

ORDER/NERC/2024/133

BEFORE THE NIGERIAN ELECTRICITY REGULATORY COMMISSION IN THE MATTER OF OCTOBER 2024 SUPPLEMENTARY ORDER TO THE MULTI-YEAR TARIFF ORDER 2024 FOR KADUNA ELECTRICITY DISTRIBUTION PLC

TITLE

1. This regulatory instrument shall be cited as October 2024 Supplementary Order to the Multi-Year Tariff Order - 2024 ("October 2024 Supplementary Order") for Kaduna Electricity Distribution Plc ("KAEDC").

COMMENCEMENT AND TERMINATION

2. This Supplementary Order shall take effect from 1st October 2024 and it shall cease to be effective on the issuance of a new tariff review Order for KAEDC by the Nigerian Electricity Regulatory Commission ("NERC" or the "Commission").

CONTEXT

- 3. Pursuant to the Tariff Review Application by KAEDC, the Commission approved MYTO-2024 effective from 1st January 2024. The Order among others;
 - a. Restated KAEDC's Performance Improvement Plan ("PIP") and approved a revised 5-year CAPEX provision to finance planned CAPEX projects. The Order further applied regulatory adjustments to the verified historical investments of KAEDC;
 - b. Approved a reset of the baseline ATC&C loss level to a new target considered to be fair and reasonable given current operating conditions and comparable benchmarks within and outside the Nigerian Electricity Supply Industry ("NESI");
 - c. Revised relevant assumptions for the forecast of revenue requirements and applicable tariffs for the period 2024 2027;

OBJECTIVE

4. Further to Section 23 of the MYTO-2024, this Supplementary Order seeks to reflect the changes in the pass-through indices outside the control of licensees including inflation rates, ₦/US\$ exchange rate, available generation capacity and gas price for the determination of Cost-Reflective Tariffs ("CRT").



BASIS FOR THE REVIEW

5. Minor Review Indices

The underlisted indices with potential impact on electricity rates were considered to determine KAEDC's revised revenue requirements and associated tariffs:

- a. Exchange Rate: The Naira to the US Dollar exchange rate of #1,637.13/US\$1 has been adopted for October December 2024; this has been determined by adding a 1% transaction cost to the average foreign exchange rate of #1,620.92 during the period of 1st 26th September 2024 as obtained from the website of the Central Bank of Nigeria ("CBN") in line with the MYTO methodology.
- b. **Nigerian Inflation Rate:** The Nigerian inflation rate of **32.15**% for August 2024 as published by the National Bureau of Statistics ("NBS") is applied to revise the Nigerian inflation rate projection for 2024.
- c. **US Inflation Rate:** Based on the data published by the United States Bureau of Labor Statistics (http://www.bls.gov), the US inflation rate of **2.50%** for August 2024 is applied to revise the US Inflation rate projection for 2024.
- d. Available Generation Capacity: Considering the periodic reports from the System Operator, the review maintains the January 2024 projection of an average offtake of 258MWh/h by KAEDC in 2024.

e. Wholesale Gas to Power Prices:

- i. The review maintains the benchmark gas-to-power price of US\$2.42/MMBTU based on the established benchmark price of gas-to-power by the Nigerian Midstream and Downstream Petroleum Regulatory Authority ("NMDPRA") in line with Section 167 of the Petroleum Industry Act ("PIA") 2021
- ii. Contracted gas supply and transportation prices outside Domestic Gas Delivery Obligation quantities and based on effective Gas Sale Agreements ("GSAs") approved by the Commission.
- iii. Benchmark Gas Transportation tariff of US\$0.80/MMBTU.

6. Regulatory Net-offs for Non-Adherence to the Order on Non-Compliance with Capping of Estimated Bills

Pursuant to the Commission's Order NERC/2024/004 on Non-compliance with the Capping of Estimated Bills and subsequent petition hearings and review of data further provided by KAEDC, the Commission has approved the deduction of N115Mn from the total annual OpEx of KAEDC effective September 2024, being the 10% of the overbilled amount by KAEDC for the period covering January–September 2023.

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7. Summary of Tariff Assumptions and Results

Table 1 below summarises the tariff review indices adopted in this Order.

Table - 1: Key Tariff Review Indices/Assumptions for KAEDC

| Table 1. Key failif Keyley | illuices/ Ass | ombiions i | OI KAEDC | |
|---|-------------------|-------------|-------------|----------|
| Parameter | Unit | Aug 2024 | Sep 2024 | Oct 2024 |
| Loss Target | % | 25.00% | 25.00% | 25.00% |
| Nigerian Inflation | % | 34.2% | 33.4% | 32.2% |
| US Inflation | % | 3.0% | 2.9% | 2.5% |
| Exchange Rate | ₩/\$ | 1,564.3 | 1601.5 | 1637.1 |
| Gas Supply and Transportation Cost | \$/MMBTU | 3.22 | 3.22 | 3.22 |
| Transmission Loss Factor | % | 7.00% | 7.00% | 7.00% |
| Energy Delivered to DisCo | GWh/Year | 2,260 | 2,260 | 2,260 |
| Energy Delivered to DisCo | MWh/h | 258 | 258 | 258 |
| Generation Cost | ₩/kWh | 111.1 | 113.7 | 116.1 |
| Transmission & Admin Cost | ₩/kWh | 10.4 | 10.5 | 10.7 |
| Weighted Average Cost Reflective Tariff | ₩ /kWh | 202.3 | 206.0 | 209.9 |
| Weighted Average Allowed Tariff | ₩ /kWh | 114.4 | 113.0 | 113.0 |
| Monthly Tariff Shortfall (Subsidy) | N 'Million | 12,412 | 13,136 | 13,686 |

8. Approved End-User Tariffs Effective from 1st October 2024

Pursuant to Section 116 of the EA and extant regulations, the Commission has considered and approved for KAEDC, the tariffs in Table 2 below effective 1st October 2024. The approved tariffs shall remain in force subject to monthly adjustments of pass-through indices including inflation rates, NGN/US\$ exchange rates and gas-to-power prices.

