 billion (+50.94%) increase compared to 2022/Q1 − ₩1.45 billion		

2. STATE OF THE INDUSTRY

2.0 State of the Industry

The Nigerian Electricity Regulatory Commission (NERC), in line with its statutory mandate continues to monitor the technical, operational, and commercial performance of the Nigerian Electricity Supply Industry (NESI). These actions are geared towards ensuring the implementation of appropriate regulatory interventions and ultimately, optimum service delivery to consumers.

2.1. Operational Performance

In 2022/Q2, the average available generation capacity was 4,508.38MW, the average hourly generation stood at 3,556.16MWh/h while the total quarterly generation was 7,766.66GWh from 26 grid-connected generating plants across the country.

Average Available Capacity: The average available generation capacity was 4,508.38MW – a decline of 203.96MW (-4.33%) from 4,712.34MW recorded in 2022/Q1. As illustrated in Figure 1, the drop in available generation was driven largely by Afam VI, Jebba, Kainji and Egbin ST power plants that recorded a reduction of -70.19MW (-41.39%), -114.12MW (-30.65%), -122.41MW (-29.73%), and -202.73MW (-37.07%) respectively.

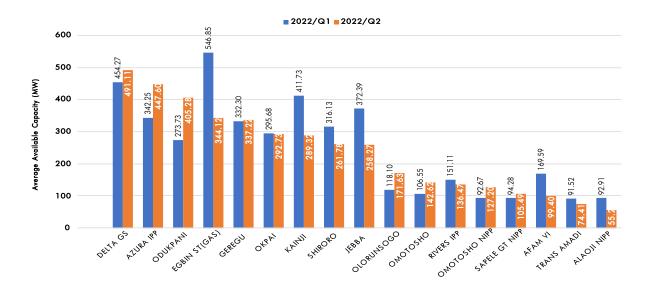


Figure 1⁴: Average Available Capacity (MW) 2022/Q1 vs 2022/Q2

Average Hourly Generation: The combined hourly output of all the units in a power plant varies in accordance with grid demand and availability of the units. A plant's average hourly output throughout the quarter is an indication of the operational health of the power plant as well as the overall grid demand during the period because a plant is only dispatched when there is a load in need of the power on the system.

In 2022/Q2, the grid's average hourly generation was 3,556.16MWh/h representing a decrease of 540.15MWh/h (-13.19%) from 4,096.31MWh/h in 2022/Q1. As represented in Figure 2, the average hourly generation of Geregu NIPP, Delta, Egbin, Sapele, Afam IV – V, Shiroro, Kainji, Jebba and Dadin Kowa plants decreased by 51.61MWh/h (-17.73%), 30.67MWh/h (-7.92%), 7.61MWh/h (-20.22%), 4.93MWh/h (-10.74%), 122.75MWh/h (-42.46%), 156.49MWh/h (-38.84%), 128.48MWh/h (-35.59%) and 20.57MWh/h (58.48%) respectively in 2022/Q2 compared to 2022/Q1.

Conversely, the average hourly generation of Omotosho, Olorunsogo, Sapele NIPP, Alaoji NIPP, Geregu NIPP, Olorunsogo NIPP, Omotosho NIPP, Omoku, Azura and Ibom Power plants increased by 47.91MWh/h (56.50%), 63.36MWh/h (+75.07%), 9.49MWh/h

⁴ Figure 1 reflects the top 17 plants, by size, which constitute 91% of the total available capacity during the quarter

(+14.84%), 3.89MWh/h (+5.87%), 53.89MWh/h (+101.98%), 66.74MWh/h (+297.59%), 2.09MWh/h (+2.61%), 1.64MWh/h (+3.49%), 68.23MWh/h (+20.42%), and 19.11MWh/h (101.84%) respectively.

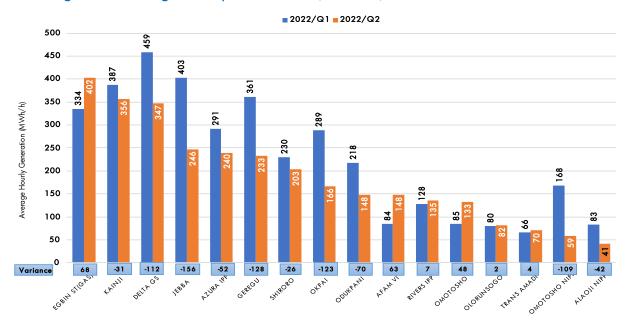


Figure 2: Average Hourly Generation (MWh/h) in 2022/Q1 vs 2022/Q2

The low generation suffered by Kainji, Jebba, Afam VI and Egbin were due to units that were unavailable due to technical faults and annual preventive maintenance while Afam VI and Egbin were due gas constraints. It is noteworthy that Kainji went on annual preventive maintenance in the second quarter of 2022 which coincides with the onset of rainy season, leading to suboptimal use of the waterhead available at that time. Hydro plants should be mandated to carry out all planned maintenance before the onset of rainy season. Furthermore, the System Operator (SO) should coordinate planned maintenance of all power plants to ensure minimal disruption to capacity utilization and energy generation.

Total Quarterly Generation: The total generation in 2022/Q2 was 7,766.66GWh representing a decrease of 1,081.38GWh (-12.22%)⁵ from the 8,848.04GWh generated in 2022/Q1. As represented in Figure 3, the total generation of Geregu, Delta, Egbin, Sapele, Afam IV – V, Shiroro, Kainji, Jebba and plants decreased by 105.72GWh (-

⁵ It is important to note that the percentage change in quarterly total generation vs. quarterly average hourly generation are marginally different due to the difference in number of days in the quarters – 2022/Q1 had 90 days while 2022/Q2 had 91 days.

16.81%), 57.69GWh (-6.90%), 233.30GWh (-23.54%), 15.69GWh (-19.33%), 9.66GWh (-9.75%), 261.12GWh (-41.91%), 332.10GWh (-38.16%) and 271.93GWh (-34.87%) respectively in 2022/Q2 compared to 2022/Q1.

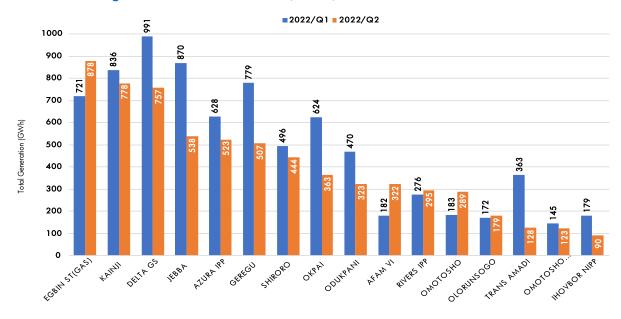


Figure 3: Total Generation (GWh) in 2022/Q1 vs 2022/Q2

Conversely, the total generation of Omotosho, Olorunsogo, Sapele NIPP, Alaoji NIPP, Geregu NIPP, Olorunsogo NIPP, Omotosho NIPP, Omoku, Azura and Ibom Power plants increased by 106.66GWh (+58.24%), 140.39GWh (+77.02%), 22.25GWh (+16.11%), 10.09GWh (+7.04%), 118.95GWh (+104.23%), 146.28GWh (+302.01%), 6.48GWh (+3.75%), 4.70GWh (+4.64%), 157.02GWh (+21.76%) and 42.19GWh (+104.64%) respectively.

During 2022/Q2, Geregu NIPP carried out condenser joint expansion while Olorunsogo gas reported of compressor stalling. Jebba hydro also reported generator winding faults. Other issues that caused generation decline during the quarter were faults (oil leakage on governor runner head, high thrust bearing temperature, generator winding, high rotor vibration, high inlet differential pressure and defective air inlet filter housing), routine maintenance, low water levels, as well as shortages of gas supply. To improve this performance, the Commission commenced sensitisation of the market towards partial activation of contracts which is expected to increase cash flow security and allow GenCos to do better Operation and Maintenance, thereby improving the reliability of their units.

2.2. Generation Load Factor

Load factor is defined as the amount of energy that a power plant generated over a certain period relative to its available capacity for the same period. The load factor plays a significant role in the cost of the generation per unit MWh. The higher the load factor of a plant, the better the capacity utilization and profitability as the fixed costs of generation plants are spread across more MWh dispatched. It is critical to note that load factor reflects how well a plant is dispatched over a period relative to its availability which is usually a reflection of demand and the capacity to evacuate power from the station.

The formula for Load Factor is represented by equation 1 below:

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

Across all the grid connected power plants, the average load factor in 2022/Q2 was 75.95%; this means that 24.05% of the available capacity of GenCos in this quarter was not dispatched. The 75.95% load factor recorded in 2022/Q2 represents a decrease of 11.07 percentage points (pp) from the 87.02% average load factor recorded in 2022/Q1.

As represented in Figure 4, six (6) power plants – Jebba (97.20%), Dadin Kowa (95.60%), Kainji (93.79%), Rivers IPP (92.22%), Azura IPP (90.56%), and Geregu NIPP (90.00%) had over 90% of their available capacities dispatched in 2022/Q2. With the exception of Shiroro (65.74%), all other hydro plants 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 Commission's Order mandates that hydro plants which are the cheapest energy generation source within the mix get priority dispatch in an effort to reduce the wholesale cost of energy for consumers.

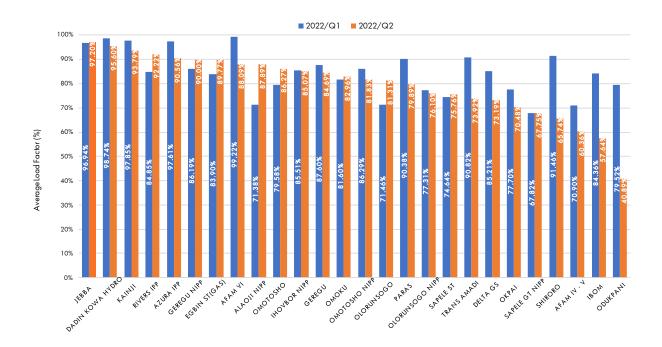


Figure 4: Plants Load Factor (%) in 2022/Q1 vs 2022/Q2

Similarly, Alaoji NIPP, Olorunsogo, Rivers NIPP, Omotosho, Egin Gas, Geregu NIPP, Omoku, Sapele, and Jebba power plants experienced increased load factor performance of +18.51, +9.85, +7.37, +6.69, +5.86, +3.80, +1.35, +1.12 and +0.26 pp respectively between 2022/Q1 and 2022/Q2. This increased load factor performance of these plants can be attributable to lower incidence of reduced generation in response to system frequency. Conversely, Olorunsogo NIPP, Geregu, Dadin kowa, Kainji, Omotosho NIPP, Azura, Okpai, Paras, Afam IV – V, Afam VI, Delta GS, Trans Amadi, Shiroro, Ibom and Odukpani power plants experienced decreased load factor performance of -1.21, -2.92, -3.14, -4.06, -4.46, -7.05, -7.22, -10.49, -10.54, -11.13, -12.02, -16.91, -25.72, -26.72, and -38.63 pp respectively in 2022/Q2 compared to 2022/Q1.

The Commission has noted with concern the decline in load factor in spite of the overall reduction in available capacity. Some of the potential causes of this phenomenon are – i) poor coordination between the SO and the DisCos on real-time energy offtake; ii) the commencement of the rainy season in 2022/Q2 which causes many DisCos to undertake load shedding as a result of their weak infrastructure. Notwithstanding, the Commission

has restarted the "Situation Room" oversight which was first introduced at the height of the COVID-19 pandemic. The Situation Room involves 3-4 meetings daily between all the grid connected operators and the SO with a mandate of reviewing energy offtake performance across the preceding intervals in a bid to ensure maximum utilisation of available capacity to supply end use customers.

2.3. Generation Mix

The electricity generation mix refers to the combination of fuels used to generate electricity over a period of time. The generation mix varies from one country to another depending on availability of natural resources, government policies, environmental factors, type of generating plants installed, quantity of energy required, as well as seasonal variations. An optimal energy mix is one that can adequately balance the energy trilemma —energy cost reduction, continuous energy generation (reliability), and utilisation of locally available resources (energy security/independence).

The share of electricity generation by fuel sources is given by equation 2 below:

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

where i represents the fuel source category

The share of electricity generation by fuel sources for 2022/Q1 and 2022/Q2 are represented in Figure 5. The share of hydro power plants in the energy mix decreased significantly from 2,350.12GWh (26.56%) in 2022/Q1 to 1,457.13GWh (18.56%) in 2022/Q2. This decrease is consistent with expectations regarding Nigeria's energy mix as energy generated by hydro plants are limited by water availability during the dry season (January to July). The consistency of the output of hydro plants is partly due to the control mechanisms being put in place by the National Control Centre (NCC). The NCC tracks the daily water levels at all hydro plants and manages the dispatch of the plants in a way that ensures that there is sufficient water in the plants' reservoirs to allow them run during the peak of the dry season albeit with limited capacity compared to the wet season. This is critical to grid stabilisation as it allows for year-round security of supply from the hydro plants.

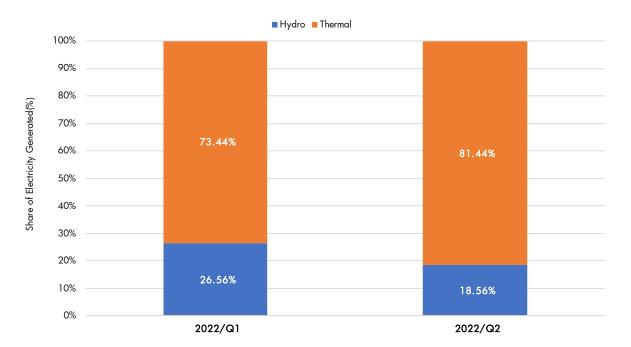


Figure 5: Share of Electricity Generated by Energy Sources in 2022/Q1 & 2022/Q2

The current energy mix in Nigeria means that seasonal variation in water volume and uncertainty surrounding gas availability each constitute substantial risk factors for electricity generation. The Commission is in the process of reviewing some of its regulations with a view of encouraging increased utilisation of other renewable energy technologies on the grid. Notable among these interventions is the Commission's ongoing collaboration with the Transmission Company of Nigeria (TCN) to evaluate the National Grid's ability to integrate large-scale renewable energy sources such as wind and solar.

In the long term, it is essential that ongoing efforts by the Federal Ministry of Power with respect to the creation of an Integrated Resource Plan (IRP) are concluded as this will provide clear guiding principles for the optimisation of NESI's generation mix. The Commission is committed to support the Ministry in finalising the IRP which will serve as a policy instrument to guide the Commission in the evaluation of generation plant licence applications as well as transmission infrastructure investments.

2.4. Grid Performance

To assess the performance of the grid, the Commission focuses on four (4) Key Performance Indicators (KPI) that relate to power transmission. These are:

1. Transmission loss factor

- 2. Stability of grid frequency
- 3. Voltage fluctuation
- 4. 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 (electrical wire losses and transmission station use) 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 i.e., a decline in the TLF indicates an improvement in transmission efficiency.

