



ORDER/NERC/205/2020

**BEFORE THE NIGERIAN ELECTRICITY REGULATORY COMMISSION  
IN THE MATTER OF THE EXTRAORDINARY REVIEW OF MULTI YEAR TARIFF ORDER 2015  
FOR KADUNA ELECTRICITY DISTRIBUTION PLC**

**TITLE**

1. This regulatory instrument may be cited as **MULTI YEAR TARIFF ORDER (MYTO) 2020 for Kaduna Electricity Distribution Plc.**

**COMMENCEMENT**

2. This Order shall take effect from 1<sup>st</sup> September 2020 and shall cease to have effect on the issuance of a new Minor Review Order or an Extraordinary Tariff Review Order by the Nigerian Electricity Regulatory Commission ("NERC" or the "Commission").

**CONTEXT**

3. The Commission has reviewed an extra-ordinary tariff review application filed by Kaduna Electricity Distribution Plc ("KAEDCO") seeking approval to review its end user tariffs taking into account the impact of inflation, foreign exchange and its investment plan towards improving service to customers.
4. The Commission, pursuant to sections 32 and 76 of the Electric Power Sector Reform Act ("EPSRA"), issued the MYTO – 2015 Tariff Order in December 2015 to address, amongst other objectives, the provision of cost-reflective tariffs thus ensuring that prices charged by licensees are fair to consumers and are sufficient to allow licensees that operate efficiently to recover the full cost of their activities, including a reasonable return on the capital invested in the business.
5. Section 6 of the MYTO Methodology (Amended) provides for the biannual minor review of the tariffs taking into consideration changes in exogenous variables outside the control of operators in the Nigerian Electricity Supply Industry ("NESI"). These variables are the Nigerian and United States inflation rates, NGN/USD foreign exchange rates, gas prices and available generation capacity.
6. Section 9(c) of the "Regulations on Procedure for Electricity Tariff Reviews in the Nigerian Electricity Supply Industry" provides the basis upon which the Commission may accept applications for the conduct of extraordinary tariff reviews.
7. The Commission has reviewed the application filed by KAEDCO taking into consideration the outcome of public consultations held in February - March 2020 and approved end-user tariffs for the period 1<sup>st</sup> September 2020 to 30<sup>th</sup> June 2025. This Order reflects the impact



of changes in macroeconomic parameters on KAEDCO's revenue requirement and a revised tariff design that aligns rates paid by customers with the quality of service as measured by average availability of power supply over a one-month period. This Order takes cognisance of the varying levels of infrastructural development of the utility's network that is directly attributable to the level of investment which results in customers enjoying different levels of supply in the same network and further seeks to incentivise utilities to invest across their entire networks thus ensuring that the rates paid by customers is aligned with service improvements.

8. KAEDCO is hereby directed to continue engagement with their customers through all mediums of public consultations on guaranteed levels of quality of electricity supply on the basis of monthly average hours of supply per day.
9. Pursuant to the objective of incentivising a continuous improvement of service for all customers, **there shall be no tariff reviews for customers experiencing an average power supply availability of less than 12-hours per day over a period of one month.**
10. Unmetered customers within service bands A, B and C thus benefitting from a supply availability in excess of an average of 12hrs per day over a period of one month as affected by this tariff Order shall be protected by the provisions of "Order on the Capping of Estimated Bills in the NESI" and the FGN intervention on accelerated metering of all customers.
11. The Commission hereby orders that KAEDCO shall continue to maintain the lifeline tariff of NGN4.00/kWhr for all customers consuming less than 50kWhrs of energy per month as a safeguard for the less privileged members of the society.

## OBJECTIVES

### 12. This Order seeks to:

- a. Ensure that prices charged by KAEDCO are fair to customers and are sufficient to allow KAEDCO to fully recover the efficient cost of operation, including a reasonable return on the capital invested in the business pursuant to the provisions of Sections 32(d) and 76(2)(a) of EPSRA.
- b. Provide a path to a transition to fully service-based cost-reflective tariffs by July 2021.
- c. Reclassify and disaggregate customers and customer clusters on the basis of KAEDCO's commitment on quality of service to customer clusters.
- d. Ensure that customer tariffs are commensurate and aligned with the quality and availability of power supply committed to customer clusters by KAEDCO.
- e. Ensure sustained improvement in reliability and quality of supply by incentivising KAEDCO to off-take energy in accordance with its Vesting Contract and MYTO load allocation.
- f. Provide a framework for settlement of imbalances between TCN and KAEDCO on delivery and off-take of available energy in accordance with the Market Rules, Vesting Contracts and other industry documents.