In line with the policy direction of the FGN on electricity subsidy, the allowed tariffs for Bands B – E customer categories shall remain frozen at the rates payable since December 2022 subject to further policy direction by the Government. With this policy, the estimated subsidy benefit for customers under the KAEDC franchise in 2024 is approximately *13.69bn monthly.



Table - 2: Approved Allowed Tariffs (₩/kWh) for KAEDC

| Tariff Class | Apr 2024 | May - Jun 2024 | Jul - Oct 2024 |
|--------------|----------|----------------|----------------|
| Life-line | 4.00 | 4.00 | 4.00 |
| A - Non-MD | 225.00 | 206.80 | 209.50 |
| A - MD1 | 225.00 | 206.80 | 209.50 |
| A - MD2 | 225.00 | 206.80 | 209.50 |
| B - Non-MD | 62.63 | 62.63 | 62.63 |
| B - MD1 | 66.34 | 66.34 | 66.34 |
| B - MD2 | 68.78 | 68.78 | 68.78 |
| C - Non-MD | 51.12 | 51.12 | 51.12 |
| C - MD1 | 52.88 | 52.88 | 52.88 |
| C - MD2 | 55.52 | 55.52 | 55.52 |
| D - Non-MD | 35.41 | 35.41 | 35.41 |
| D - MD1 | 46.40 | 46.40 | 46.40 |
| D - MD2 | 46.40 | 46.40 | 46.40 |
| E - Non-MD | 35.41 | 35.41 | 35.41 |
| E - MD1 | 46.40 | 46.40 | 46.40 |
| E - MD2 | 46.40 | 46.40 | 46.40 |

9. Service Delivery Commitments

KAEDC shall be held accountable for service deliveries per commitments under its Service Based Tariff proposals that seek to align end-user tariffs in proportion to the service level enjoyed by customer clusters as measured in average hours of supply per day over one month. Details of the service level commitments made by KAEDC to customers in various tariff Bands for October 2024 are shown in Appendixes 2–4.

10. Monitoring and Evaluation of Compliance to Service Commitment

- a. The Commission shall continue to leverage technology to directly obtain data on the hours of supply on each Band A feeder from the head-end system of KAEDC for near real-time monitoring of service.
- b. KAEDC shall maintain a rapid response team to ensure effective service delivery on the committed minimum hours of supply to each service Band commencing with Band A feeders. The team shall continue to ensure timely response to customers' complaints, fault clearing and alignment with TCN regional teams for effective load management and optimised dispatch to respective feeders. KAEDC shall maintain the dedicated email and contact numbers of the service rapid response team for each customer cluster/business unit on its website and continue to circulate same to the customers via bulk SMS and social media handles.
- c. KAEDC is obligated to publish a rolling 7-day average daily hours of supply on each Band A feeder daily on its website no later than 09:00 am of the next day.



- d. Where KAEDC fails to deliver on the committed level of service on a Band A feeder for consecutive two days, KAEDC shall on the next day by 10.00 am publish on its website an explanation of the reasons for the failure and update the affected customers on the timeline for restoration of service to the committed service level.
- e. Where KAEDC fails to meet the committed service level to a Band A feeder for seven (7) consecutive days, the feeder shall be automatically downgraded to the recorded level of supply pursuant to provisions of Section 6 of Order No. NERC/334/2022 "Order on Migration of Customers and Compensation for Service Failure under Service-Based Tariff Framework".
- f. KAEDC is mandated to continuously ensure upward migration of customers from the lower service Bands to Band A service level in line with the target on improvement in quality of service as provided in the Order on Key Performance Indicators for KAEDC issued from time to time by the Commission

11. Service Band Performance, Migration/Downgrade and Compensation

Pursuant to the provisions of the Order on Migration of Customers and Compensation for Service Failure under the Service-Based Tariff Framework ("Order on Migration") and the Directive to Electricity Distribution Companies on Band A Feeder Performance Monitoring, Upgrade and Downgrade ("Directive for Operationalization of Band A Feeders"), the Commission, based on the feeder performance report for the 8th – 21st of September 2024, hereby orders as follow:

- a. KAEDC shall downgrade the Band A feeders listed in Appendix 2 to the commensurate level of supply and make appropriate compensation to the affected customers in line with the provisions of the Order on Migration.
- b. KAEDC shall make appropriate compensation to the affected customers in Band A feeders listed in Appendix 3 for failure to deliver up to 20 hours of average supply but more than 18 hours of average supply in line with the provisions of the Order on Migration while the feeders shall remain as Band A.