The formula for TLF is represented by equation 3 below:
$$TLF = \left(1 - \frac{Energy\ delivered\ to\ all\ DisCos + Energy\ Exported}{Energy\ Sent\ out\ by\ all\ GenCos}\right) \times 100 \tag{3}$$

As illustrated in Figure 6, the average TLF in 2022/Q2 was 8.69%. The average TLF increased by 0.67 pp from 8.02% recorded in 2022/Q1, indicating a decline in TCN's operational efficiency. An 8.69% TLF implies that for every 100 MWh of energy injected into the grid from the generation stations in 2022/Q2, 8.69MWh of the energy was dissipated in transit as transmission loss and undelivered to the DisCos.

The TLF allowed as "efficient transmission losses" in the MYTO for the quarter was 7.50%. With an average actual TLF of 8.67%, this shows that TCN failed to attain the expected efficiency level (92.5%) in wheeling power to DisCos – TCN only achieved a transmission efficiency of (91.33%). As a result of this, an additional 1.19% (92.42GWh) of energy generated is lost outside the MYTO limits; it is worthy to highlight that the MYTO does not allow TCN to recover revenue from customers for any inefficient losses recorded in its operation. This means that such losses are borne entirely by TCN and could negatively affect their financial position if operational efficiency is not improved to at least hit the targets set in the MYTO model. In a bid to ensure that TCN's investments are coordinated towards improving grid operational efficiency, TCN has been mandated to submit its Performance Improvement Plan (PIP) to the Commission for review and approval.

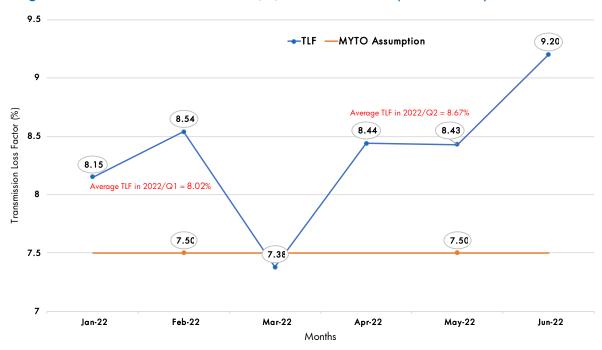


Figure 6: Transmission Loss Factor (%) vs MYTO Assumption January – June 2022

The noticeably high spike in TLF in the month of June was attributed to the poor energy accounting by the SO as a result of inadequate substation metering. In response to this, the TCN has commenced a programme to ensure all its substations are accurately metered nationwide.

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 frequency sensitive 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 system frequency pattern from January to June 2022 represented in Figure 7 shows that the system has remained within the higher and lower bound stress limits throughout the period. Nevertheless, the system frequency throughout the quarter remained outside the statutory normal limits (49.75Hz < frequency < 50.25Hz) set in the grid code.

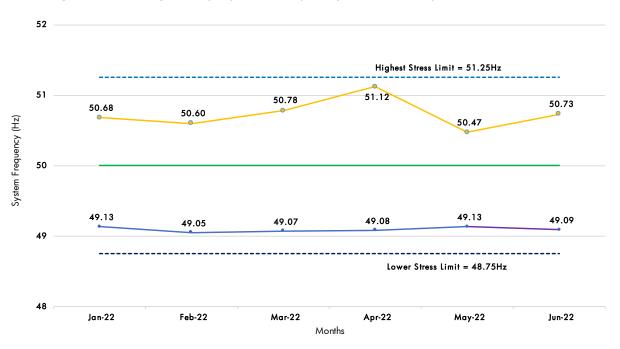


Figure 7: Average Daily System Frequency from January 2022 – June 2022

As reported in the previous quarter (2022/Q1), there is an urgent need for improved system coordination by the System Operator (SO) to ensure the grid frequency is sustained within the statutory limits to attain the envisaged quality of grid electricity and make it acceptable to all consumers. This will require an improved balancing between load offtake and generation which can be enhanced by improved predictability of GenCos availability and DisCos load offtake respectively.

Energy consumption data from Distribution companies indicates that industrial customers currently account for a small fraction of their annual energy sales, majorly due to the poor quality and reliability of supply. The implication is a decoupling of grid energy supply from industrial output, thus limiting the growth potential of the electricity supply industry. Increased patronage of industrial customers has the potential to reduce commercial and collection loss and improve sector liquidity. The Commission continues to push for improved quality of grid supply through strict implementation of the PIPs of both TCN and Discos.

DisCos are encouraged to pursue investment in technology that will provide real-time visibility into load offtake at their feeders, so as to improve the SO's ability to balance generation and load in real-time as well as helping the DisCos optimise the utilisation of the grid energy allocation. An advantage of operating the grid within the limit is that it

will enable Nigeria to participate in the West African Power Pool (WAPP) which will connect the transmission system of several West African Countries. The WAPP provides both an opportunity for Nigerian GenCos to sell their power seamlessly across the border while also allowing Nigeria to import energy from neighbours with excess capacity.

2.4.3 Voltage Fluctuation

To ensure good power quality, the Grid code specifies a nominal system voltage of 330kV with a tolerance of +/- 5% (between 313.5kV – 346.5kV). Fluctuations in grid voltage which manifest in spikes, dips, flickers, brownouts, and blackouts are detrimental to consumers and have the potential to exacerbate commercial losses. Extreme cases of voltage fluctuations especially at the level of distribution network, can cause heavy damage to industrial machine and push industrial customers to self-generation rather than depending on the distribution networks.

The system voltage pattern from January 2022 to June 2022 is represented in Figure 8. Throughout 2022/Q2, both the high and low system voltages were outside the prescribed regulatory boundaries. The DisCos' inability to adhere to SO directives on load offtake continue to negatively affect voltage stability while the SO's lack of full visibility of the grid system hinders its prompt response to voltage fluctuations. Furthermore, there is a shortage of load following plants with flexible ramp rate that could be used to accurately balance load supply and demand on the grid.

To minimize the frequency and voltage fluctuations, the Commission continues to work with TCN and other relevant stakeholders to ensure that system voltage operates within the prescribed regulatory limits to ensure safe and reliable electricity supply.

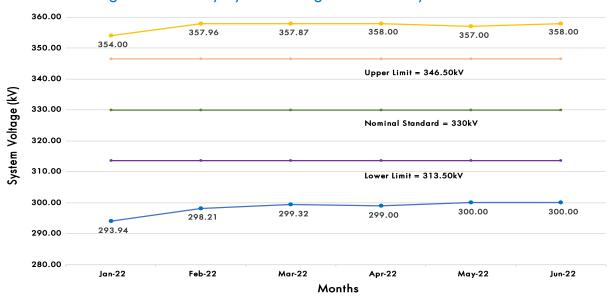


Figure 8: Monthly System Voltage from January – June 2022

2.4.4 System Collapse

The national power grid, a network of electrical transmission lines connecting generating stations to loads over the entire country, is designed to operate within certain stability limits in terms of voltage (330kV±0.5%) and frequency (50Hz±0.5%). Whenever the grid operates outside of these stability ranges, the grid will become unstable, power quality decreases and may lead to wide scale supply disruptions. These disruptions could result in the failure of a section of the grid (partial collapse), or the entire grid (total collapse) resulting in blackouts in the affected areas. At all times, the SO has an overarching objective of operating the grid within allowed normal operational tolerances.

When supply exceeds demand, the grid frequency increases and in extreme cases some power plants that are unable to tolerate excessive frequency variation may trip on auto protective shutdown thereby causing a sudden drop in available generation on the grid. Such loss of generation further exacerbates the frequency imbalance, potentially leading to a full/partial system collapse.

When demand exceeds supply, the frequency drops and unless the System Operator immediately brings in additional supply or shed some load, there is the risk of cascading (automatic protection systems within the generation units which forces them to shut down when the frequency is below acceptable limits) leading to a total collapse of the grid i.e., generation drops to near OMW. As reported above, the frequency pattern throughout the quarter indicates that the grid operated outside the stability range, the implication being

that the grid was susceptible to partial or full disturbance.

In 2022/Q2, the grid network recorded two collapses on 8th April 2022 and 12th June 2022 — same number reported in 2022/Q1. The events leading to the disturbances/collapses are summarised in Table 1 below:

Table 1: System Collapse in 2022/Q2

SN	Date	Immediate Cause	Remote Cause	Explanation
1	8th April 2022 (18:30 hrs)	Collapse of 330kV Tower 104 in Itu LGA of Akwa Ibom State, which led to the tripping of all the units at Odukpani power plant and load loss of 400MW	The Vandalism of 330kV Ikot- Ekpene to Adiabo lines 1 and 2	•
2	12th June 2022 (18:49 hrs)	Simultaneous tripping of Alaoji NIPP GT3 and Okpai IPP GTs 11, 12 & ST18 as a result of over voltage recorded on transmission lines around the Okpai axis which led to a total load loss of 412.50MW	Inadequate gas supply to the thermal power plant. Hydro power plants still not generating at optimum capacity. These feedstock limitations resulted in a low generation of 3,020MW	The loss of 412.50MW created an imbalance between the instantaneous load demand and supply. This resulted in a drop in overall frequency leading to a cascade that precipitated a full collapse. System restoration commenced at 19:19 hrs on 12th June 2022. Remedial measures should include installation of a load frequency control on the grid and enforcement of automatic voltage regulation.

Notes of the table: As it was in 2022/Q1, there were zero partial collapse and 2 total collapses in 2022/Q2.

A potential reason for total grid collapse could be the misalignment in the relay settings across the network. Relays are protection systems that are intended to coordinate how a system responds to frequency variations. A well-set relay system ensures that various parts of the network which are designed to trip (shut down) before frequency incidents are

recorded at the stations respond in good time. In the absence of a well-calibrated relay system, there would be instances of generators receiving and responding to frequency abnormalities before the protection systems that have been incorporated into the network.

The Commission, in collaboration with the TCN, continues to intensify efforts to sustain the improvements in grid stability and prevent system collapses in subsequent quarters. In this regard, the Commission shall continue to strictly 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 electricity industry. The Commission is also exploring options for the enforcement of under frequency load-shedding scheme instituted to provide an added layer of security for the grid in case of a sudden loss of generation. TCN will also be required to undertake a review of the calibration of its relay settings as part of efforts to increase grid stability.

2.5. Commercial Performance

The commercial performance of the NESI is a measure of the liquidity of the market - an aggregate of the viability index of each DisCo in terms of energy received, proportion billed to customers and the amount of money received in relation to the expected target sales.

In determining commercial performance of the NESI, the following parameters are considered:

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

2.5.1 Energy received and MYTO Allocation

A certain amount of energy generated is lost before reaching the final consumers. This is because part of the energy generated from the power stations is used in-house to power station equipment, offices, and other facilities. Energy sent out (energy injected into the transmission grid) is thus the total energy generated less the power station's own-use. A

fraction of the injected energy is again lost in the transmission system (TLF) before it is received at the Disco's and the international customers' metering points. This energy received by the DisCos is subject to further losses (technical) before reaching the customers.

In determining the cost reflective tariff for any DisCo, the MYTO model forecasts the amount of energy which the DisCo will sell over the period. This volume is determined by the DisCo's percentage share of total energy made available to all DisCos in line with its vesting contract (MYTO Allocation)⁶, as moderated by the total energy generated from all power plants during the period (net of allowed losses and bilateral energy sales). This process results in the estimated energy sales which a DisCo is forecasted to undertake over a given period known as the "MYTO Target Sales" (MTS).

A DisCo's ability to achieve the MTS is however affected by the following -

- i. The availability of the required generation volume
- ii. TCN's ability to wheel (transmit) the electricity to where the DisCo needs it
- iii. DisCos ability and/or willingness to offtake the energy.

Scenario 1: Under the bulk buyer framework in which NBET procures energy from the GenCos before reselling to the DisCos, the availability risk is taken entirely by NBET i.e., no DisCo will be held accountable if the available generation is below the MTS. When the available energy is below the MTS, the Commission has the responsibility of retroactively recomputing the cost reflective tariff for the DisCos adjusting for the deficit. An adjustment is made to their tariffs going forward to allow them recover any lost revenue in the preceding tariff period in the form of increases to customer tariffs. If customer tariffs are not adjusted to allow the DisCos recover the revenue, the Government covers the revenue gap in the form of subsidies which will be paid directly to the GenCos thereby reducing the generation payment obligations of the DisCos. When Generation is below the target, each DisCo's MTS is pro-rated accordingly with the exception of bilateral contracts outside NBET.

Scenario 2: In a case where a DisCo is unable to take its MTS as a result of TCN limitations, the Service Level Agreement (SLA) regime which came into effect in September

⁶ The percentages are Abuja (11.50%), Benin (9.00%), Eko (11.00%), Enugu (9.00%), Ibadan (13.00%), Ikeja (15.00%), Jos (5.50%), Kaduna (8.00%), Kano (8.00%), Port Harcourt (6.50%) and Yola (3.50%)

2020 has created a mechanism for the TCN to compensate the DisCo for the resultant revenue losses.

Scenario 3: If a DisCo's inability to take the MTS is as result of its actions or operational challenges, the cost is borne entirely by the DisCo as described below. Deviation between the energy available to a DisCo and its actual offtake is often used to identify instances of load rejection by the respective DisCo(s) –

- Generation: Each DisCo's generation invoice has both a capacity (fixed) and energy (variable) component. When a DisCo takes less capacity than is available to it under its MTS, the DisCo will still be liable for the capacity charge for the untaken capacity. This means that the average wholesale cost of energy for each DisCo will be dependent on its energy offtake; if a DisCo takes less energy than its available share, its wholesale energy cost will be higher than its target. This is due to additional capacity charges for energy not taken. Conversely, if a DisCo takes more energy than its available share, its wholesale energy cost will be lower than its target because it will not pay capacity charges on the additional energy taken above its share.
- Transmission: The mechanism for TCN to recover its expected revenue where a DisCo does not take allowed energy is the same as what has been described for GenCos above.

The market is expected to compensate the DisCo if its inability to offtake the forecasted allocation is due to either scenario 1 or 2 above while the DisCo will incur losses which cannot be recovered through tariffs (passed on to customers) if its non-offtake is due to scenario 3.

The summary presented in Table 2 indicates that the amount of energy received by DisCos at their trading points in 2022/Q2 was 6,344.14GWh. This is a decrease of 956.62GWh (-13.10%) from 7,300.76 GWh recorded in 2022/Q1. The decrease is partly reflective of the decrease in available and actual generation in 2022/Q2.