- g. Provide a framework that ensures customer tariffs are consistent with the services they receive from KAEDCO.
- h. Develop and implement a framework for enforcing market discipline in respect of market remittances and managing future revenue shortfalls in the industry including a minimum market remittance requirement to account for differences between cost-reflective tariffs and allowed tariffs in the settlement of invoices issued by the Nigerian Bulk Electricity Trading Plc (“NBET”) and the Market Operator (“MO”).
- i. Support the interim arrangements for payments to the electricity market and reaffirm the payment securitisation requirement and flow of funds from KAEDCO to NBET and MO.

## BASIS FOR THE REVIEW

### 13. Change in Rate Design

Pursuant to the outcome of the public hearings held in February/March 2020 on the extraordinary tariff application filed by KAEDCO, the Commission directed the utility to adopt a revised rate design that aligns tariffs with service level experience of customers in different clusters/locations. Upon evaluation of KAEDCO’s application, the Commission considered and approved five (5) tariff ‘Service Bands’ representing relative quality of service experience as measured by the committed minimum average hours of supply per day over a period of one month, interruptions (frequency and duration), service voltage levels and a number of other service parameters. These service bands are further subdivided into tariff classes as follows:

- (i) Non-Maximum Demand (Non-MD).
- (ii) Low voltage Maximum Demand (MD 1).
- (iii) Medium/High voltage Maximum Demand (MD 2).
- (iv) Lifeline tariff class (R1) (for consumption of not more than 50kWh/month).

Table – 1 below is a comparative analysis of the new and old tariff classes:

**Table – 1: KAEDCO Tariff Classification**

| Service Bands                      | New Tariff Class | Old Tariff Class                        |
|------------------------------------|------------------|---|
| <b>Lifeline</b>                    | R1               | R1                                      |
| <b>A</b><br>(minimum of 20hrs/day) | A – Non-MD       | R2, C1, D1, A1 (single and three phase) |
|                                    | A – MD 1         | R3, C2, D2, A2 Street Light             |
|                                    | A – MD 2         | R4, C3, D3, A3                          |
| <b>B</b><br>(minimum of 16hrs/day) | B – Non-MD       | R2, C1, D1, A1 (single and three phase) |
|                                    | B – MD 1         | R3, C2, D2, A2 Street Light             |
|                                    | B – MD 2         | R4, C3, D3, A3                          |
| <b>C</b><br>(minimum of 12hrs/day) | C – Non-MD       | R2, C1, D1, A1 (single and three phase) |
|                                    | C – MD 1         | R3, C2, D2, A2 Street Light             |
|                                    | C – MD 2         | R4, C3, D3, A3                          |
| <b>D</b><br>(minimum of 8hrs/day)  | D – Non-MD       | R2, C1, D1, A1 (single and three phase) |
|                                    | D – MD 1         | R3, C2, D2, A2 Street Light             |
|                                    | D – MD 2         | R4, C3, D3, A3                          |
| <b>E</b><br>(minimum of 4hrs/day)  | E – Non-MD       | R2, C1, D1, A1 (single and three phase) |
|                                    | E – MD 1         | R3, C2, D2, A2 Street Light             |
|                                    | E – MD 2         | R4, C3, D3, A3                          |



KAEDCO shall be liable for service improvements in accordance with commitments under its universal service obligations for providing electricity supply to customers. Attached herewith as Appendix 2 are details of the service improvement commitments made by KAEDCO to customers in various tariff bands for the period 1<sup>st</sup> September 2020 to 31<sup>st</sup> December 2021.

#### 14. Capital Expenditure (“CAPEX”) Plan

KAEDCO has applied to the Commission for an upward review of the CAPEX provisions in its tariffs to support the implementation of its Performance Improvement Plans (“PIP”) over the next 5 years. Pursuant to the request, the Commission has shared a CAPEX Request Template with KAEDCO as a guide for a revised submission to qualify for consideration in the tariffs. Accordingly, the rates as contained in this Order and valid to December 31, 2020 are based on current CAPEX provision as contained in MYTO-2015 Order, with necessary adjustments for changes in relevant macroeconomic indices. Any verified and approved investments beyond the CAPEX allowances during this period shall be recognised and applied in the Tariff Order commencing on 1<sup>st</sup> January 2021. CAPEX review proposals for the period 2021 – 2025 shall be evaluated and upon approval applied in the Tariff Order commencing on 1<sup>st</sup> January 2021.

#### 15. MYTO Load Allocation

The current MYTO load allocation to DisCos was presented as a subject matter for consultation during the public hearings in consideration of the applications for extraordinary tariff review. Several DisCos and the Transmission Company of Nigeria Plc (“TCN”) consider the current MYTO Load Allocation as sub-optimal, given the changes that have occurred in load growth and capacities of the transmission and distribution networks. However, a full justification for a holistic review of the MYTO load allocation could not be established during this Extra-Ordinary Tariff Review process. Accordingly, the Commission orders that the current MYTO load allocation shall be maintained for the purpose of computing the relevant tariffs of all DisCos.