12. Procurement of Embedded Generation

KAEDC is obligated by this Order to procure a minimum of **26MW** capacity of embedded generation, being 10% of its 2024 load allocation, to improve the reliability of supply and sustain delivery of a minimum service level under the SBT. A minimum of **13MW** (i.e., 50%) of the embedded generation capacity must be sourced from renewable energy sources. The required capacity may be procured in bulk or distributed capacities across KAEDC's Franchise area. The capacity to be procured should be ready for dispatch to the KAEDC's network by the 1st of April 2025.



13. KAEDC's Remittance Obligation

The FGN policy on subsidy and electricity tariffs provides for a gradual transition to cost-reflective end-user tariffs with safeguards for the less privileged electricity consumers. Accordingly, the Federal Government has committed to funding the revenue gap arising from the difference between cost-reflective tariffs approved by the Commission and the actual end-user tariffs during the transition to cost-reflective tariffs where applicable. KAEDC shall settle its market invoices under the DisCo Remittance Obligation thresholds as provided in Table 3. All settlements are subject to regulatory net-offs as may be issued from time to time by the Commission.

Table - 3: Monthly DisCo Remittance Obligation for KAEDC, 2024

| Head | Sub Head | Aug 2024 Revision N'Million | Sep 2024 Revision N'Million | Oct 2024 Revision N'Million |
|--------------------------------|------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | NEMSF | 294 | 294 | 361 |
| red | Meter Acquisition Fund | 167 | 167 | 167 |
| aqui. | Unadjusted GenCo Invoice | 19,619 | 20,110 | 20,449 |
| e R | ZHEPP Invoice | 1,305 | 1,305 | 1,417 |
| Revenue Required | TCN & Admin Services | 1,961 | 1,986 | 2,007 |
| Rev | DisCo | 5,228 | 5,249 | 5,250 |
| | Total | 28,574 | 29,111 | 29,652 |
| | Allowed Recovery | 16,162 | 15,965 | 15,965 |
| | 2023 Under Recovery B/F | | | - |
| 99 | Tariff Shortfall (Subsidy) | 12,412 | 13,146 | 13,686 |
| NB | ET Adjusted Invoice to KAEDC | 7,207 | 6,964 | 6,763 |
| | NEMSF | 294 | 294 | 361 |
| ၅၁၉ | Meter Acquisition Fund | 167 | 167 | 167 |
| DisCo Remittance Obligation | NBET Remittance Obligation | 7,207 | 6,964 | 6,763 |
| Co Remitta Obligation | ZHEPP Remittance Obligation | 1,305 | 1,305 | 1,417 |
| ပ္ပ ဝိ | MO Remittance Obligation | 1,961 | 1,986 | 2,007 |
| Dis | DisCo | 5,228 | 5,249 | 5,250 |
| | Total Distribution | 16,162 | 15,965 | 15,965 |
| | DisCo Remittance to NBET | 100% | 100% | 100% |
| [| DisCo Remittance to ZHEPP | 100% | 100% | 100% |
| | DisCo Remittance to MO | 100% | 100% | 100% |



- 14. The waterfall of market revenues during the transitional period shall be in line with the following:
 - a. NBET shall issue energy invoices to KAEDC net of the applicable tariff shortfall approved by the Commission monthly, while MO shall issue the full transmission and administrative services invoices to KAEDC at the applicable tariff.
 - b. KAEDC shall make full settlement (100%) of the market invoices issued by MO (including Zungeru Power Plant) and NBET as provided in Table 3 above.
 - c. FGN intervention from budgetary appropriation and other sources for funding tariff shortfall shall be applied by NBET to ensure 100% settlement of market invoices as issued by generating companies ("GenCos").
 - d. KAEDC shall be liable to relevant penalties/sanctions for failure to meet the payment obligation in any payment cycle under the terms of its respective contracts with bilateral counterparties including NBET and MO.
 - e. KAEDC shall maintain adequate payment securitisation for energy off-take in line with the earlier directive of the Commission and relevant bilateral contracts.
 - f. KAEDC shall settle its market invoices under the DisCo Remittance Obligation thresholds as provided in Table 3. All settlements are subject to regulatory net-offs as may be issued from time to time by the Commission.

15. Effective Date

This Supplementary Order shall be effective from 1st October 2024.

Dated this 30th day of September 2024

Musiliu O. Oseni

(Vaga 30/09/2024)

Vice-Chairman

Nathan R. Shatti

Commissioner

Finance and Management Services

Appendix - 1: KAEDC's Customer Classifications

| Service Bands | Nav. Tariff | Description |
|---------------------------|-------------|--|
| Lifeline | R1 | Life-Line customers with energy consumption of not more than 50kWh/month |
| A | A - Non-MD | Customers with single or three-phase connections located within Band-A Service Level Feeders |
| (Minimum of 20hrs/day) | A - MD 1 | Customers with LV Maximum Demand connection located within Band-A Service Level Feeders |
| | A - MD 2 | Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – A Service Level Feeders |
| В | B - Non-MD | Customers with single or three-phase connections located within Band-B Service Level Feeders |
| (Minimum of 16hrs/day) | B - MD 1 | Customers with LV Maximum Demand connection located within Band-B Service Level Feeders |
| | B - MD 2 | Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – B Service Level Feeders |
| c | C – Non-MD | Customers with single or three-phase connections located within Band-C Service Level Feeders |
| (Minimum of 12hrs/day) | C - MD 1 | Customers with LV Maximum Demand connection located within Band-C Service Level Feeders |
| | C - MD 2 | Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – C Service Level Feeders |
| D | D - Non-MD | Customers with single or three-phase connections located within Band-D Service Level Feeders |
| (Minimum of 8hrs/day) | D – MD 1 | Customers with LV Maximum Demand connection located within Band-D Service Level Feeders |
| . ,, | D - MD 2 | Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – D Service Level Feeders |
| E | E - Non-MD | Customers with single or three-phase connections located within Band-E Service Level Feeders |
| (Minimum of 4hrs/day) | E – MD 1 | Customers with LV Maximum Demand connection located within Band-E Service Level Feeders |
| | E - MD 2 | Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – E Service Level Feeders |