2022/Q1 **DisCos** 2022/Q2 Received MYTO share MYTO share **Variance** Received **Variance** В C=A-BВ C=A-BΑ Α 965.00 839.59 125.41 847.00 729.58 Abuja 117.42 Benin 717.50 657.07 60.44 609.01 570.97 38.04 -38.68 -9.86 Eko 764.40 803.08 688.00 697.86 746.00 88.93 29.99 Enuqu 657.07 600.96 570.97 899.43 949.10 -49.66 776.93 824.74 -47.81 Ibadan 897.85 951.62 Ikeja 1039.48 1095.11 -55.63 -53.77 Jos 377.66 401.54 -23.88 350.01 348.93 1.08 Kaduna 572.00 584.06 -12.06497.00 507.53 -10.53-99.53 Kano 499.90 584.06 -84.16 408.00 507.53 Port Harcourt 475.55 15.11 412.37 49.08 489.66 461.45 Yola 229.72 255.53 -25.80207.93 222.04 -14.11 All DisCos 7300.76 7300.76 6344.14 6344.14

Table 2: Energy (GWh) received and MYTO Allocation

Notes of the table: DisCos are the electricity distribution companies

As represented in Figure 9, Kano (-99.53GWh), Ikeja (-53.77 GWh), Ibadan (-47.81 GWh), Yola (-14.11GWh), Kaduna (-10.53GWh) and Eko (-9.86 GWh) DisCos took less than their MYTO allocation in 2022/Q2, possibly due to technical limitation of their networks and/or commercially induced low load offtake during the period. Conversely, Abuja (+117.42GWh), Port Harcourt (+49.08GWh), Benin (+38.04GWh), Enugu (+29.99GWh), and Jos (+1.08GWh) DisCos took more energy than their MYTO allocations over the same period. In 2022/Q2, relative to their MYTO allocation, Abuja DisCo had the largest positive variance (117.42GWh; +16.09%) while Kano DisCo had the largest negative variance (99.53GWh; -19.6%).

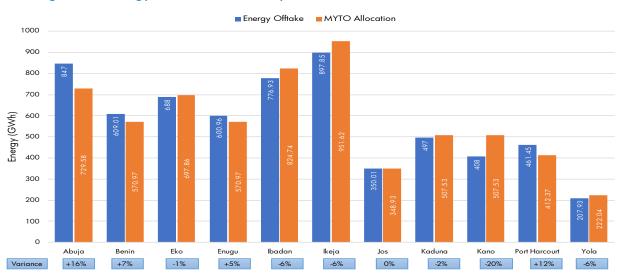


Figure 9: Energy Off-take (GWh) by DisCos vs MYTO Allocation in 2022/Q2

2.5.2 Energy Billed and Billing Efficiency

Billing Efficiency is an indicator of the proportion of energy that has been billed (including metered and unmetered sales) to customers in comparison to the total energy supplied to an area within a given period. A major contributor to billing losses is the inability of the DisCos to identify all the consumers of their energy— owing to poor customer enumeration, low metering, the presence of inaccurate meters, and energy theft (commercial loss).

Billing efficiency combines technical (e.g., energy losses in the form of heat as electricity travels along distribution lines) and commercial (e.g., losses that arise as a result of the DisCo's inability to account for energy supplied – energy theft, meter bypass, etc...) efficiencies. For instance, a 70% billing efficiency means that for every \(\mathbb{\text{10.00}}\) worth of electricity received by DisCos during a period, \(\mathbb{\text{3.00}}\) worth of energy is unable to be billed by the DisCos due to reasons ranging from energy theft, poor distribution infrastructure and inadequate customer enumeration.

The formula for billing efficiency is represented by equation 4 below:

Billing Efficiency =
$$\left(\frac{Total\ energy\ billed\ to\ customers\ (kWh)}{Total\ energy\ reeceived\ by\ the\ Network\ (kWh)}\right) \times 100$$
 (4)

The summary presented in Table 3 indicates that the total energy received by all DisCos in 2022/Q2 was 6,344.14GWh. The total energy billed was 4,959.53GWh and the billing efficiency was 78.17%. Comparatively, the total energy received and billed in 2022/Q1 were 7,300.76GWh and 5,649.24GWh respectively which translates to a billing efficiency of 77.38%. This means that billing efficiency showed a marginal increase of 0.79 pp from the 77.38% recorded in 2022/Q1 although the individual billing efficiencies of some Discos declined. A billing efficiency of 78.17% implies that for every \$\mathbb{N}100\$ worth of energy received by DisCos in 2022/Q2, energy worth \$\mathbb{N}21.83\$ was not billed to end users. An increase in billing efficiency when there is a major drop in energy delivered (-13.10%) is to be expected because DisCos will further prioritise energy delivery to areas with less energy loss profiles.

In 2022/Q2, Enugu, Abuja, Ibadan, Eko, Ikeja and Benin DisCos had improved billing efficiencies of 73.38% (+4.21 pp), 70.13% (+3.50 pp), 76.35% (+2.80 pp), 89.53% (+2.35 pp), 88.67% (+1.12 pp) and 83.38% (+0.12 pp) respectively when compared to 2022/Q1. Kaduna, Kano, Port Harcourt, Jos and Yola DisCos however recorded

decreased billing efficiencies of 76.86% (-4.26 pp), 71.32% (-3.07 pp), 78.82% (-3.02 pp), 73.88% (-2.13 pp) and 55.87% (-1.22 pp) respectively compared to 2022/Q1.

	Table 3: Energy Received	and Billed by	DisCos in 2022/	'Q1 and 2022/Q2
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DisCos	Total Energy Received (GWh)			Total Energy Billed (GWh)		Billing Efficiency (%)	
	2022/Q1	2022/Q2	2022/Q1	2022/Q2	2022/Q1	2022/Q2	
Abuja	965.00	847.00	643.00	594.00	66.63	70.13	
Benin	717.50	609.01	597.39	507.81	83.26	83.38	
Eko	764.40	688.00	666.39	616.00	87.18	89.53	
Enugu	746.00	600.96	516.00	441.00	69.17	73.38	
Ibadan	899.43	776.93	661.51	593.17	73.55	76.35	
Ikeja	1039.48	897.85	910.07	796.10	87.55	88.67	
Jos	377.66	350.01	287.06	258.58	76.01	73.88	
Kaduna	572.00	497.00	464.00	382.00	81.12	76.86	
Kano	499.90	408.00	371.90	291.00	74.39	71.32	
Port Harcourt	489.66	461.45	400.75	363.70	81.84	78.82	
Yola	229.72	207.93	131.15	116.17	57.09	55.87	
All DisCos	7300.76	6344.14	5649.21	4959.53	77.38	78.17	

In 2022/Q2, Eko Disco recorded the highest billing efficiency of 89.53% while Yola DisCo recorded the lowest billing efficiency of 55.87%. This indicates that Yola DisCo lost about 44.13% (91.76GWh) of the energy it received in 2022/Q2 to a combination of technical and commercial losses.

Notwithstanding the progress in most of the DisCos' billing efficiency, the Commission is committed to working with DisCos to ensure that distribution losses are significantly reduced as part of the efforts towards steering the industry to financial sustainability. This effort will hinge on reinforcement of DisCo infrastructure to reduce technical losses, improved consumer enumeration and roll out of initiatives to curb energy theft thereby reducing commercial losses.

2.5.3 Revenue and Collection Efficiency

Collection efficiency is an indicator 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 in part due to a lack of willingness to pay (including unsatisfactory DisCo services). This has led to mounting commercial losses recorded by DisCos.

The formula for collection efficiency is represented by equation 5 below:

Collection Efficiency =
$$\left(\frac{Total\ Revenue\ Collected\ (\aleph)}{Total\ Billed\ Amount\ (\aleph)}\right) \times 100$$
 (5)

Collection efficiency of 70% for instance implies that for every ₹10.00 worth of energy billed to customers by DisCos, approximately ₹3.00 remained unrecovered from the billed customers.

The total revenue collected by all DisCos in 2022/Q2 was \$\\$188.29\$ billion out of \$\\$265.68\$ billion billed to customers —this translates to a collection efficiency of 70.87%. Although the total energy billed reduced by 10.15% (\$\\$295.7\$ billion in 2021/Q1 vs. \$\\$265.68\$ billion in 2022/Q2), the total collections reduced by just 5.47% (\$\\$199.19\$ billion in 2022/Q1 vs. \$\\$188.29\$ billion in 2022/Q2). This indicates that at a per kWh level, the collection performance in 2022/Q2 was better than 2022/Q1; this may be on account of DisCos prioritising supply to their most commercially viable customers when there is a drop in available energy.

The summary of revenue performance for all DisCos in 2022/Q1 and 2022/Q2 is contained in Table 4. The DisCos cumulative collection efficiency increased by 1.53 pp from 69.34% in 2022/Q1 to 70.87% in 2022/Q2. The general increase in collection efficiency in 2022/Q2 could be attributed to the increased metering and a decline in the total billings by 10.15% occasioned by the decreased energy delivered to DisCos (-13.10%) in 2022/Q2. Given that two-thirds of energy delivered to Discos in 2022/Q2 went to residential customers most of whom are not metered and whose monthly energy budget is fixed, delivery of more energy does not always translate to collecting more from them.

The increase was largely driven by Benin, Jos, and Enugu DisCos who recorded significant increase in collection efficiency by 7.76, 6.90 and 4.80 pp respectively. Abuja, Eko, Ibadan, Ikeja, Kaduna, Kano and Port Harcourt DisCos also recorded increase in collection efficiency by 2.36, 1.60, 3.58, 2.04, 2.73, 2.56 and 1.71 pp respectively. Only Yola DisCo recorded a decline in collection efficiency (-8.43 pp) between 2022/Q1 and 2022/Q2.

DisCos	Total I	Billings	Revenue	Collected	Colle	ection
	(₩ ′Bi	illion)	(₦ ′Bi	illion)	Efficier	ncy (%)
	2022/Q1	2022/Q2	2022/Q1	2022/Q2	2022/Q1	2022/Q2
Abuja	36.49	33.82	30.42	28.99	83.36	85.72
Benin	31.00	27.17	16.10	16.22	51.94	59.70
Eko	34.52	32.63	28.79	27.74	83.42	85.02
Enugu	27.45	23.56	18.18	16.74	66.23	71.03
Ibadan	34.80	32.01	21.84	21.24	62.77	66.35
Ikeja	44.53	39.53	40.62	36.87	91.23	93.27
Jos	16.94	15.55	7.15	7.64	42.20	49.10
Kaduna	24.15	19.50	7.49	6.57	30.99	33.72
Kano	19.02	15.81	11.79	10.20	61.98	64.54
Port Harcourt	21.03	19.65	13.57	13.01	64.53	66.24
Yola	5.78	6.45	3.24	3.07	56.00	47.57
All DisCos	295.70	265.68	199.19	188.29	69.34	70.87

Table 4: Revenue Performance (%) of DisCos in 2022/Q1 vs 2022/Q2

The current demand structure is dominated by households that are mostly unmetered and whose demands are inelastic due to affordability concerns. Thus, beyond a certain threshold, increased supply may result in decreased collection efficiency. A direct correlation between improved energy supply, customer satisfaction and collection efficiency will be experienced when commercial and industrial customers represent a more significant share of the demand. To sustain improvements in collection efficiency, the Commission will continue to actively track each DisCo's progress under the various metering interventions – the National Mass Metering Program (NMMP) funded through the Central Bank of Nigeria and the Meter Asset Provider (MAP) scheme. Furthermore, the Commission is also closely monitoring the delivery of energy to customers under the SBT regime especially to the industrial customer clusters.

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

The Aggregate Technical, Commercial and Collection (ATC&C) loss is a summation of billing losses incurred by the 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 invoice's issues out to consumers. As described above, ATC&C is a critical performance setting parameter for tariff determination because it represents the efficient losses 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 the course of 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 losses is represented by Equation 6 below:

 $ATC\&C\ Losses = [1 - (billing\ efficiency \times collection\ efficiency)] \times 100$ (6)

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

As contained in Table 5, the ATC&C losses in 2022/Q2 was 44.60% consisting of 21.83% technical and commercial losses, and 29.13% in collection loss. This level of ATC&C losses implies that over the course of 2022/Q2, on average, as much as N4.46 in every N10.00 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 losses for 2022/Q2 decreased by -3.28 pp from the 47.88% recorded in 2022/Q1. This decrease was largely driven by Benin (50.22%), Enugu (47.87%), Abuja (39.89%), Jos (63.72%) and Eko (23.88%) DisCos which had decreased ATC&C losses of -6.53, -6.32, -4.57, -4.20 and -3.39 pp respectively between 2022/Q1 and 2022/Q2. The inability of most DisCos to meet their allowed loss targets means they are unable to meet revenue requirements thereby compromising their long-term financial position.

The overall ATC&C losses of 44.60% is significantly higher than the expected ATC&C losses (20.76%) provided for in the MYTO for the quarter. All DisCos recorded ATC&C

losses that were above their allowed targets. Kaduna, Kano, Enugu, Jos and Ibadan had the widest negative variances of 63.43, 38.12, 36.56, 36.45 and 33.87 pp respectively relative to their allowed MYTO targets. There is an urgent need for all the DisCos to take emergency remedial actions through customer enumeration and increased revenue assurance to improve their ATC&C losses. Failure to resolve this will not only prevent the DisCos from being able to meet their upstream obligations, it will also saddle them with too much debt and erode their equity.

Table 5: ATC&C Losses (%) by DisCos in 2022/Q1 vs 2022/Q2

DisCos	MYTO Target (%)	Average ATC&C (%)		
	2022	2022/Q1	2022/Q2	
Abuja	19.27	44.46	39.89	
Benin	17.37	56.75	50.22	
Eko	14.18	27.27	23.88	
Enugu	11.31	54.19	47.87	
Ibadan	15.47	53.84	49.34	
Ikeja	11.37	20.13	17.30	
Jos	27.27	67.92	63.72	
Kaduna	10.65	74.86	74.08	
Kano	15.85	53.89	53.97	
Port Harcourt	21.45	47.19	47.80	
Yola	64.14	68.03	73.42	
All DisCos				
MYTO Level	20.76			
Total Technical, Commercial & Collection losses	-	47.88	44.60	
Technical & Commercial losses	-	22.62	21.83	
Collection losses	-	32.64	29.13	

Notes of the table: MYTO is Multi-Year Tariff Order; ATC&C Loss MYTO target figures are adjusted for a two-year non-performance mutually agreed by BPE and DisCos' Core Investors.

While the collection losses during the quarter appears to be larger than billing losses, the scope for improvement in overall efficiency is larger in respect of billing efficiency given that a DisCo can only suffer collection losses on energy that is properly billed. Furthermore, the remedial activities for increasing billing efficiency such as customer enumeration and improved energy audit lie solely at the control of the DisCos. Therefore, it is critical for DisCos to commit necessary resources towards increasing their billing efficiencies thereby improving their long-term financial outlook.

2.5.5 Market Remittance to NBET and MO

In 2013, the CBN set up an escrow mechanism as part of the conditions for the original Nigerian Electricity Market Stabilization Facility (NEMSF) intervention that the CBN 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 loan 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.