#### 16. Tariff Assumptions

Pursuant to the provisions of the MYTO Methodology and the Regulation on Procedure for Electricity Tariff Review in NESI, Table 2 below provides the key indices considered in evaluating the tariff application by KAEDCO in this Extraordinary Tariff Review process. The projected parameters in this Order shall be reviewed and retrospectively adjusted during the December 2020 Minor Review of Tariffs to align the assumptions with actuals.

- a. **Nigerian rate of inflation:** The Nigerian rate of inflation for July 2020 as obtained from the National Bureau of Statistics (NBS) was 12.82%. This rate was adopted to project Nigerian inflation rates for year 2020 and beyond.
- b. **Exchange Rate:** In accordance with the provisions of the MYTO Methodology, CBN official exchange rates were used in this review. The MYTO - Methodology provides for a premium of 1% above the CBN rate as transaction cost and this was applied in the current review. The applicable NGN/USD exchange rate for the period





September 01, 2020 and beyond is computed as NGN380 +1% premium = NGN383.80.

- c. US rate of inflation: Based on the data obtained from the website of the United States Bureau of Labor Statistics (<http://www.bls.gov>), the US inflation rate for the month of July 2020 was 1.0%. This rate was adopted for the purpose of this review to project US Inflation rates for year 2020 and beyond.
- d. Gas Price: The price of natural gas for the power sector has been regulated since the inception of MYTO in 2008. The Commission has maintained the gas price of US\$2.50/MMBTU and gas transportation cost of US\$0.80/MMBTU for this review. Other grid connected generation companies with contracted gas prices outside the regulated rates and as provided in their respective Gas Sale Agreements (“GSAs”) are also provided for in the MYTO model as a pass-through cost.

**Table – 2: Key Indices Considered in Evaluating KAEDCO Application**

| Parameter                               | Sep – Dec 2020 | Jan – Jun 2021 | Jul – Dec 2021 | Jan – Dec 2022 |
|---|----------------|----------------|----------------|----------------|
| Nigerian Inflation                      | 12.82%         | 12.82%         | 12.82%         | 12.82%         |
| Exchange Rate (₦/US\$)                  | 383.8          | 383.8          | 383.8          | 383.8          |
| US Inflation                            | 1.00%          | 1.00%          | 1.00%          | 1.00%          |
| Sent out Generation (MWh/h)             | 4,646          | 4,974          | 4,974          | 5,325          |
| Weighted Generation Price (₦/kWh)       | 25.6           | 25.6           | 25.6           | 25.6           |
| TCN and Admin Charge (₦/kWh)            | 7.8            | 8.3            | 8.3            | 8.2            |
| Delivered to KAEDCO (MWh/h)             | 320            | 344            | 344            | 370            |
| ATC&C Losses                            | 20.12%         | 12.47%         | 12.47%         | 7.73%          |
| End-use Cost-reflective Tariffs (₦/kWh) | 57.22          | 53.99          | 53.99          | 51.13          |
| End-use Allowed Tariffs (₦/kWh)         | 50.05          | 50.05          | 53.99          | 51.13          |
| Tariff Shortfall (₦/kWh)                | 7.17           | 3.94           | -              | -              |



**17. Approved End-user Tariffs Effective from 1<sup>st</sup> September 2020**

Pursuant to KAEDCO's application for extraordinary tariff review and consistent with paragraph 13 of this Order, the Commission considered and approved the tariffs in Table-3A below with effect from 1<sup>st</sup> September 2020 and shall remain in force until the issuance of a new Minor Review Order or an Extraordinary Tariff Review Order by the Commission.