Appendix 2: Feeders for Downgrade and Compensation of Customers Due to Failure of Service

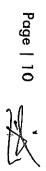
Appendix 3: Feeder for Compensation of Customers Only Due to Failure of Service

| POLY QUARTERS & MOGADISHU LAYOUT GWANDU, GRA NEPA, GRA BIRNINKEBBI, VILLAGE, |
|--|
| POLY QUARTERS & MOGA |
| MILLENIUM CITY & NURU SURAJ |
| |
| NAFSAT VILLAGE, FARIN GIDA & HAYIN BANKI |
| LAGOS STREET, YORUBA ROAD, ORIYOFATA |
| STREET & KUBAU ROAD |
| ISA NATA KOAD, UNGUWAN SARKI & SULTAN ROAD |
| CAITA BOAD INICIDIANA |
| GWARI AVENUE |
| WHAFF, RIVER SIDE, UNGUWAN KAYA, DAKCCE & NAGOYI ROAD |
| DOAD COA MANICHECTED |
| HIGH-COST AREA & BARNAWA COMPLEX |
| ABANTA, SUNCTO KOAD & AHMADU BELLO WAY |
| BAKEA COKOTO BOLD S |
| NAME OF MAJOR STREETS SERVED BY THE FEEDER |

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Appendix - 4: KAEDC's Service Level Commitments for October 2024

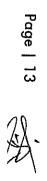
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| 33KV NAF | SOLV MOTHER CART | 33KV MOTHER CAPT | 33KV I ABANA (DEDICATED) | 33KV KRPC (DEDICATED) | 33KV KOFAN DOKA | 33KV KINKINAU | 33KV KAFANCHAN | JONY JAJI | SOLVEY INDELLEGINGE | 33KV INDEDENINGE | 33KV GONIN GORA | | 33KV FARFARU | 33KV FADAMA 2 | 33KV FADAMA 1 | SSNY DONA | 33KV AVIATION | | 33KV AREWA | 33KV AIRPORT ROAD | 33KV ABAKPA | SSNY MOGADISHO | 335V 400 ADISHI | I IKV WATER RESOURCES RIG | I KV NAFBASE | I IKV LUGGARD HALL | I IKV COMMERCIAL DKA | I KV BANK KAFANCHAN | THE TANKE |
| MANDO | MANDO | MECHANICS VILLAGES | MECHANICS VIII A OTO | POWER STATION | ZARIA TS | MANDO | KAFANCHAN | MANDO | POWER STATION | ZARIA TS | POWER STATION | | SOKOTO TS | B/KEBBI TS | B/KEBBI TS | MANDO | ZARIA TS | () () () () () | POWED STATION | MANDO | MANDO | POWER STATION | | MOTHERCAT | NAFBASE KADUNA | ABAKPA | CONSTITUTION | BANK ROAD | LOCATION |
| OBASANJO FARM, ARRISALA GLOBAL CARE BY NAFBASE, MOTHER CAT HODLING COMPANY | NO POINT LOAD | LABANA & JEGA ROAD | KRPC KADUNA | WATER BOARD FOMPING STATION, LANNURAKH HOTEL, NUHU JAMO'S HOUSE | WATER BOARD PILLENING CTATEOUS STATE OF A SINKINAU INJ SS | DANMANI TOWAL AND STATES OF TAXABLE TO THE TOWAL AND STATES OF THE TAXABLE TO THE TOWAL AND STATES OF THE TAXABLE TO THE TAXAB | | KAWO, ZARIA ROAD, MARRABAN JOS TRADE FAIRS | NO POINT LOAD | FABS HOTEL & ORGANO HOTELS ALONG ROCK ROAD GRA ZARIA | GORA, KADUNA -ABUJA EXPRESS WAY | ANNILLA BINJI QUAKIEKS, ANHASS PLASTIC, FARFARU INJECTION SUBSTATION | ABUIL ABUIL OLIVERS OF THE AND AKENA EVIERN BY PASS B/KEBBI | AZBIB HOTEL AND AREAS SCENARIOS KEBBI | CENTRAL BANK B/KEBBI, BESIDE KEBBI TV, SIR YAHAY HOSPITAL KEBBI, EMIR OF GWANDU | KAURA SUPER SAG BY NNAMDI AZIKWE ROAD | OF EXCELLENT SAMARU & ABU TEACHING HOSPITAL SHIKA. | INTERNATIONAL SCHOOL AND KAURI INJECTION SUBSTATION | KENFELI, KOTANGORA ESTATE CHECHERRY LOGIN GATES ENCINEEDING MANDO ROAD | AIRPORT KADUNA EYES CENTERS KADUNA NIDA KADUNA NEW ANDERS | CIBI GRANITE BY MANDO, NNAMDI AZIKWE ROAD KADUNA BYPASS, AAM PLASTIC BY KURMIN MASHI, MTN FRIEDSHIPS BY ABAKPA, MASCALLA HOTEL ,BELLS HOLDING, OXYGEN MANFACTURERS AND CONFIDENCE WATER | KADUNA, KADUAN STATE WATER BOARD POLY ROAD, METER TESK COMPANY BY POWER HOUSE & FERTILZER COMPANY BY AMADU DOKA ROAD ABAKPA. | 44 NA R-HOSPITAL BADIKKO JUNCTION, SIR KASHIM IBRAHIM HOUSE GOVERNMENT HOUSE | WATER RESOURCES MOTHERCAT | NAFBASE KADUNA & AGRIC QUARTERS | ALKALI ROAD, YAKUBU AVENUE, WHAFF ROAD & INDEPENDENCES WAYS | MAIDUGURI ROAD, CONSTITUTION ROAD & DAURA ROAD | BANK ROAD KAFANCHAN | NAME OF MAJOR STREETS SERVED BY THE FEEDER |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 02 | 20 0 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 30 | 20 | 20 | 20 | - Control of the Cont | 20 | 20 | 20 | 20 | 8 6 | 20 02 | 20 02 | Coroni Old (I Ind) | MIN. SUPPLY |