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 2022/Q2 are summarised in Table 6. A key takeaway is that due to the absence of cost reflective tariffs across all DisCos, the Government was saddled with a subsidy obligation of \\$35.02 billion over the 3 months of 2022/Q2 (\\$38.27 billion in 2022/Q1) which translates to \\$11.67 billion per month during the quarter. It is worth noting that for ease of administration of the subsidy, the MRO is limited to NBET only with the MO being allowed to recover 100% of its revenue requirement from the DisCos at all times.

All DisCos

149.89

Table 6. 14BLT invoice and MRT Adjusted find Obligation for 2022/ &2							
DisCos	NBET Invoice (₩' billion)	MRO (%)	Final Obligation (₩'billion)				
Abuja	23.21	95.29	22.12				
Benin	17.27	80.99	13.99				
Eko	20.31	83.10	16.87				
Enugu	17.13	91.65	15.70				
Ibadan	23.27	81.56	18.98				
Ikeja	26.87	83.58	22.46				
Jos	10.28	60.39	6.21				
Kaduna	14.68	86.98	12.77				
Kano	13.21	82.97	10.96				
Port Harcourt	12.43	79.15	9.84				
Yola	6.25	0.00	0.00				

Table 6: NBET Invoice and MRT Adjusted final Obligation for 2022/Q2

The summary presented in Table 7 indicates that the combined MRO adjusted invoices from NBET & MO to DisCos in 2022/Q2 was \$185.01 billion (\$149.89 billion for NBET and \$35.12 billion for MO) for generation cost as well as transmission and administrative services. Out of this amount, the DisCos collectively remitted a total of \$126.69 billion (\$102.35 billion for NBET and \$24.34 billion for MO), creating a total deficit of \$58.32 billion and translating to a remittance performance of 68.48% in 2022/Q2 (2.49 pp increase compared to 2022/Q1-65.99%).

184.91

Table 7: DisCos Remittances to NBET and MO in 2022/Q2

DisCos	Invoice (N'Billion)		MRT Adjusted		Actual Remittance		Remittance	
			Invoice (¥ ′Billion)	(₩ ′Bil	lion)	Performa	ance (%)
	NBET	MO	NBET	MO	NBET	MO	2022/Q1	2022/Q2
Abuja	23.21	4.03	22.12	4.03	18.76	3.31	82.77%	84.42%
Benin	17.27	3.65	13.99	3.65	8.17	1.94	52.27%	57.31%
Eko	20.31	3.99	16.87	3.99	17.74	3.67	96.73%	102.63%
Enugu	17.13	3.93	15.70	3.93	8.51	2.01	51.87%	53.57%
Ibadan	23.27	5.16	18.98	5.16	11.20	4.07	55.10%	63.26%
Ikeja	26.87	4.74	22.46	4.74	19.52	4.11	84.22%	86.90%
Jos	10.28	2.37	6.21	2.37	3.33	1.12	49.57%	51.87%
Kaduna	14.68	1.85	12.77	1.85	1.27	0.17	18.80%	9.80%
Kano	13.21	2.42	10.96	2.42	5.99	1.18	54.41%	53.59%
Port Harcourt	12.43	2.25	9.84	2.25	7.41	1.54	66.53%	74.08%
Yola	6.25	0.73	0.00	0.73	0.45	1.22	108.02%	230.01%
All DisCos	184.91	35.12	149.89	35.12	102.35	24.34	64.91%	68.48%

In comparison with 2022/Q1, the total invoice, and remittance dropped by \$20.62 billion (-10.03%) and \$9.0 billion (-6.63%) respectively, while remittance performance improved by 2.49 pp. Figure 10 indicates that Yola had the highest remittance performances of $230.01\%^7$ (\$1.67 billion) followed by Eko DisCo with $102.63\%^8$ (\$21.41 billion) in 2022/Q2. Ikeja and Abuja DisCos had remittances of 86.90% (\$23.63 billion) and 84.42% (\$22.08 billion) respectively. Kaduna DisCo however had the lowest remittance performance of 9.80% (\$1.44 billion).

In comparison with 2022/Q1, nine (9) DisCos – Yola, Ibadan, Port Harcourt, Eko, Benin, Ikeja, Jos, Enugu and Abuja DisCos had improved remittances of +121.99 pp, +8.16 pp, +7.55 pp, +5.90 pp, +5.04 pp, +2.68 pp, +2.30 pp, +1.70 pp and +1.65 pp respectively to the (NBET+MO) in 2022/Q2. However, Kaduna and Kano DisCos recorded decreased remittance performance by -9.00 pp and -0.82 pp respectively in 2022/Q2.

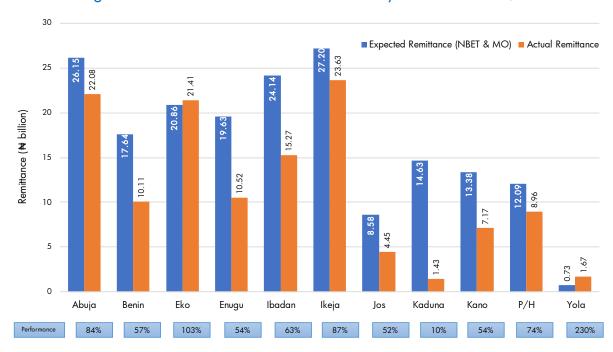


Figure 10: Market Invoice and Remittance by DisCos in 2022/Q2

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⁷ Beginning January 2022, as contained in the MRO, Yola's Minimum Remittance to NBET is 0%. This is a result of the ownership transition and the terms of the re-privatization agreed with the government. This is primarily responsible for the significantly high remittance performance reported by the DisCo.

⁸ Remittance performance above the MRT could be due to retroactive review of the minimum remittance threshold or payment of arrears. Eko DisCos's performance above MRT is due to payment of arrears/outstanding.

There is an urgent need for all the DisCos to implement new strategies to increase their collections in order to improve their remittance performances or else they will be incur shortfalls that can compromise their equity positions.

2.5.6 Market Remittance to MO

The Market Operator issues invoices to DisCos and international customers for energy transmission and administrative services. The average remittance performance to the MO in 2022/Q2 was 69.30% compared to 63.12% in 2022/Q1 (+6.18 pp change). Yola had 167.76% remittance performance (₦1.22 billion against invoice of ₦0.73 billion) while Kaduna had a remittance performance of 9.12% (₦0.17 billion against invoice of ₦1.85 billion).

Eko, Ikeja and Abuja were the only DisCos with remittance rates above 80% with 91.96% (₦3.67 billion), 86.75% (₦4.11 billion), and 82.14% (₦3.31 billion) respectively. Figure 11 shows that Kaduna, Jos, and Kano DisCos had remittance below 50% with 9.12% (₦0.17 billion), 47.19% (₦1.12 billion) and 48.82% (₦1.18 billion) respectively in 2022/Q2.

Compared to 2022/Q1, Abuja, Benin, Jos, Kaduna, and Kano DisCos had decreased remittances to the MO in 2022/Q2. Among these DisCos, only Kaduna recorded a single-digit remittance rate to MO (9.12%) in 2022/Q2.

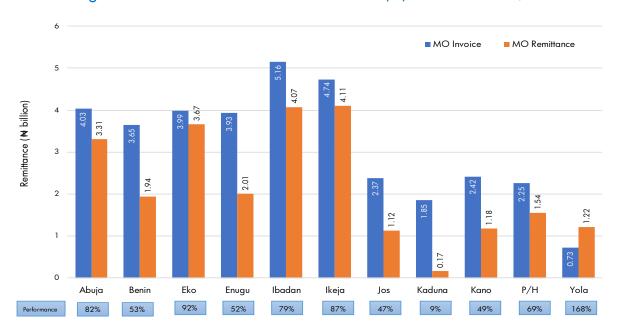


Figure 11: DisCos Remittance Performances (%) to MO in 2022/Q2

2.5.7 Market Remittance to NBET

The Nigerian Bulk Electricity Trading Company issues invoices to DisCos to cover for energy generation costs. Figure 12 shows that the average remittance performance to NBET in 2022/Q2 was 68.28% compared to 66.70% in 2022/Q1 (+1.58 pp change). Eko Disco had a notable 105.15% remittance (\mathbf{h}17.74 billion) which could be because of a retroactive review of MRT or payment of outstanding from previous quarters, while Kaduna had 9.90% (\mathbf{h}1.27 billion) remittance to NBET in 2022/Q2.

Compared to the remittance performance to NBET in 2022/Q1, Benin and Port Harcourt DisCos had significantly improved remittance performances of +7.78 pp and +7.36 pp corresponding to \text{\text{\text{N}}}0.35 billion and \text{\text{\text{\text{N}}}0.13 billion respectively while Ikeja Disco decreased by -12.91 pp corresponding to \text{\text{\text{\text{N}}}5.19 billion. Low remittances have continued to adversely affect the ability of NBET to honour its financial obligations to GenCos while service providers struggle with the paucity of funds.



Figure 12: DisCos Remittance Performances (%) to NBET in 2022/Q2

In recognition of the importance of improving market remittances to sustain the operations of the sector, the Commission continues to support DisCos with initiatives on revenue growth. The introduction of the SBT and DisCos' ability to migrate customers upwards by increasing the quality of supply, provides a clear pathway for DisCos to boost their revenues without absolute tariff increase. The ongoing infrastructure investments and metering being undertaken by DisCos will increase the volume of reliable energy supplied

to customers and revenue assurance which should translate into increased collections and market remittances.

To enforce market discipline and compliance with payment obligations, the Commission has ordered NBET to exercise its contractual right on the payment security cover provided by DisCos in accordance with the terms of its vesting contract with the DisCos.

2.5.8 Remittance by International, Special and Bilateral Customers

The summary presented in Table 8 contains remittance made by International, Special and bilateral customers in 2022/Q2. The table indicates that international customers; Transcorp-SBEE and Mainstream-NIGERLEC received invoices of \$2.42 million and \$5.56 million respectively from MO and made remittances of \$2.42 million (100%) and \$5.54 million (99.64%) respectively in 2022/Q2. These customers had 100% and 98% remittance performance respectively to the MO in 2022/Q1. However, no remittance was made to the MO by Paras-SBEE and Odukpani-CEET for invoices of \$2.39 million and \$2.03 million respectively. Paras-SBEE had 100% remittance to the MO in 2022/Q1 while no remittance was made by Odukpani-CEET in 2022/Q1.

Bilateral customers; Mainstream/Inner Galaxy, Mainstream/KAM Industries, Mainstream/KAM Integrated, KAM Steel Shagamu, NDPHC/Sunflag, North south/ Star Pipe, North south/ OAU, Mainstream/Adefolorunsho ventures received invoices of N505.68 million, N24.19 million, N117.23 million, N153.03 million, N19.54 million, N18.36 million, N22.39 million and N35.20 million respectively from the MO in 2022/Q2. The remittances of these customers were N289.96 (57.34%), N22.48 million (92.93%), N98.75 million (84.28%), N68.01 million (44.44%), N0.00 million (0%), N45.45 million (247.54%), N0.00 million (0%) and N0.00 million (0%) respectively during the quarter.

Furthermore, no payment was made by the special customers (Ajaokuta Steel Co. Ltd and the host community) in respect of the \(\mathbb{H}0.27\) billion and \(\mathbb{H}0.07\) billion market invoices received from NBET and MO respectively in 2022/Q2. There is need to ensure timely remittance by this class of customers and the MO should take appropriate actions in cases of perpetual non-remittance by these customers.

Table 8: Bilateral and Special Customer Invoices and Remittances in 2022/Q2

Customers		NBET				МО		
	Invoice (Million)	Remittance (Million)		mance %)	Invoice (Million)	Remittance (Million)		mance %)
	2022	2022	2022	2022	2022	2022	2022	2022
	/Q2	/Q2	/Q1	/Q2	/Q2	/Q2	/Q1	/Q2
International Customers								
PARAS-SBEE(\$)	0	0	0	0	2.39	0.00	100	0
TRANSCORP-SBEE (\$)	0	0	0	0	2.42	2.42	100	100
MAINSTREAM-NIGELEC (\$)	0	0	0	0	5.56	5.54	98	100
ODUKPANI-CEET (\$)	0	0	0	0	2.03	0.00	0	0
Total	0	0	0	0	12.40	7.97	75	50
Bilateral Customers								
MSTM/INNER GALAXY (₦)	0	0	0	0	505.68	289.96	0	57
MSTM/KAM INDUSTRIES (₦)	0	0	0	0	24.19	22.48	0	93
MSTM/KAM INTERGRATED (₦)	0	0	0	0	117.23	98.75	0	84
KAM STEEL SHAGAMU (₦)	0	0	0	0	153.03	68.01	0	44
NDPHC/SUNFLAG (₦)	0	0	0	0	19.54	0.00	0	0
North South/ Star Pipe (\mathbb{H})	0	0	0	0	18.36	45.45	0	248
NORTH SOUTH/ OAU (N)	0	0	0	0	22.39	0.00	0	0
MSTM/ADFV (₦)	0	0	0	0	35.20	0.00	0	0
Total	0	0	0	0	895.63	524.65	0	66
Special Customer								
AJAOKUTA STEEL	264.76	0	0	0	66.71	0	0	0

Notes of the table:

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

2. MSTM, ADFV are Mainstream and Adefolorunsho Ventures respectively

3. 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 2022/Q2, the Commission issued two (2) new Orders with no new Regulations, The Orders issued are detailed below:

- i. Order No: NERC/307/2022 Methodology for the determination of monthly energy caps for unmetered customers of successor distribution Licensees in the NESI. This Order is dated 30th June 2022 and effective 1st July 2022. The objective of the Order is to adopt a more dynamic methodology for the determination of monthly energy caps in the interest of end-use customers and DisCos. The new methodology will compute energy caps on a monthly basis to reflect the quality of supply to end-use customers within a DisCos's network over the preceding three (3) months.
- ii. Order No: NERC/319/2022 Securitisation of contracts and payment of water fall in the NESI. This Order is dated 11th May 2022 and effective 1st July 2022. The objectives of this Order include;
 - Provide visibility and certainty of market payments to market participants and gas suppliers, thereby ensuring certainty and stability in generation.
 - I. Enforce the fulfilment of financial obligations between contracting parties, boost liquidity and investment in the NESI, and secure the commitment for gas supply.
 - II. Address the constraints of gas supply and gas transportation contracts and the challenges surrounding securitisation of payments across the NESI value chain

Notwithstanding, the Commission continued the monitoring of compliance with the provisions of other extant regulations, orders and standards governing the NESI.

3.2 Licences and Permits Issued or Renewed

During 2022/Q2, the Commission approved the issuance of two (2) new generation licenses with a total nameplate capacity of 14MW. The Commission also authorised the

issuance of a trading licence to Commercio Electricity Exchange Limited and approved the renewal of one (1) existing license in addition to the amendment of an on-grid generation license from Calabar Generation Company Limited.

It is noteworthy that Commercio Electricity Exchange Limited is the first private electricity trading licensee in the NESI. It is one step further towards the transition of the market into a bilateral one with little to no government intervention along the value chain. With its current licence, the Company may subject to specific approval from the Commission, undertake generation aggregation and sale to eligible customers or the DisCos. Table 9 contains the list of licenses issued in 2022/Q2.