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| | 1 | | | | | _ | 0 | 9 | | 7 | 36 | 35 | 4 | | 3 | 31 | | 30 | 77 | 3 6 | 3 1 | 26 | S/N BAND |
| В | D | · D | - | > | - ; | → | > | A | > | > | > | ➤ | A | . > | > : | > | | > | > | · > | - > | · > | d A |
| 11KV ARKILLA | 33KV POWERHOUSE | 33KV MARADUN | SSNY MAGAMI | 33KV BAKURA | SURVE AINCE | ZAM | 11KV GOVERNMENT HOUSE | 11KV COMMERCIAL ZAM | 33KV WATER WORKS ZARIA | 33KV WATER WORKS | 33KY UNTL (DEDICATED) | (DEDICATED) | 33KV UNGWAN DOSA | 33KY UNGUWAN BORO | SORY TOROING | 33KV RIGASA | | 33KV PZ | 33KV POWER STATION | 33KV OLAM | 33KV NEW INJECTION | 33KV NARAYI | FEEDER NAME |
| BIRNIN KEBBI ROAD | GUSAU TS | TALATA MAFARA TS | GUSAU TS | TALATA MAFARA TS | IALAIA MAFARA TS | rOwek HOUSE | POWER HOUSE | POWER HOUSE | DOGARAWA | MANDO | POWER STATION | MECHANICS VILLAGES | MANDO | POWER STATION | MANUC | MANDO | | ZARIA TS | SOKOTO TS | POWER STATION | SOKOTO TS | POWER STATION | DESCRIPTION OF FEEDER LOCATION |
| GESSE PHASE 1 & 2, SHIYAR FADA AREA, SANI ABACHA BYPASS FROM TIPA GARRAGE TO KCC | SAMARU GUSAU, BACK OF GRID , KING FAHAD HOSPITAL, PART OF UNGUWAN SHADOW & UNG NASARAWA | MAKADUN, RINI, GORA, BIRNIN TUDU, MAKERA, KAZAMA, MAI GABAS, DOSARA, BIRNIN TUDU, SOLID MINERAL , RIMA QTRS, LAYIN DAJI, KOFAR KYARAWA, DAN FAKO | SAMARU RELIEF | KOFOJI, GOBIRAWA YAR KOFOJI, MTN BAKURA, BALGARE VILLAGE, GAMJI, FADAMAWA, BAICHIN GABCAH, STILOWO A TAK | MANGORO, SECRETARIAT, DAN MANGORO, BAKUNA KASUWAR DAN BAKURA, KASUWAR DAN BAKURA BAKURA KASUWAR DAN BAKURA BAKURA KASUWAR DAN BAKURA BAKU | YANKUKA, YARIMAN BAKURA HOSPITAL, WATER BOARD & GOVERNMENT HOUSE GUSAU | NIA GUSAU ALONG SAMARU | ZAKIA DAM SHIKA VILLAGE, SANYOGHURT SABI & DOGARAWA | KAITA& PENECILLES RABAH ROAD | WATER BOARD INTAKE RABAH ROAD, ANGEL GUARDING RABAH ROAD, ROYAI HOTET BY ISA | UNTI NACACO PAN DRIVE LIMITED WIRE DECON KATIRA | UNIVERSITY BIRNIN KEBBI | KADUNA DISEASE CONTROL CENTRE, CU VENTURE ALONG NNAMDI AZIKWUWE, GONIN GORA, KADUNA -ABUJA EXPRESS WAY | COMPANY,TOP GALAXY,REG-VIEWEND HOTEL | JAJI AND KATABU INJECTION SUBSTATION | BYE PASS, TETRAA FILLING STATION(FORMERLY GIL), UNITY PLAZA, MAMIYA OIL, HARCO RICE LIMITED, URWA HOUSE, GT BANK, NAMAGIRA | NEPA QUARTERS. A & G COLLEGE OF HEALTH TECHNICIONAL STEEL CONTROLL STEEL STEE | HULHULDE INVESTMENT, DABOL NIG LTD, NALMACO- CHIKAJI INDUSTRIAL LAYOUT ZARIA. | ARKILLA BINJI QUARTERS, ANHASS PLASTIC, FARFARU INJECTION SUBSTATION | HYBRID FEED, OLAM, PLASTIC & KADUNA -ABILIA EXPRESSWAY | KEKE RICE, SHUKURA HOTEL WATERBOARD, GIGINYA HOTEL | LIVING FAITH CHURCH BARNAWA KADI NIA | NAME OF MAJOR STREETS SERVED BY THE FEEDER |
| 16 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 70 | 30 | 20 | 20 | 20 | 20 | 20 | 02 | 20 | 20 | 20 | DUKATION (HRS) | MIN. SUPPLY |