Fuel Type SN Licensee Capacity Type Location (MW) NA Trading Licence NA Commercio Lagos **Electricity Exchange** Limited Calabar 561 On-Grid Odukpani, Gas Generation Generation/ Calabar Company Limited Amendment to supply multiple oftakers approved Alaoji Generation 1070 On-Grid Alaoji, Abia Gas Company Limited Generation Renewal of the licence approved 4 Off-Grid Ama Brewery Cross Boundary Gas Generation Energy Nigeria Limited 5 Haske Solar 10 Embedded Challawa. Solar Generation Kumbotso Company Limited

Table 9: List of Licences issued in 2022/Q2

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 2022/Q2, the Commission granted eight (8) new captive power generation permits with a total nameplate capacity of 174.08MW. Details of the permit holders, location and plant capacities are listed below in Table 10.

Table 10: Captive Generation Plants Approved in 2022/Q2

S/N	Company Name	Location/State	Capacity (MW)
1	Mobil Producing Nigeria Unlimited	East Area Project Ibeno, Akwa Ibom	15.00
2	The Shell Petroleum Development Co. Nig. Ltd	Ogbotobo AG-Booster-Station Tunu CPF Opukushi AG Booster StatioBenisede AG Booster Station	3.98 15.855 4.28 4.285
3	The Shell Petroleum Development Co. Nig. Ltd	Sea Eagle FPSO Kolo Creek Oil & NAG Manifold Okoloma	50.00 6.00 2.00
4	Niger Mills Limited	Murtala Muhammad Highway, Calabar	8.8
5	Mikano International Limited	Akinwande Street, Off Badagry Express Way	22.90
6	African Natural Resources & Mines Limited	No. 11, Dan Fodio Street, Off Liverpool Road, Apapa, Lagos,	50
7	Premier Polypack Limited	Plot 1 Block A Gbagada Industrial Estate Lagos	3.43
8	Wacot Rice Limited	Km 10 Argungu Sokoto Expressway Kebbi	3.4.0

3.4 Mini-grid Operators Registered with the Commission

Following the satisfactory evaluation of mini-grid applications, the Commission approved nine (9) Mini-grid permits and issued fourteen (14) registration certificates in 2022/Q2. 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 2022/Q2

S/N	Name	Location	Туре	Capacity
1	Privida Power Limited	Sati-Ikov, Ushongo Benue	Registration	50
2	Privida Power Limited	Nyanikhume, Kwande, Benue	Registration	50
3	Privida Power Limited	Ugbedomagwu, Igalamela Odolu, Kogi	Registration	45
4	Privida Power Limited	Odamagu-Odo, Omala, Kogi	Registration	8
5	Privida Power Limited	Ugbamaka, Ofu, Kogi	Registration	45
6	Privida Power Limited	Kpnache Ozongulo, Bassa, Kogi	Registration	55
7	Privida Power Limited	Ikem Ogugu, Olamaboro, Kogi	Registration	60
8	Privida Power Limited	lgoti-Iboko, Ofu, Kogi	Registration	71
9	Privida Power Limited	Emonoji, Omala, Kogi	Registration	15

10	Privida Power Limited	Emakpe, Igalamela Odolu, Kogi	Registration	15
11	Privida Power Limited	Emagaba II, Olamaboro, Kogi	Registration	71
12	Privida Power Limited	Ekelekwu, Igalamela Odolu, Kogi	Registration	15
13	A4 & T Power Solutions	Orisunbare, Ondo East, Ondo olaruntedo, Ondo west, Ondo	Registration	15
14	Husk power Limited	Rukubi, Doma, Nasarawa	Registration	100
	B. Approved Permits			
15	Husk Power Energy Systems Nigeria Limited	Gidan Buba, Lafia, Nassarawa	Permit	110
16	Privida Power Limited	Ugah, 1, Lafia Nasarawa	Permit	220
17	Privida Power Limited	Ugah,2, Lafia Nasarawa	Permit	240
18	Privida Power Limited	Ochi- Adegbe, ofu Kogi	Permit	205
19	Privida Power Limited	Alla Ejima, ofo, Kogi	Permit	230
20	Privida Power Limited	Bagaji- Ofo Omola, Kogi	Permit	225
21	Privida Power Limited	Azara, awe, Nasarawa	Permit	250
22	Privida Power Limited	Otukpo, Apa, Benue	Permit	155
23	Privida Power Limited	Adupi fzmimko, olamaboro, Kogi	Permit	170

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.

In 2022/Q2, the Commission certified fourteen (14) MSPs following the satisfactory evaluation of their applications. The list of the certified MSPs in Table 12 comprises nine (9) meter installer companies, three (3) meter manufacturers, one (1) meter importer and one (1) meter vendor.

Table 12: Approved Meter Asset providers in 2022/Q2

S/N	Name	Authorisation Type			
1	Trovec Integrated Ventures Ltd	Installer A1			
2	Jesom Technologies Ltd	Installer A1			
3	Unique Utilities Ltd	Installer A1			
4	Katalex Tech Limited	Installer A1			
5	Vicbony International Concepts Ltd	Installer B1			
6	Skyrun Electric Power Tech Nig. Ltd	Installer C1			
7	Salem A&B Nigeria Ltd	Installer C1			
8	Centonel Global Network Ltd	Installer C1			
9	Radreed Global Services Ltd	Installer C1			
Manu	facturers				
10	Chintec Electro Nig. Ltd	Manufacturer			
11	News Engineering Nig Ltd	Manufacturer			
12	Marks and Adams	Manufacturer			
Impor	ters				
13	Q-Tech Nigeria Limited	Importer			
Vend	Vendors				
14	Utility Performance Limited	Vendor			

3.6 Public Consultation and Awareness

The Commission did not conduct public consultations on new regulations in 2022/Q2, as no new regulations were under consideration. To improve awareness of the existing regulations, consumer rights and obligations, the Commission continued several customer and stakeholder engagements through radio programmes (e.g., Electricity Update). The Commission is committed to maintaining the regularity of its town hall meetings as well as power consumer assembly⁹ in accordance with the provisions of the EPSRA. The engagements will seek among others, to improve stakeholders' awareness of the existing regulations, and consumer rights and obligations as provided in the industry rules and the EPSRA.

⁹ Power consumer assemblies are public forums held by the commission between consumers, operators, and licensees to discuss issues pertinent to them

3.7 Compliance and Enforcement

During 2022/Q2, the Commission continued with existing enforcement actions (such as payments of penalties and compensations) brought forward from the preceding quarters against several operators for violations of rules and infractions. These include the violations of Regulations and Orders, accidents, electrocution cases, and the failure to comply with Forum decisions within the stipulated time frame. For instance, a notice of compliance failure was issued to all the DisCos for failing to meter their 33kV and 11kV feeders within the stipulated time. Ikeja and Ibadan DisCos were queried for not providing meters to customers that paid for them while a notice of compliance failure was issued to Ikeja DisCo for excessive estimated billing that contravenes the Capping Order.

3.8 Alternative Dispute Resolution

Alternative Dispute Resolution (ADR) refers to the settlement process instituted by the Commission for the resolution of disputes that may arise amongst market participants. In accordance with Market Rule 42.3.7, the Commission constitutes a Dispute Resolution Panel (DRP) responsible for arbitrating or otherwise resolving disputes between market participants. A Dispute Resolution Counsellor (usually with extensive knowledge and experience in dispute resolution) is appointed by the Commission to administer and ensure effective operation of the dispute resolution provisions of Market Rules and the Grid Code.

In 2022/Q2, the Commission appointed a Dispute Resolution Counsellor for the NESI in accordance with the provision of the Market Rules. The Commission did not oversee any disputes between stakeholders in the industry in 2022/Q2. However, the Commission continues to promote the ADR mechanism as a means for dispute resolution among market participants. In this regard, the Dispute Resolution Office (DRO) was provided a one-off seed-fund to set up a functional office – this was intended to reduce the charges payable by disputants in the early stages of the DRO thereby encouraging its utilization by industry stakeholders.

4. CONSUMER AFFAIRS

4.0 Consumer Affairs

4.1 Consumer Education and Enlightenment

The Commission considers continuous customer education and enlightenment as an important tool to enlighten consumers on the activities of the Commission, discuss customer rights and obligations as well as ensure swift resolution of complaints. One of the consumer education and enlightenment mechanisms instituted by the Commission is town hall/customer complaints resolution meetings. In 2022/Q2, the Commission held three (3) customer complaints resolution meetings across the country —Lagos (May 11th–13th), Port Harcourt (June 8th–10th) and Sokoto (June 21st–23rd). During the meetings, discussions covered issues including Service Based Tariff, customers' rights and obligations, customers' redress mechanisms, capping of estimated billing, metering gaps, and the strategy being adopted by the Commission to bridge the metering gap in the industry.

4.2 Metering End-Use Customers

The total number of registered customers as of 30th June 2022 was 12,643,630 out of which 4,898,721 have been metered representing 38.74% metering rate as presented in Table 13. Between 2022/Q1 and 2022/Q2, the number of registered customers increased by 101,049 (+0.81%) while the metering rate increased by +0.95 pp.

Table 13: Metering Progress as of 2022/Q2

DisCos	Total Number of	No of Metered	Metering
	Registered Customers	Customers	Performance
Abuja	1,163,553	710,870	61.09%
Benin	1,665,886	631,898	37.93%
Eko	654,184	360,152	55.05%
Enugu	1,666,840	559,810	33.59%
Ibadan	2,141,404	828,061	38.67%
Ikeja	1,298,323	686,705	52.89%
Jos	696,211	219,243	31.49%
Kaduna	818,890	192,848	23.55%
Kano	884,799	199,234	22.52%
Port Harcourt	1,178,868	425,784	36.12%
Yola	474,672	84,116	17.72%
Total	12,643,630	4,898,721	38.74%

Since the Commission issued the updated MAP & NMMP Regulations (2021), there has been a sustained improvement in the deployment of end-use customer meters. This has improved transparency in customer-DisCo relations.

Metering addresses one of the major concerns customers have with DisCos – the fear of unfair billing. In 2022/Q2, an additional 167,956 end-user customers were metered. This represents an increase of 82,446 installations (+96.42%) when compared to the 85,510 meters installed in 2022/Q1 (Table 14). Out of the 167,956 meters installed for end users in 2022/Q2, 34,390 (20.48%) were metered under the NMMP scheme while 133,566 (79.52%) customers were metered under the MAP intervention. This represents a 137.54% increase in MAP meter deployment compared to 2022/Q1 and is a result of a concerted effort by the Commission to push DisCos towards launching innovative solutions (including – mobile MAP, etc...) to improve public awareness about the MAP program.

On a DisCo-by-DisCo basis, Abuja, Eko, Enugu, Ibadan, Ikeja, Kaduna, Port Harcourt, and Yola DisCos recorded increments of 31.96%, 98.28%, 62.91%, 40.01% 154.75%, 157.65%, 8.72% and 100.00% from the numbers of customers metered in 2022/Q1. It is noteworthy that Yola moved from recording zero meter installation in 2022/Q1 to almost 5,000 meters in 2022/Q2 thanks to the commencement of the NMMP in its franchise area – this was delayed by the change in the company's ownership. In contrast, Benin, Jos, and Kano DisCos recorded changes of -89.32%, -84.18%, and -14.17% respectively in their metering rate between 2022/Q1 and 2022/Q2.

Table 14: MAP and NMMP Meter Deployment by DisCos 2022/Q1 vs 2022/Q2

DisCos	Number of	Customers	Customers	Change in
	Metered Customers	Metered in	Metered in	Metering between
	as at 2022/Q2	2022/Q1	2022/Q2	2022/Q1 and Q2
Abuja	1,163,553	705	22,532	21,827
Benin	1,665,886	6,336	677	-5,659
Eko	654,184	3,263	6,470	3,207
Enugu	1,666,840	8,852	14,421	5,569
Ibadan	2,141,404	30,404	42,570	12,166
Ikeja	1,298,323	18,169	46,285	28,116
Jos	696,211	1,966	311	-1,655
Kaduna	818,890	8,493	21,882	13,389
Kano	884,799	199	173	-26
Port Harcourt	1,178,868	7,123	7,744	621
Yola	474,672	0	4,891	4,891
Total	12,643,630	85,510	167,956	82,446

Despite the winding down of the Phase 0 of the NMMP, most of the DisCos reported increased metering and the total number of metered customers almost doubled between 2022/Q1 and 2022/Q2. This increase in metering can be attributed to enforcement initiatives by the Commission mandating DisCos to take responsibility for failure of MAP in their franchise areas. There has consequently therefore been an increase the adoption of the MAP in the quarter. All these highlight the advantages of having multiple mass meter financing options as contained in the Commission's regulation —NERC/R/113/2021.

Further details on the metering progress under the NMMP and MAP between 2022/Q1 and 2022/Q2 are presented in appendices XI and XII respectively. In 2022/Q2, under the MAP intervention, a total of 133,566 meters were installed representing a 137.54% (+77,338) increase in metering under MAP compared to the 56,228 installations recorded in 2022/Q1. Ikeja DisCo recorded the highest number of installations (46,285) representing 34.65% of the total number of customers metered under the MAP scheme. Yola DisCo did not record any installation under the MAP scheme in 2022/Q2.

During the same period, a total of 34,390 customers were metered under the NMMP representing an increase of 17.44% from 29,282 customers metered in 2022/Q1. Except for Benin and Ibadan DisCos, all DisCos reported an increase in customer metering through NMMP in 2022/Q2 compared to 2022/Q1. Yola DisCo's poor rollout of the NMMP as reported in prior reports as a result of its ownership transition has improved as evidenced by the ~5,000 meter installations recorded in 2022/Q2 under the NMMP scheme.

As reported in the preceding quarter's report, MAP and NMMP continue to provide the clearest path for mass customer metering. On NMMP, the Commission is actively engaged with the CBN, World Bank and other relevant stakeholders to accelerate the financial close and funds disbursement for the next round of the NMMP. On MAP, the Commission is undertaking steps to increase customer uptake through a combination of enlightenment and developing a mechanism for the implementation of the customer refund. Ways for holding DisCos to account for increased enlightenment and ultimately off-take of the MAP meters are also being evaluated.

4.3 Customers Complaints

The complaints received and resolved by DisCos in 2022/Q1 and 2022/Q2 are represented in Table 15. The total number of complaints received in 2022/Q2 was 251,007 across all DisCos and 231,905 of those were resolved. The average resolution

rate recorded in 2022/Q2 was 92.39%. Compared to 2022/Q1, the number of complaints received, number of cases resolved, and average resolution rate varied respectively as follows 7,620 (+3.13%), 1,412 (+0.61%) and -2.31 pp.

Port Harcourt Disco had the highest number of complaints (49,292 representing 19.64% of total complaints) while Yola Disco had the least number of complaints (2,032 representing 0.81% of total complaints). In comparison with 2022/Q1, Ibadan, Ikeja, Kaduna, Port Harcourt, and Yola DisCos recorded increased customer complaints by 22,084 (+146.23%), 3,988 (+110.84%), 41 (+0.49%), 3,140 (+6.80%), and 742 (+57.52%) respectively.

Conversely, Abuja, Benin, Enugu, Eko, Jos, and Kano Yola DisCos received fewer complaints from customers in 2022/Q2 compared to 2022/Q1 by 1,780 (-6.53%), 1,294 (-13.56%), 1,436 (-3.79%), 8,213 (-29.29%), 7,170 (-37.98%) and 2,488 (-19.08%) respectively. All the DisCos except Ibadan and Enugu DisCos had over 90% resolution rate for the complaints received in 2022/Q2 with Eko, Jos, Kano, Port Harcourt, and Yola DisCos having resolution rates of 98%+.

Table 15: Complaints Received and Resolved by Disco in 2022 Q1 and 2022 Q2

DisCos	2022/Q1			2022/Q2			
	Complaints	Complaints	Resolution	Complaints	Complaints	Resolution	
	Received	Resolved	Rate	Received	Resolved	Rate	
Abuja	27,251	26,948	98.89%	25,471	24,908	97.79%	
Benin	9,546	9,163	95.99%	8,252	7,612	92.24%	
Eko	37,938	37,412	98.61%	36,502	35,995	98.61%	
Enugu	29,028	23,466	80.84%	20,815	15,742	71.67%	
Ibadan	15,102	14,179	93.89%	37,186	29,752	80.01%	
Ikeja	36,802	33,542	91.14%	40,790	37,579	92.13%	
Jos	18,878	18,475	97.87%	11,708	11,524	98.43%	
Kaduna	8,369	7,425	88.72%	8,410	7,862	93.48%	
Kano	13,037	12,969	99.48%	10,549	10,461	99.17%	
PH	46,152	45,646	98.90%	49,292	48,458	98.31%	
Yola	1,290	1,268	98.29%	2,032	2,012	99.02%	
Total	243,393	230,493	94.70%	251,007	231,905	91.89%	

The most frequent complaints topics in 2022/Q2 were metering, billing and service interruption which cumulatively accounted for more than 72% of the total complaints received as presented in Figure 13. Out of the total 234,393 complaints received in 2022/Q2 by DisCos, 111,956 (47.76%) were on metering, 32,930 (14.05%) were

related to billing, and 23,438 (10.0%) were interruption related. These set of complaints categories also accounted for >65% of the complaints in 2022/Q1 which shows that they continue to be the biggest pain points for consumers.

In recognition of the above, the Commission has introduced initiatives to address these major customer pain points. For example, on the issues of metering/billing, the commission has introduced a process that enables it to independently verify whether DisCos are complying with the capping regulations that have been put in place to protect unmetered customers from overbilling. Haven obtained access to the Discos' billing platforms, the Commission independently accesses the billing records for each unmetered customer and compares the amount of energy billed to that customer with the energy cap stipulated by the Commission. Any DisCo that bills a customer above the energy cap outlined by the Commission in the capping Order is in violation of the capping Order.

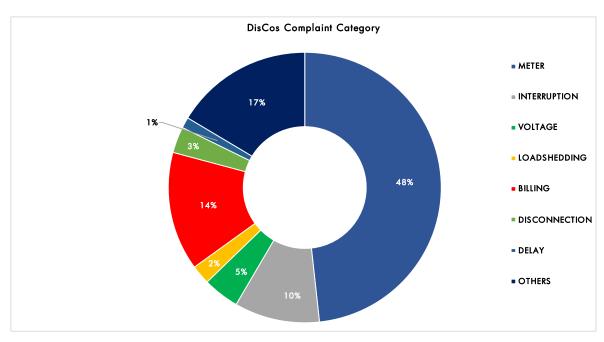


Figure 13: Category of Complaints Received by DisCos in 2022/Q2

Over the years, the Commission has continuously monitored the complaint handling and resolution process adopted by all DisCos. The Commission is monitoring the DisCos' compliance with its directive on monthly submission of their customers' complaints reports to ensure timely regulatory interventions when necessary. The Commission has also commenced the review of its strategy of monitoring DisCos' customer complaints handling and resolution process, with a view to further improve the regulatory oversights. This also

includes the review of the operations in the Commission's Forum Offices which are set up to redress the customers' complaints that are not resolved by the DisCos.

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 and are selected from the following groups/agencies:

- 1. One representative of Industrial customers to be nominated by the Manufacturers' Association of Nigeria (MAN).
- 2. One representative of Commercial customers to be nominated by the Nigerian Association of Chambers of Commerce, Industry, Mining and Agriculture (NACCIMA).
- 3. One representative of household customers to be nominated by the Federal Competition and Consumers Protection Commission (FCCPC).
- 4. One representative of an NGO based in the DisCos operating area nominated by the Commission.
- One nominee based in the DisCos operating area who has an electrical engineering background 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 30th June 2022, 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 XIV.

Table 16 presents a summary of the appeals across the forum offices in 2022/Q2. The total number of new appeals received in the quarter was 1,538 while there were an additional 904 pending appeals carried over from 2022/Q1. This means in total, there were 2,442 appeals across all the Forum Offices in 2022/Q2; this corresponds to an increase of 7.15% (163) compared to 2,279 active appeals in 2022/Q1.

The Forum Offices covering Ikeja Disco's operation areas had the highest number of appeals (622) in 2022/Q2. This was followed by the Forum Offices covering Ibadan (Ibadan, Ilorin and Osogbo) and Port Harcourt (Calabar, Port Harcourt and Uyo) DisCos' operation areas which received 478 and 440 appeals respectively. The Forum Office covering Yola DisCo's franchise area had the least number of appeals (35) in 2022/Q2.

The Forum Offices' Panels had a total of fifty-one (51) sittings in 2022/Q2 compared to sixty-eight (68) sittings in 2022/Q1 and resolved 1,222 (50.04%) of the total 2,442 active appeals. By comparison, the aggregate appeal resolution rate across in 2022/Q2 was 50.04%; –20.74 pp lower than was achieved during 2022/Q1 (70.78%). There were fewer Panel sittings (-17) in 2022/Q2 compared to 2022/Q1 which could be responsible for the sharp drop in appeal resolution rate reported in 2022/Q2. The reduction in the number of sittings in 2022/Q2 as compared to 2022/Q1 was as a result of the expiration of the tenures of Forum members across many offices. The Commission is in the process of reconstituting the Forum offices to facilitate the swift resolution of outstanding cases. To prevent similar occurrences in the future, the Commission will undertake a more proactive approach to tracking the tenures of forum members and renewing the tenures or replacing them as required.

Table 16: Appeals Handled by Forum Offices in 2022/Q2

Forum Offices	Accountable	Appeals	Appeals	Appeals	No of
	DisCos	Received ¹	Resolved ²	Pending ³	Sittings
Abuja, Lafia & Lokoja	Abuja	84	47	37	6
Asaba & Benin	Benin	180	135	45	6
Eko	Eko	124	55	69	0
Abakaliki, Akwa, Enugu, Owerri, & Umuahia	Enugu	285	121	164	10
Ibadan, Abeokuta, Ilorin & Osogbo	Ibadan	478	322	156	6
Ikeja	Ikeja	622	75	547	3
Bauchi, Gombe, Jos & Makurdi	Jos	66	45	21	5
Gusau, Kaduna, Kebbi & Sokoto	Kaduna	86	58	28	4
Jigawa, Kano & Katsina	Kano	42	14	28	1
Calabar, Port Harcourt & Uyo	P/Harcourt	440	326	114	8
Yola	Yola	35	24	11	2
All Forum Offices	All DisCos	2442	1222	1220	51

Note of tables: 1. Appeals received includes outstanding complaints from the preceding quarter

Figure 14 represents the various categories of appeals received at the Forum Offices in 2022/Q2. Billing related appeals represented a significant portion of cases presented to the forum offices accounting for 65.32% of the total in the quarter. Metering and disconnection were also prevalent representing 22.07% and 5.69% of the total appeals

² Appeals resolved excludes complaints withdrawn or rejected

³ Appeals are still within the regulatory timeframe of 2 months to resolve

received. These 3 topics accounted for >90% of total appeals as they did in the previous quarter.

The Commission is harmonising its customer service regulations and improve customer education in a bid to reduce complaints along these topics. The introduction of improved processes around estimated billing and its enforcement (through energy caps described above) are among steps being taken by the Commission to reduce the prevalence of these category of complaints. The Commission is also working on creating an incentive structure to push DisCos towards improving the quality of customer compliant resolution at that CCU because this will translate into reduced escalation of complaints by customers to the Forum offices.

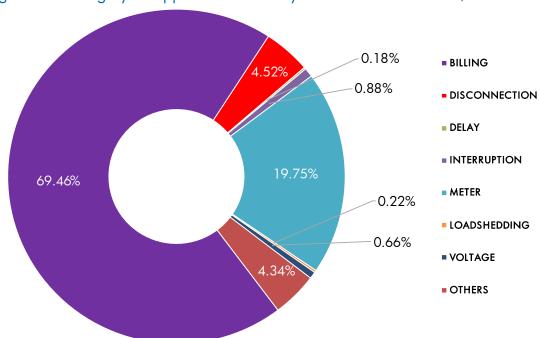


Figure 14: Category of Appeals Received by Forum Offices in 2022/Q1

Twenty (0.82%) of the unresolved cases recorded in this quarter were due to incomplete submission and/or withdrawal by the concerned consumers which suggests that majority of the non-resolution of cases is as a result of inadequate meetings from the Forums. This makes it critical for the Commission to explore avenues to increase the frequency of forum meetings in a bid to reduce the rate the delayed resolution of cases at the Forum Offices. The Commission is working towards establishing additional Forum Offices and other customer complaint resolution channels in a bid to increase case resolution while also reducing the number of cases that escalate up to the Forum Offices.

4.5 Health and Safety

In accordance with section 32(1)(e) of EPSRA, the Commission continued to monitor the health and safety performance in the NESI to guarantee the delivery of safe and reliable electricity to Nigerians. Out of the eighty-seven (87) mandatory health and safety reports in 2022/Q2, the Commission received a total of eighty-six (86) reports with Ibadan DisCo having one outstanding report for 2022/Q2. The number of reports received in 2022/Q2 increased by eight (8) from the seventy-eight (78) submitted in 2022/Q1. The Commission has developed new processes to track the submission of statutory reports (including the health and safety report) by licensees which will guide the implementation of relevant actions against licensees that do not meet their reporting obligations.

The health and safety reports were analysed in line with the provisions of Section 32(1)(e) of ESPRA for monitoring and evaluating of health and safety performance of licensees to ensure that operators abide by their responsibility of delivering safe electricity services to consumers. The summary statistics on the accidents experienced in the NESI in 2022/Q1 and 2022/Q2 are presented in table 17. In 2022/Q2, the total number of incidents was 53 – 24 injuries and 29 deaths compared to 55 incidents recorded in 2022/Q1 – 18 injuries and 37 deaths. The Commission has launched investigations into all the reported incidents with a view of understanding the root causes records and meting out relevant actions against the licensees (where applicable).

Table 17: Health and Safety (H&S) Reports in 2022 Q1 and 2022 Q2

Item	2022/Q1	2022/Q2	Net Change
Number of Expected H&S Reports	87	87	0
Number of H&S Reports Submitted	77	86	+9
Number of Deaths (employees & third parties)	37	29	-8
Number of Injuries	18	24	+6

In line with its 2021-2023 strategic goals, 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.

5. THE COMMISSION

5.0 Commission

5.1 Financial Report

The summary of the Commission's revenue and expenditure in 2022/Q2 and 2022/Q1 is presented in Table 18. In 2022/Q2 the total revenue realised by the Commission was \$\mathbb{A}4,949.76\$ million with a total expenditure of \$\mathbb{A}2,192.33\$ million.

The total revenue in 2022/Q2 was about ₹1,367.54 million (+38.18%) higher than the ₹3,582.22 million realised in 2022/Q1. This increase in revenue is attributed to the increase in operating levy (market charges) which improved by ₹1,391.53 million (+40.74%), from ₹3,415.83 million realized in 2022/Q1 to ₹4,807.36 million in 2022/Q2. This total revenue increased despite the 14.42% decrease in other Internally Generated Revenue (OIGR) between 2022/Q1 and 2022/Q2.

During the same period, the Commission's total expenditure (capital and recurrent) was \$\frac{1}{2}.192.33\$ million which represents a \$\frac{1}{2}.86\$ million (+50.94%) increase compared to the \$\frac{1}{2}.452.47\$ million incurred in 2021/Q1. This is attributable to the increase in personnel costs, regulatory expenses as well as admin and general maintenance costs.

Table 18: Quarterly Cash Flow of the Commission for 2022/Q2

	Summary for 2022/Q2 (#' Million)			2022/Q2	2022/Q1
	April	May	June		
A. Revenue					
Operating Levy (i.e., MC)	1,233.56	1,316.71	2,257.09 ¹⁰	4,807.36	3,415.83
Other IGR	66.51	20.42	55.47	142.39	166.39
Total Revenue	1,300.07	1,337.12	2,312.56	4,949.76	3,582.22
B. Expenditure					
Personnel Cost	504.83	405.48	773.83	1,684.14	1,144.22
Regulatory Expenses	116.00	84.99	226.96	427.96	242.07
Admin & General Maintenance	26.62	26.70	26.92	80.24	66.18
Total Expenditure	647.45	517.16	1,027.72	2,192.33	1,452.47
C. Net Cash Flow (A-B)	652.62	819.96	1,284.85	2,757.43	2,129.75
Outstanding Liabilities as at the end of the Stated Quarters				4,501.88	4,087.34

¹⁰ There were two (2) remittances from the MO in June 2022. 1 each for the March and June 2022 market receivables – as mentioned in the 2022/Q1 report, the MO did not make any remittance in March 202.

A comparison of the revenue and expenditure of the Commission in 2022/Q2 reveals a positive net cash flow of \ 2,757.43 million. The total outstanding liabilities¹¹ at the end of the quarter stood at \ 4,501.88 compared to \ 4,087.34 in 2022/Q1.

The proper management of the Commission's cash flow remains one of its key financial obligations. Thus, the Commission continued to monitor its expenditure and liabilities while continuously working on the regulatory interventions necessary to improve the liquidity in the industry.

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¹¹ These are Commission's expenses that have accrued and are payable in subsequent quarters. E.g. taxes, pensions, surplus revenue due to be transferred to REA as provided in the EPSRA, etc.