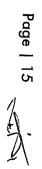
| | 2 | 2 2 | 100 | 00 | 98 | 97 | 96 | 95 | 94 | 2 2 | 23 72 | 3 : | <u>•</u> | 90 | 89 | 88 | 8 | a a | 8 8 | 84 | | 83 | 82 | 81 | 80 | 79 | 78 | 77 | 76 | ì | 75 | 74 | s× |
|---|----------|--|-------------------|------------------------------|--------------------|---|---|---|---|-----------|-----------------|--------------------|--|--|---|--|--|----------------------------------|---|---|--|---|--|------------------------------------|---|------------------|---|--|---|--------------------|---------|--|-----------------------|
| 0 | | , c | 7 | י כ | | C | С | n | 0 | |) (| | ر — | C | 0 | C | 0 | |) 0 | C | | ი | 0 | 0 | 0 | n | 0 | n | 0 | c | | C | BAND |
| 11KV DAMBA | 11KV DAM | I IKV COSTAIN | I IKV BARNAWA MKR | 11 CONTRACT | 11KV FIETH CHILKED | 33KV YAWURI | 33KV YABO/SHAGARI | 33KV SOBA | 33KV KWARE/UNIVERSITY | 33KV CCNN | 33KV ARGUNGU | TONY ONGOWAN TELWA | TINGING | 11KV SABON GARIN ZAR | 11KV NORTEX | 11KV NOCACO | 11KV NNPC ZAR | TIKV MC (DEDICATED) | 11KV MANDO ROAD | 11KV KARA | · · · · · · · · · · · · · · · · · · · | 11KV KAKURI | 11KV INDUSTRIAL ZAM | 11KV GRA ZAR | 11KY GRA ZAM | 11KV GRA ARGUNGU | 11KV GASKIYA | 11KV FGGC | 11KY FEDERAL HOUSING | I IKY BULASA | 11000 | 11KV RADO | FEEDER NAME |
| GRID | SI | INDEPENDENCE | KAKURI | MANDO | TAOR 13 | VAIIDI TS | SOKOTO TS | ZARIA TS | SKOTO TS | SKOTO TS | BIRNIN KEBBI TS | BOASTAL | | MAIN OFFICE | KAKURI | PAN | TS | JAJI | MOTHER CAT | EASTERN BYPASS | | KAKIIDI | TSUNAMI | MAIN OFFICE | TSUNAMI | ARGUNGU | KOFAN DOKA | NNPC | GONIN GORA | MECHANICS VILLAGES | FARFARU | LOCATION | DESCRIPTION OF FEEDER |
| DAMBA ESTATE 1&2, MARERI ESTATE, FEDERAL COLLEGE OF EDUCATION TECHNICAL, LALAN, | | COSTAIN QUARTERS, KABALA COSTAIN, AGRIC QUARTERS | KAKURI | FIFTH CHUKKER ALONG JOS ROAD | YAURI | ALITO GUARTERS, AIR-PORT, MILGOMA, TAKATUKU | Allyli Ollantens Alipaget Faciont, PAMBEGUWA AND WUCICIRI | GABARI VILLAGE, MADACHI, SOBA VIII AGE SIINSEED EACTORY BALLAGEOIREA AND THE STREET | KAIKWAIAWA IINIWEDCITY BIINICAYE WALAND | CCNN | BIRNIN KEBBI TS | CORRECTION CENTRE | INCWAN SINDAY INCAMANA, JANAWA, JUSHI AND U/GORO | SARON CAR HOLDER MARKEI, KARUKI JEXIILE ROAD, DIC ROAD | KIIBMIN OWARI MONDAY HARKET KAKIRITETETETETETETETETETETETETETETETETETET | UNGUWN TAKE LINGLIWAN MISSION KIRIKANIYAS ANIAMO AND LUKUK | HANWA ROCK ROAD DANI MAGAIL CONTAIN CANDER AND THEFT | MILITARY CANTONMENT IA II KADINA | MANDO ROAD, ASHEHU ROAD, LAYIN SARKI, MSHELIA STREET, STERLING ROAD AND ASSALAMUALIAKUM | AREA AND BEHIND OANDO AREA BIRNINKEBBI, SOME PART OF AHMADU BELLO WAY AREA BIRNINKEBBI | AIRFORCE ROAD & MAKERA MAIN ROAD & KAKURI GENERAL PUMP | KAKURI, KURMIN GWARI, PART OF TIRKANIYA. KAKURI GRA KAKURI BI BIIST STOB KAKURI | STATE LOWCOST MANGORODA VENDASAY SUEBII BANKA ILICAMAZA AND SILICAMA | GRA ZARIA RAHWAY OHADTERS DOCABAWA | BARAKAII AHII INVESMENT HOLIGE 198 SECRETARIA | | TUDUN JUKUN, TUKUR TUKUR. MAGUME GASKIYA LAYOUT KWABIN DANGOMA AND TOOK | GIDAN DAWA NNPC MAHIJTA FERMA AND ECCO | FEDERAL HOUSING, GOVERNMENT LAND, KARA TUDU, UNGUWAN BIJE, UNGUWAN ROMI | MECHANICS VILLAGES | | NAME OF MAJOR STREETS SERVED BY THE FEEDER | |
| 0 00 | 0 | 0 0 | α 1 | 19 | 12 | 12 | 12 | 12 | 12 | 10 | วี | 12 | 12 | 12 | 12 | 12 | 12 | | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | 13 | 12 | 19 | MIN. SUPPLY DURATION (HRS) | |