APPENDIX

Appendix I: Energy Generation in 2022/Q1 and 2022/Q2

GenCos	Available Cap	pacity (MW)	Average Daily Generation	on (MWh)	Quarterly Gen	eration (GWh)
	2022/Q1	2022/Q2	2022/Q1	2022/Q2	2022/Q1	2022/Q2
AES		-	-	-	-	-
Afam _VI	64.76	81.84	1,101.91	983.56	100.11	90.49
Afam IV_V	169.59	99.40	4,038.47	1,414.42	365.61	130.13
Alaoji NIPP	92.91	55.22	1,591.65	1,685.05	141.44	155.02
Azura-Edo IPP	342.25	447.60	8,017.86	9,655.31	718.46	888.29
Dadin Kowa	35.62	15.77	844.23	350.52	75.86	32.25
Delta	454.27	491.11	9,290.40	8,554.29	833.20	786.99
Egbin	546.85	344.12	11,011.63	8,326.78	984.70	766.06
Egbin ST-6	-	-	· -	-	-	
Gbarain NIPP		÷		<u>-</u>	<u>-</u>	-
Geregu Gas	332.30	337.22	6,986.69	5,748.12	632.31	528.83
Geregu NIPP	61.30	102.01	1,268.13	2,561.40	112.19	235.65
Ibom Power	22.25	48.89	450.45	909.17	40.02	83.64
Ihovbor NIPP	77.18	84.94	1,584.00	1,357.72	140.13	124.91
Jebba	372.39	258.27	8,664.05	5,580.50	780.82	513.41
Kainji	411.73	289.32	9,669.43	5,913.69	869.72	544.06
Odukpani	273.73	405.28	5,224.32	3,556.06	468.28	327.16
Okpai .	295.68	292.73	5,513.72	4,881.23	495.01	449.07
Olorunsogo Gas	118.10	171.63	2,025.50	3,546.09	182.32	326.24
Olorunsogo NIPP	29.01	140.73	538.21	2,139.86	48.96	196.87
Omoku	57.42	58.46	1,124.55	1,163.85	101.30	107.07
Omotosho Gas	106.55	142.62	2,034.94	3,184.72	182.99	292.99
Omotosho NIPP	92.67	127.20	1,919.15	1,969.28	171.37	181.17
Paras Energy	52.28	57.99	1,133.89	1,133.38	102.17	104.27
Rivers IPP	151.11	136.47	3,076.98	3,241.79	276.60	298.24
Sapele	94.28	105.49	1,534.58	1,762.29	139.14	162.13
Sapele NIPP	50.45	50.56	903.68	720.99	82.00	66.33
Shiroro	316.13	261.78	6,939.34	3,993.63	623.76	367.41
Trans Amadi	91.52	74.41	1,994.91	994.62	179.57	91.51
Total	4,712.34	4,681.06	98,482.66	85,328.32	8,848.04	7,766.66

Appendix II: Monthly Energy Received and Billed by DisCos in 2022/Q1and 2022/Q2

		Е	nergy Rece	ived (GWh)					Energy B	Billed (GWh)			Billing E	fficiency (%)
DisCos	202	2/Q1		202	2/Q2			2022/Q1			2022/Q2		2022/Q1	2022/Q2
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	Мау	Jun		
Abuja	343	315	307	320	288	239	213	213	217	208	191	195	66.63%	70.13%
Benin	254	227	237	200	212	196	208	188	201	169	176	163	83.26%	83.38%
Eko	296	252	216	231	258	199	251	221	194	211	222	183	87.18%	89.53%
Enugu	257	247	242	207	204	190	180	169	167	152	145	144	69.17%	73.38%
Ibadan	348	286	266	279	271	227	253	208	201	211	209	173	73.55%	76.35%
Ikeja	397	336	306	312	326	260	336	299	274	275	286	235	87.55%	88.67%
Jos	122	130	126	121	104	125	97	97	93	92	82	85	76.01%	73.88%
Kaduna	207	185	180	189	167	141	166	153	145	154	135	93	81.12%	76.86%
Kano	191	170	139	158	132	118	141	126	105	109	96	86	74.39%	71.32%
Port Harcourt	171	168	150	145	139	177	130	136	135	123	119	121	81.84%	78.82%
Yola	74	74	81	80	67	62	43	42	46	44	38	34	57.09%	55.87%
All Discos	2661	2390	2250	2242	2169	1933	2018	1853	1779	1748	1700	1511	77.38%	78.17%

Appendix III: Monthly Revenue Performance by DisCos in 2022/Q1 and 2022/Q2

			Total Billing	(Ħ′ Billion)				R	evenue Collec	cted (₦' billion)			Collection Efficiency (%)		
DisCos		2022/Q1			2022/Q2			2022/Q1		2	2022/Q2		2022/Q1	2022/Q2	
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun			
Abuja	11909	12133	12452	11890	10892	11036	10870	10126	9424	9853	8748	10387	83.36%	85.72%	
Benin	10284	10144	10569	9104	9424	8638	5061	5563	5476	5625	5668	4925	51.94%	59.70%	
Eko	12462	11715	10339	11112	11722	9798	10305	9525	8965	9373	9385	8986	83.42%	85.02%	
Enugu	9661	8925	8866	8149	7748	7667	6217	6532	5433	5801	5256	5681	66.23%	71.03%	
Ibadan	12835	11148	10815	11295	11357	9361	7355	7415	7071	7200	7012	7029	62.77%	66.35%	
Ikeja	16357	14918	13252	13585	14429	11515	13636	13933	13053	12958	12142	11767	91.23%	93.27%	
Jos	5630	5727	5580	5540	4841	5174	2441	2573	2134	3009	2000	2629	42.20%	49.10%	
Kaduna	8708	8107	7335	7853	6721	4922	2956	2421	2108	2386	2123	2065	30.99%	33.72%	
Kano	6605	6690	5720	5829	5175	4804	4029	4056	3701	3455	3219	3528	61.98%	64.54%	
Port Harcourt	6509	7284	7241	6622	6433	6590	4474	4761	4338	4148	4288	4577	64.53%	66.24%	
Yola	1877	1926	1978	2399	2051	2003	993	1209	1035	1012	1013	1044	56.00%	47.57%	
All DisCos	102837	98716	94147	93378	90792	81507	68337	68116	62738	64820	60855	62616	69.34%	70.87%	

Notes of the table:

DisCos are the electricity distribution companies
 Négeria Currency

Appendix IV: Monthly DisCos Invoices & Remittances to MO in 2022/Q1 and 2022/Q2

			Invoice (∜ Billion)				,	Remittance	(\ ' billion)			Remittance Performan (%)		
DisCos	20	22/Q1		20	22/Q2		_	2022/Q1		2	2022/Q2		2022/Q1	2022/Q2	
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	Мау	Jun			
Abuja	1.67	1.5	1.45	1.5	1.3	1.2	1.54	1.88	1.08	1.20	0.96	1.15	97.31%	82.14%	
Benin	1.5	1.31	1.36	1.1	1.3	1.2	1.1	0.74	0.59	0.63	0.55	0.76	58.42%	53.16%	
Eko	1.56	1.4	1.41	1.5	1.5	1.0	0.78	1.25	1.16	1.36	1.32	0.99	72.99%	91.96%	
Enugu	1.47	1.22	1.41	1.4	1.3	1.2	0.43	0.67	0.59	0.73	0.57	0.70	41.29%	51.11%	
Ibadan	2.04	1.73	1.88	1.7	1.8	1.6	1.11	0.75	1.63	0.94	2.09	1.04	61.80%	78.86%	
Ikeja	2.18	1.66	1.68	1.8	1.7	1.2	0.41	1.34	1.25	1.61	0.78	1.73	54.43%	86.75%	
Jos	0.92	0.78	0.81	0.8	0.8	0.7	0.59	0.33	0.33	0.42	0.23	0.47	49.76%	47.19%	
Kaduna	1.27	0.94	0.72	0.7	0.6	0.6	1.7	0.09	0.03	0.09	0.02	0.05	61.70%	9.12%	
Kano	1.01	1	0.91	0.9	0.7	0.8	1.25	0.47	0.31	0.48	0.26	0.44	69.45%	48.82%	
Port Harcourt	1.11	0.91	0.96	0.6	0.7	0.9	0.16	1.23	0.44	0.40	0.59	0.55	61.29%	68.53%	
Yola	0.28	0.3	0.42	0.4	0.2	0.2	0.08	0.06	0.38	0.40	0.43	0.38	51.04%	167.76%	
All DisCos	15.01	12.75	13.01	12.4	12.0	10.7	9.14	8.81	7.79	8.26	7.80	8.28	63.12%	69.30%	
Ajaokuta Steel (Ħ′M)	22.67	21.46	25.32	22.47	23.65	20.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other Bilateral(\$'M)	4.21	4.36	4.91	4.38	4.43	3.59	2.92	3.1	3.96	2.44	3.01	2.5	74.04%	64.11%	

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

Appendix V: Monthly DisCos Invoices & Remittances to NBET in 2022/Q1 and 2022/Q2

			Invoice (₦	' Billion)					Remittance	(Ħ′ billion)				Performance %)
DisCos		2022/Q1			2022/Q2			2022/Q1			2022/Q2		2022/Q1	2022/Q2
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun		
Abuja	8.85	8.24	8.06	8.27	7.85	7.09	6.18	6.98	6.00	6.51	5.74	6.52	79.97%	80.85%
Benin	6.69	6.13	6.26	5.70	5.93	5.65	1.98	3.27	2.57	2.93	2.44	2.80	50.61%	47.29%
Eko	8.02	7.17	6.6	6.80	7.25	6.26	6.75	6.38	5.43	6.08	6.46	5.20	102.45%	87.38%
Enugu	6.77	6.42	6.33	5.80	5.80	5.53	3.52	3.55	2.65	3.10	2.47	2.93	54.30%	49.66%
Ibadan	9.41	8.27	7.97	8.08	8.02	7.17	4.45	3.58	3.12	4.44	3.06	3.70	53.30%	48.13%
Ikeja	10.81	9.62	9.19	9.18	9.46	8.24	10.09	7.77	6.85	8.41	4.22	6.89	99.84%	72.66%
Jos	3.79	3.54	3.63	3.53	3.51	3.24	1.10	1.11	1.07	1.39	0.71	1.23	49.50%	32.40%
Kaduna	5.7	5.22	5.15	5.24	4.95	4.50	0.69	0.48	0.20	0.68	0.20	0.38	9.79%	8.62%
Kano	5.47	5	4.55	4.77	4.40	4.04	2.44	2.37	1.53	2.57	1.58	1.83	50.88%	45.33%
Port Harcourt	4.52	4.55	4.46	4.21	4.16	4.06	1.35	4.09	1.84	2.43	2.98	2.00	67.99%	59.64%
Yola	2.27	2.18	2.28	2.24	2.07	1.94	0.34	0.23	0.00	0.24	0.22	0.00	8.47%	7.24%
All DisCos	72.3	66.33	64.49	63.82	63.37	57.72	38.88	39.81	31.27	38.78	30.09	33.48	66.70%	55.35%
Ajaokuta Steel (Ħ'M)	123.46	119.54	144.48	127.63	137.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00

Notes of the table:

^{1.} DisCos and NBET are electricity Distribution Companies and Nigeria Bulk Electricity Trader respectively.

^{2. ₦&#}x27;Billion is billions of Nigeria Currency.

Appendix VI: Category of Complaints Received by Discos in 2022/Q2

DISCO	COMPLAINTS RECEIVED	COMPLAINTS RESOLVED	UNRESOLVED COMPLAINTS	METER	INTERRUPTION	VOLTAGE	LOADSHEDDING	BILLING	DISCONNECTION	DELAY	OTHERS	RESOLUTION RATE
Abuja	25,471	24,908	563	7,742	2,999	840	3,024	3,876	2,040	602	3785	98%
Benin	8,252	7,612	640	1,497	1,746	260	14	1,114	60	0	2,921	92%
Eko	36,502	35,995	507	29,599	2,176	32	8	2,178	88	98	1,816	99%
Enugu	20,815	15,742	5,073	6,351	1,604	575	342	1,835	701	531	3,803	76%
Ibadan	37,186	29,752	7434	15,960	481	113	0	11,511	0	0	1687	80%
Ikeja	40,790	37,579	3,211	16,260	2,988	566	797	4,853	432	1,697	9,986	92%
Jos	11,708	11,524	184	7,636	1,492	314	0	1,987	48	0	47	98%
Kaduna	8,410	7,862	548	2,174	3,715	505	8	1,050	151	0	259	93%
Kano	10,549	10,461	88	9,191	754	95	2	168	6	12	233	99%
Port Harcourt	49,292	48,458	834	14,894	5,009	6,616	1,141	3,817	3,573	39	13,369	98%
Yola	2,032	2,012	20	652	474	71	0	541	152	17	105	99%
All DisCos	251,007	231,905	19,102	111,956	23,438	9,987	5,336	32,930	7,251	2,996	38,011	92.39%

Appendix VII: Complaints Handled by Forum Offices in 2022/Q1 and 2022/Q2

				2022/Q1: Cus	tomers Complaints	_			tomers Complaints
S/N	Forum Offices	Complaints	Complaints Resolved	Complaints Pending	Resolution Rate	Complaints	Complaints Resolved	Complaints Pending	Resolution Rate
1	Abakaliki, Ebonyi State	41	28	13	68%	77	0	77	0%
2	Abeokuta, Ogun State	NA	NA	NA	NA	39	13	26	33%
2	Abuja, FCT	62	47	15	76%	56	33	23	59%
3	Asaba, Delta State	84	80	4	95%	121	92	29	76%
4	Awka, Anambra State	77	67	8	87%	62	35	25	56%
5	Bauchi, Bauchi State	34	25	9	74%	17	14	3	82%
6	Benin, Edo State	67	45	22	67%	59	43	16	73%
7	Birnin Kebbi, Kebbi State	48	31	17	65%	58	28	30	48%
8	Calabar, C/Rivers State	142	114	28	80%	124	55	69	44%
9	Dutse, Jigawa State	72	54	18	75%	72	54	18	75%
10	Eko, Lagos State	15	10	4	67%	18	15	3	83%
11	Enugu, Enugu State	10	3	7	30%	16	13	3	81%
12	Gombe, Gombe State	231	126	105	55%	168	90	78	54%
13	Gusau, Zamfara State	354	222	132	63%	622	75	547	12%
14	Ibadan, Oyo State	39	37	2	95%	33	28	5	85%
15	Ikeja, Lagos State	2	1	1	50%	14	0	14	0%
16	llorin, Kwara State	28	20	8	71%	14	8	6	57%
17	Jos, Plateau State	174	133	41	76%	54	35	19	65%
18	Kaduna, Kaduna State	25	18	7	72%	19	9	7	47%
19	Kano, Kano State	3	3	0	100%	9	5	2	20%
20	Katsina, Katsina State	4	0	4	0%	4	0	4	0%
21	Lafia, Nasarawa State	13	6	7	46%	19	9	8	47%

SECOND QUARTER 2022	NERC QUARTERLY REPORTS

22	Lokoja, Kogi State	7	6	1	86%	9	5	4	0%
23	Makurdi, Benue State	32	16	7	50%	17	8	4	47%
24	Osogbo, Osun State	197	177	20	90%	238	191	47	80%
25	Owerri, Imo State	23	18	5	78%	22	17	5	77%
26	Port Harcourt, Rivers State	225	176	49	78%	217	179	34	82%
27	Sokoto, Sokoto State	8	3	5	38%	12	10	2	83%
28	Umuahia, Abia State	77	44	22	57%	52	15	35	29%
29	Uyo, Akwa Ibom State	156	83	73	53%	165	119	46	72%
30	Yola, Adamawa State	29	20	9	69%	35	24	11	69%
	All Forum Offices	2279	1613	643	71%	2442	1222	1200	50%

Appendix VIII: Category of Complaints Received by Forum Offices in 2022/Q1 and 2022/Q2

				20	022/Q1								2022/Q2			
Forum Office	Billing	Disconnection	Con. Delay	Interruption	Metering	Load Shedding	Voltage	Others	Billing	Disconnection	Con. Delay	Interruption	Metering	Load Shedding	Voltage	Others
<i>Abakaliki</i> , Ebonyi State	41	0	0	0	0	0	0	0	32	7	0	0	25	0	0	13
Abuja, FCT	6	0	0	0	52	0	0	4	9	0	0	0	43	0	0	4
<i>Asaba</i> , Delta State	74	1	0	0	4	0	0	5	105	4	0	0	11	0	0	1
<i>Awka</i> , Anambra State	54	0	0	0	23	0	0	0	50	3			7			2
<i>Bauchi,</i> Bauchi State	20	4	0	0	8	0	0	2	15	1	0	0	1	0	0	0
Benin, Edo State	55	4	1	2	3	0	0	2	47	3	1	1	3	0	0	4
<i>B/Kebbi,</i> Kebbi State	44	0	0	0	3	0	0	1	52	2	0	0	1	0	0	3
Calabar, C/Rivers State	95	6	0	5	33	0	0	3	73	12	0	4	23	0	0	12
<i>Dutse</i> , Jigawa State	35	16	0	0	20	0	0	1	35	16			20			1
<i>Eko</i> , Lagos State	9	0	0	0	6	0	0	0	9	0	0	0	9	0	0	0
<i>Enugu,</i> Enugu State	8	0	0	0	2	0	0	0	11	0	0	0	5	0	0	0
Gombe, Gombe State	151	19	0	3	30	0	0	28	110	9	0	0	19	0	0	30
<i>Gusau,</i> Zamfara State	291	0	0	0	63	0	0	0	470	20	2	1	111	3	0	15
<i>Ibadan,</i> Oyo State	12	6	0	0	19	0	0	2	10	2	0	0	21	0	0	0
<i>Ikeja</i> , Lagos State	1	0	0	0	1	0	0	0	14	0	0	0	0	0	0	0
<i>llorin</i> , Kwara State	13	0	0	0	9	0	1	5	9	0	0	0	3	0	0	2

Jos, Plateau State	154	7	0	0	8	0	0	5	43	3	0	0	7	0	0	1
<i>Kaduna</i> , Kaduna State	10	2	0	0	3	0	0	10	4	0	0	2	0	1	0	12
Kano, Kano State	3	0	0	0	0	0	0	0	3	3	1	0	1	0	1	0
<i>Katsina,</i> Katsina State	4	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
<i>Lafia,</i> Nasarawa State	7	0	0		6	0	0	0	19	0	0	0	0	0	0	0
<i>Lokoja,</i> Kogi State	5	1	0	0	1	0	0	0	5	1	0	0	1	0	0	2
<i>Makurdi,</i> Benue State	32	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0
<i>Osogbo,</i> Osun State	106	5	0	0	81	0	0	5	98	2			130			8
Owerri, Imo State	15	4	0	0	1	0	1	2	16	1	0	0	3	0	0	2
<i>P/Harcourt,</i> Rivers State	141	12	0	0	42	5	10	15	135	29	0	0	39	0	4	10
<i>Sokoto</i> , Sokoto State	6	0	0	0	0	0	0	2	10	0	0	0	0	0	0	2
<i>Umuahia,</i> Abia State	58	6	1	1	10	0	0	1	41	4	0	1	4	0	1	1
<i>Uyo</i> , Akwa Ibom State	116	7	2	3	22	0	2	4	102	13	1	1	34	0	1	13
<i>Yola</i> , Adamawa State	17	3	0	6	0	0	1	2	25	2	0	3	4	0	0	1
All Forum Offices	1,583	103	4	20	450	5	15	99	1595	139	5	13	539	4	7	140

Appendix IX: Monthly Cash Flow of the Commission between January and June 2022

		Summary for 20	022/Q1			Summary for 2	2022/Q2	
		(₦' Millio	on)			(₦' Mill	ion)	
	Jan.	Feb.	Mar.	Total	Apr.	May	Jun.	Total
A. Revenue								
Operating Levy (i.e., MC)	2,017.89	1,385.74	12.2	3,415.83	1,233.56	1,316.71	2,257.09	4,807.36
Other IGR	46	34.45	85.94	166.39	66.51	20.42	55.47	142.39
Total Revenue	2,063.89	1,420.19	98.14	3,582.22	1,300.07	1,337.12	2,312.56	4,949.76
B. Expenditure								
Personnel Cost	354.18	209.72	580.32	1144.22	504.83	405.48	773.83	1,684.14
Regulatory Expenses	11.06	204.91	26.1	242.07	116	84.99	226.96	427.96
A & G Maintenance	1.9	34.86	29.42	66.18	26.62	26.7	26.92	80.24
Total Expenditure	367.14	449.49	635.84	1,452.47	647.45	517.16	1,027.72	2,192.33
C. Net Cash Flow (A-B)	1696.75	970.7	-537.7	2,129.75	652.62	819.96	1,284.85	2,757.43
Outstanding Liabilities				4,087.34				4,501.88

Notes of the table: MC is Market Charges; IGR internal Generated Revenue; and A&G is admin and general

Appendix X: Meter Installation through the MAP and NMMP Interventions in 2022/Q1 and 2022/Q2

Discos	Meters contracted	Meters installed in 2019	Meters installed in 2020	Meters installed in 2021	Meters installed in 2022/Q1	Meters installed in 2022/Q2	Total number installations
Abuja	1,000,475	63,925	105,253	87,987	705	22,532	280,402
Benin	664,646	1,169	11,154	72,256	6,336	677	91,592
Eko	283,178	5,422	32,353	71,362	3,263	6,470	118,870
Enugu	713,926	17,410	54,603	97,433	8,852	14,421	192,719
Ibadan	1,103,867	4,771	38,403	94,309	30,404	42,570	210,457
Ikeja	1,186,114	22,876	160,469	126,051	18,169	46,285	373,850
Jos	593,473	15	4,673	87,977	1,966	311	94,942
Kaduna	519,152	43	8,258	18,236	8,493	21,882	56,912
Kano	562,747	22	3,314	87,736	199	173	91,444
Port Harcourt	220,044	7,775	36,546	92,543	7,123	7,744	151,731
Yola	749,376	-	478	5,565	-	4,891	10,934
Total	7,596,998	123,428	455,504	841,455	85,510	167,956	1,673,853

Appendix XI: Meter Installation through the NMMP intervention in 2022/Q1 and 2022/Q2

Discos	Meters contracted	Meters installed in 2019	Meters installed in 2020	Meters installed in 2021	Meters installed in 2022/Q1	Meters installed in 2022/Q2	Total number installations
Abuja	100,475	-	17,777	82,698	-	-	100,475
Benin	90,870	-	=	71,152	6,336	354	77842
Eko	79,178	-	55	63,659	2,972	3,545	70231
Enugu	92,381	-	-	92,025	-	130	92155
Ibadan	114,952	-	4,985	93,761	10,966	3,880	113,592
Ikeja	111,703	-	24	111,679	=	-	111703
Jos	93,473	-	983	87,977	1,966	-	90926
Kaduna	69,152	-	1,555	15,835	7,042	21,590	46,022
Kano	87,747	-	11	87,736	-	-	87747
Port Harcourt	82,720	-	14,212	68,508	=	-	82,720
Yola	85,376	-	478	5,565	-	4,891	10934
Total	1,008,026	-	40,080	780,595	29,282	34,390	884,347

Appendix XII: Meter Installation through the MAP intervention in 2022/Q1 and 2022/Q2

Discos	Meters contracted	Meters installed in 2019	Meters installed in 2020	Meters installed in 2021	Meters installed in 2022/Q1	Meters installed in 2022/Q2	Total number installations
Abuja	900,000	63,925	87,476	5,289	705	22,532	179,927
Benin	573,776	1,169	11,154	1,104	-	323	13,750
Eko	204,000	5,422	32,298	7,703	291	2,925	48,639
Enugu	621,545	17,410	54,603	5,408	8,852	14,291	100,564
Ibadan	988,915	4,771	33,418	548	19,438	38,690	96,865
lkeja	1,074,411	22,876	160,445	14,372	18,169	46,285	262,147
Jos	500,000	15	3,690	-	-	311	4,016
Kaduna	450,000	43	6,703	2,401	1,451	292	10,890
Kano	475,000	22	3,303	-	199	173	3,697
Port Harcourt	137,324	7,775	22,334	24,035	7,123	7,744	69,011
Yola	664,000	-	-	-	-	-	-
Total	6,588,971	123,428	415,424	60,860	56,228	133,566	789,506

Appendix XIII: Categories of Appeals Received at the Forum Offices in 2022/Q2

S/N	FORUM OFFICES	COMPLAINTS B/F	CURRENT	COMPLAINTS RECEIVED	COMPLAINTS RESOLVED	COMPLAINTS REJECTED	COMPLAINTS WITHDRAWN	PENDING COMPLAINTS	NO OF HEARINGS	BILLING	DISCONNECTI	DELAY	INTERRUPTION	METER	1OADSHEDDIN G	VOITAGE	OTHERS	RESOLUTION RATE
1	ABAKALIKI	13	64	77	0	0	0	77	0	32	7	0	0	25	0	0	13	0.0%
2	ABEOKUTA	21	18	39	13	0	0	26	1	24	2	0	0	12	0	0	1	33.3%
3	ABUJA	15	41	56	33	0	0	23	3	9	0	0	0	43	0	0	4	58.9%
4	ASABA	32	89	121	92	0	0	29	5	105	4	0	0	11	0	0	1	76.0%
5	AWKA	18	44	62	35	0	2	25	3	50	3			7			2	56.5%
6	BAUCHI	9	8	17	14	0	0	3	2	15	1	0	0	1	0	0	0	82.4%
7	BENIN	22	37	59	43	0	0	16	1	47	3	1	1	3	0	0	4	72.9%
8	CALABAR	17	41	58	28	0	0	30	3	52	2	0	0	1	0	0	3	48.3%
9	EKO	27	97	124	55	0	0	69	0	73	12	0	4	23	0	0	12	44.4%
10	ENUGU	10	62	72	54	0	0	18	4	35	16			20			1	75.0%
11	GOMBE	5	13	18	15	0	0	3	1	9	0	0	0	9	0	0	0	83.3%
12	GUSAU	0	16	16	13	0	0	3	1	11	0	0	0	5	0	0	0	81.3%
13	IBADAN	101	67	168	90	0	0	78	0	110	9	0	0	19	0	0	30	53.6%
14	IKEJA	367	255	622	75	0	0	547	3	470	20	2	1	111	3	0	15	12.1%
15	ILORIN	12	21	33	28	0	0	5	2	10	2	0	0	21	0	0	0	84.8%
16	JIGAWA	1	13	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0.0%
17	JOS	8	6	14	8	0	0	6	1	9	0	0	0	3	0	0	2	57.1%
18	KADUNA	30	24	54	35	0	0	19	2	43	3	0	0	7	0	0	1	64.8%
19	KANO	7	12	19	9	3	0	7	1	4	0	0	2	0	1	0	12	47.4%
20	KATSINA	3	6	9	5	2	0	2	0	3	3	1	0	1	0	1	0	20.0%
21	KEBBI	0	4	4	0	0	0	4	0	2	0	0	0	2	0	0	0	0.0%
22	LAFIA	8	11	19	9	2	0	8	2	19	0	0	0	0	0	0	0	47.4%
23	LOKOJA	1	8	9	5	0	0	4	1	5	1	0	0	1	0	0	2	0.0%
24	MAKURDI	13	4	17	8	5	0	4	1	17	0	0	0	0	0	0	0	47.1%
25	OSHOGBO	0	238	238	191		0	47	3	98	2			130			8	80.3%
26	OWERRI	5	17	22	17	0	0	5	2	16	1	0	0	3	0	0	2	77.3%
27	P/H	0	217	217	179	4	0	34	3	135	29	0	0	39	0	4	10	82.5%
28	SOKOTO	0	12	12	10	0	0	2	1	10	0	0	0	0	0	0	2	83.3%
29	UMUAHIA	22	30	52	15	0	2	35	1	41	4	0	1	4	0	1	1	28.8%
30	UYO	128	37	165	119	0	0	46	2	102	13	1	1	34	0	1	13	72.1%
31	YOLA	9	26	35	24	0	0	11	2	25	2	0	3	4	0	0	1	68.6%
	TOTAL	904	1,538	2442	1,222	16	4	1,200	51	1,595	139	5	13	539	4	7	140	50.04%

Appendix XIV: Categories of Complaints Received by the DisCos in 2022/Q2

DISCO	COMPLAINTS RECEIVED	COMPLAINTS RESOLVED	COMPLAINTS UNRESOLVED	METER	INTERRUPTION	VOLTAGE	LOADSHEDDING	BILLING	DISCONNECTION	DELAY	OTHERS	RESOLUTION RATE
AEDC	25,471	24,908	563	7,742	2,999	840	3,024	3,876	2,040	602	3,785	98%
BEDC	8,252	7,612	640	1,497	1,746	260	14	1,114	60	-	2,921	92%
<i>EEDC</i>	36,502	35,995	507	29,599	2,176	32	8	2,178	88	98	1,816	99%
EKDC	20,815	15,742	5,073	6,351	1,604	575	342	1,835	701	531	3,803	76%
<i>IBEDC</i>	37,186	29,752	7,434	15,960	481	113	-	11,511	-	-	1,687	80%
<i>IKEDC</i>	40,790	37,579	3,211	16,260	2,988	566	797	4,853	432	1,697	9,986	92%
<i>JEDC</i>	11,708	11,524	184	7,636	1,492	314	-	1,987	48	-	47	98%
KAEDC	8,410	7,862	548	2,174	3,715	505	8	1,050	151	-	259	93%
KNEDC	10,549	10,461	88	9,191	754	95	2	168	6	12	233	99%
PHEDC	49,292	48,458	834	14,894	5,009	6,616	1,141	3,817	3,573	39	13,369	98%
YEDC	2,032	2,012	20	652	474	71	-	541	152	17	105	99%
TOTAL	251,007	231,905	19,102	111,956	23,438	9,987	5,336	32,930	7,251	2,996	38,011	92%

Table XV: List and Addresses of NERC Forum Offices as at June 2022

	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	llorin, 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



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