| s> | S/N BAND | | DESCRIPTION OF FEEDER | | |
|---------|----------|-------------------------------|-----------------------|---|-------------|
| 13 | , ! | | LOCATION | NAME OF MAJOR STREETS SERVED BY THE FEEDER | MIN. SUPPLY |
| <u></u> | - C | 11KV DIIBRAWA | KATABU | DANKANDE VILLAGE, RIGACHUKUN VILLAGE, HAYIN MAMADI, | 8 |
| 105 | | 11KV CBA JECA | GAGI | GAGI | 88 |
| ; [: | 十 | 11KV KAFANCHAN | JEGA | GRA JEGA, NIIMA FILLING TSAKUWA | 8 |
| 106 | 0 | (TOWNSHIP) | KAFANCHAN | KAFANCHAN | 0 |
| 107 | | 11KV KANTA | ARGUNGU | | |
| 801 | 0 | 11KV KAWO | KAWO | KAWO MADET AND | 8 |
| 109 | D | 11KV KOFAN KIBO | KOFAN DOKA | KOFAN JATAH HIJIMA HIJAHAH HIJEATIKA KOFAN KIDO AND | 8 |
| 110 | 0 | 11KV KURMIN MASHI | ABAKPA | KURMIN MASHI VIII AGE BABT OF ABARDA VIII AGE SIGNIA AND SALMANDUNA | 8 |
| = | D | 11KV MABERA | GUSAU ROAD | TENTION VILLAGE, KURMIN MASHI NEW EXTENTION | 8 |
| 112 | o | 11KV MAHUTA | UNGUWAN DOSA | | 8 |
| 113 | D | 11KV MERA | GARKUWA | ONGOWAN GADO | 8 |
| 114 | U | 11KV NASSARAWA KBI | MECHANICS VILLAGE | HALIDII ARDII BAGIN ATIKI BELINDA DA D | 8 |
| 115 | 0 | 11KV NASSARAWA MKR | KAKURI | , NAI 174 A | & |
| 116 | D | 11KV NDA | ABAKPA | NDA OID SITE II/KANIAWA II/SUANII ABAKKA CIII-DE COLORI | 8 |
| 117 | D | 11KV NTA SOK | RINJIN SAMBO | ABANKI OF HAYIN BANKI | æ |
| 118 | D | 11KV RABAH ROAD | ABAKPA | ADAVDA | 8 |
| 119 | 0 | 11KV RAFIN GUZA | UNGUWAN DOSA | DATING ITA VIII AGENTA | 8 |
| 120 | D | T1KV SABON GARIN JEGA | JEGA | SARON CABIN FADA TODOS AND HAYINKOGI | & |
| 121 | D | 11KV SAMARU | SHIKA | SABON GAKIN FADA, DODUKU AND WADATA | 8 |
| 122 | D | 11KV SHIKA | SHIKA | AII GOMA NASABAWAND, HAYIN DOGO, IDC, GANGA UKU. | 8 |
| 123 | D | 11KV TEACHING HOSPITAL ZAR | KOFAN DOKA | TUDUN WADA, BANZAZZAU, JUSHI, GYALLESU, FILIN MAALLAWA AND PAMPON GWAIRA | 8 |
| 124 | D | 11KV TUDUN WADA KBI | FADAMA | OLD TOWN, MALALA QUARTERS, OLD PRISON, TARASA TOWN, KEBBI STATE WATER BOARD | 0 |
| 125 | D | 11KV TUDUN WADA ZAM | POWER HOUSE | SHEHU IDRIS, ZONAL EDUCATION MAI GEMILES AND PRESSURE | C |
| 120 | י | 11KV VILLAGE | NARAYI | NARAYI | ο |
| | ם וי | 11KV WATERWORKS SOK | GAGI | WATER WORKS SOKOTO | 0 0 |
| 128 | D | 11KV WUSASA | KOFAN DOKA | GWARGWAJE, LOW COST, KOFAN, GAYAN, KINSEA, KALIBA, AND KOFAN, KOKA | 8 |
| 129 | 0 | 11KV YANTUKWANE | KINKINAU | | 8 |
| 130 | 0 | 11KV YAURI | YAURI | AVIDA | 8 |
| 131 | D | 11KV YELWA | YAURI | VALID | æ |
| 132 | 0 | 11KV ZARIA CITY | KOFAN DOKA | KOFAN DOKA, LEMU, KWARRAI, MAGA IIVA, AMARII, BARRAI, TOOTO | 8 |
| 133 | D | 11KV ZARIA ROAD | KAWO | | ∞ α |
| | | | | TO NOTICE A PERSON | , |



| A A | ZARIA TS | ZARIA TS | 33KV KUDAN | ш | 166 |
|----------------|---|-----------------------|--------------------------|-----------|-------|
| 4 | VALIBLITS VALIBLITS | YAURI TS | 33KV KOKO | m | 65 |
| 4 | RIRNIN KERRI TO | BIRNIN KEBBI TS | 33KV KAMBA | - | 1 04 |
| . 4 | BIRNIN KERRI | BIRNIN KEBBI | 33KV BUNZA | п | 160 |
| . 4 | TAGINA | TAGINA | 33KV BIKNIN GWARI | n n | 1 62 |
| 4 | BIRNIN KEBBI TS | BIRNIN KEBBI TS | SONY ALIERO | n r | 163 |
| 4 | KINKINAU | KINKINAU | 33KV AHERO | 77 r | 161 |
| 4 | MOGADISHU | MOGADISHU | 11KV IINCIIWANI WADA RIG | m 1 | 160 |
| | BIRNIN KEBBI ROAD | DIKININ NEBBI KOAD | 11KV TIIDIINI WADA BIO | П | 159 |
| 4 | GUSAU ROAD | BIBNIN KERRI ROLL | 11KV TOWN | П | 158 |
| A | TAMBUWAL | CHEAH POAR | 11KV SUITAN PALACE | ш | 157 |
| 4 | UNGUWAN BORO | TA MENTAL BORO | I IKV SARKIN FADA | т | 156 |
| 4 | JEGA | LINGUWAN BOBO | 11KV SABON TASHA | ш | 155 |
| 4 | UNGUWAN BORO | JEGA JONO | 11KV SABON GARIN ZAM | Е | 154 |
| 4 | ZURU | UNGUWAN BORO | 11KV SABON GARIN RIG | m | 153 |
| 4 | ONGOWAIN BORO | ZURU | 11KV RIKOTO/ZURU | m | 152 |
| 4 | INCINANT POPO | UNGUWAN BORO | 11KV PAMA | П | 5 |
| 4 | KAROBO | KAGORO | 11KV MANCHOK | 1 17 | : i o |
| 4 | RIGASA | RIGASA | I IKV MAKARFI ROAD | 1 17 | 150 |
| , 4 | MAKARFI | MAKARFI | TINY MANAKE | n r | 1/0 |
| • | ILLELA ROAD | ILLELA KOAD | 11KV MAKAREI | 771 | 148 |
| 4 | KATABU | 33.780 | 11KV KHEPPERS | П | 147 |
| 4 | KAGORO | KATABII | 11KV KATABU | т | 146 |
| 4 | JAJI | KAGORO | 11KV KAGORO | m | 145 |
| 4 | IAMBUWAL | JAJI | 11KV JAJI | m | 144 |
| 4 | TAMPINAL | TAMBUWAL | 11KV ILLELA ROAD | т | 143 |
| 4 | | RIGASA | 11KV HAYIN RIGASA | ITT | 142 |
| 4 | IIIFI A ROAD | ILLELA ROAD | 11KV DIORI HAMMANI | 1 /11 | 1 6 |
| 4 | STOREDAY | KUDENDAN | 11KV CHELCO | m | 140 |
| 4 | BII) IZA | BUNZA | I IKY BUNZA | П | 107 |
| 4 | BIRNIN GWAR | BIRNIN GWARI | I KV BIRNIN GWARI | ת וו | 130 |
| 4 | ZURU | ZURU | TINY BANKACKS LURO | ון ד | 130 |
| | RIGASA | NIGAGA | 11KV BARBACKS 71IBII | m | 137 |
| œ | DANKURE, TSAMIYAR DANSISI, KWANAR KALGO, RAKUWA | DIO ACA | 11KV ASIKOLAVE | m | 136 |
| 8 | TALATA MAFARA TOWN, GURBI VILLAGE RICE MILI YARIMA BAKIN ZAZZI AIBSBACE DAGIN | TALATA MAFARA TS | 33KV MAFARA | ס | 135 |
| DURATION (HRS) | KALGO TOWN MAIYAMA TOWN JEGA METROPOLY & BACKLEY TOWN | BIRNIN KEBBI TS | 33KV JEGA | 0 | 134 |
| MIN. SUPPLY | NAME OF MAJOR STREETS SERVED BY THE FEEDER | LOCATION | HEEDER NAME | JAN DAIND | 3 4 |
| | | DESCRIPTION OF REFORD | 77777 | | クラ |



| 1/2 | <u>;</u> ; | 171 | 170 | 107 | 1 2 | 168 | : | 167 | 1 . | S | |
|--|-------------------|------------|-----------------|-----------------|----------|-------------|--------------|--------|--|-----------------------|--|
| т 1 | ייי וייי ז ה | n | <u>о</u> п | 7 | יי | т | | 7 E | | S/N BAND | |
| 33KV NNPC GUSAU | 33KV NNPC GUSAU | | 33KV 7HBH | 33KV TAMBUWAL | | 33KV NGASKI | 33KV MAKARFI | | | | |
| GUSAU TS | GUSAU TS | TAURITS | VALID 10 | BIRNIN KEBBI TS | 100N 10 | YALIDI TS | ZARIA IS | 4.7. | LOCATION | DESCRIPTION OF FEEDER | |
| GIGINYA HOTELKK RICE CBN CHATTERN HOTISE SOLVETO WATER TO TO THE SOLVETO THE SOLV | Glickling | YAURI TS 4 | BIRNIN KEBBI TS | 4 | YALIRITS | LARIA IS | | | NAME OF MAJOR STREETS SERVED BY THE FEFTER | | |

| • | age | |
|---|-----|---|
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