**Table – 3A: Approved End-user Tariffs (₹/kWh) for KAEDCO**

| Tariff Class   | Sep – Dec 2020 | Jan – Jun 2021 | Jul – Dec 2021 | Jan – Dec 2022 | Jan – Dec 2023 | Jan – Dec 2024 | Jan – Dec 2025 |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Life-line (R1) | 4.00           | 4.00           | 4.00           | 4.00           | 4.00           | 4.00           | 4.00           |
| A - Non MD     | 56.31          | 56.31          | 62.53          | 59.22          | 59.10          | 57.75          | 56.74          |
| A - MD1        | 61.54          | 61.54          | 67.52          | 63.94          | 63.82          | 62.35          | 61.26          |
| A - MD2        | 66.42          | 66.42          | 70.30          | 66.58          | 66.45          | 64.92          | 63.79          |
| B - Non MD     | 54.11          | 54.11          | 55.16          | 52.24          | 52.14          | 50.94          | 50.06          |
| B - MD1        | 58.92          | 58.92          | 61.84          | 58.56          | 58.45          | 57.11          | 56.11          |
| B - MD2        | 61.48          | 61.48          | 64.65          | 61.22          | 61.10          | 59.70          | 58.66          |
| C - Non MD     | 50.10          | 50.10          | 51.39          | 48.67          | 48.58          | 47.46          | 46.64          |
| C - MD1        | 51.25          | 51.25          | 58.44          | 55.35          | 55.24          | 53.97          | 53.03          |
| C - MD2        | 53.81          | 53.81          | 61.36          | 58.11          | 58.00          | 56.67          | 55.68          |
| D - Non MD     | 38.47          | 38.47          | 43.44          | 41.14          | 41.06          | 40.12          | 39.42          |
| D - MD1        | 42.90          | 42.90          | 48.93          | 46.34          | 46.25          | 45.19          | 44.40          |
| D - MD2        | 45.28          | 45.28          | 51.64          | 48.91          | 48.81          | 47.69          | 46.86          |
| E - Non MD     | 33.80          | 33.80          | 38.17          | 36.15          | 36.08          | 35.25          | 34.64          |
| E - MD1        | 42.90          | 42.90          | 48.93          | 46.34          | 46.25          | 45.19          | 44.40          |
| E - MD2        | 45.28          | 45.28          | 51.64          | 48.91          | 48.81          | 47.69          | 46.86          |



## 18. Tariff Freeze for Customers in Bands D and E

Following consultations and directions on tariff policy, the Commission hereby approves a deferment of the applicable tariffs for customers in service bands D and E (that is customers with a service commitment of less than an average of 12-hours supply per day over a period of one month for the period 1<sup>st</sup> September 2020 to 1<sup>st</sup> January 2021. Accordingly, KAEDCO shall continue to charge customers in Bands D & E the tariffs applied prior to this Order as provided in Table – 3B below and shall only be allowed to charge the approved tariffs in this Order upon investments that improve quality of service experience thus migrating customers to higher service bands or another Order of the Commission.

**Table – 3B: Applicable Tariffs for Customers in Bands D and E**

| Old Tariff Class | R1        | R2-SP  | R2-TP  | R3    | R4    | C1     | C2    | C3    | D1     | D2    | D3    | A1     | A2    | A3    | L1    |
|------------------|-----------|--------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|-------|
| Rate (N/kWh)     | 4.00      | 26.37  | 28.05  | 42.74 | 45.76 | 31.20  | 37.88 | 44.22 | 36.95  | 39.13 | 44.22 | 33.17  | 38.56 | 39.13 | 30.30 |
| New Category     | Life-Line | Non-MD | Non-MD | MD-1  | MD-2  | Non-MD | MD-1  | MD-2  | Non-MD | MD-1  | MD-2  | Non-MD | MD-1  | MD-2  | MD-1  |

## 19. Service Band Adjustment

Where there is a failure to deliver on committed service level by KAEDCO over as evaluated over a period of 60 days, rates payable by all customers in the affected load cluster shall be retroactively adjusted in line with the quality of service delivered over the same period, upon verification by the Commission.

## 20. Minimum Remittance Threshold for September – December 2020:

The Power Sector Recovery Plan (“PSRP”) provides for a gradual transition to cost-reflective tariffs with safeguards for the less privileged in the society. The Federal Government, under the PSRP Financing Plan, has committed to fund the revenue gap arising from the difference between cost reflective tariffs determined by the Commission and the actual end-user tariffs during the transition to cost-reflective tariffs. The waterfall of market revenues during the transitional period shall be -

- a. All DisCos are obligated to settle their market invoices in full as adjusted and netted off by applicable tariff shortfall approved by the Commission.
- b. In the determination of compliance with the minimum remittance threshold in this Order, the Commission shall consider verified receivables from MDAs for the settlement period and DisCo’s historical collection efficiency for MDAs.
- c. All FGN intervention from the financing plan of the PSRP for funding tariff shortfall shall be applied through NBET and MO to ensure 100% settlement of market invoices as issued by Market Participants.



- d. Under this framework, the minimum market remittance threshold for KAEDCO is determined after deducting the revenue deficit arising from tariff shortfall from the aggregate NBET and MO market invoices. KAEDCO shall be availed the opportunity to earn its revenue requirement only upon fully meeting the following payment obligations:
- i. Repayment of CBN-NEMS facility.
  - ii. 100% settlement of MO's invoice.
  - iii. Full settlement of 68.7% of NBET's monthly invoices being the minimum remittance threshold prescribed in this Order.
- e. KAEDCO shall be liable to relevant penalties/sanctions for failure to meet the minimum remittance requirement in any payment cycle in accordance with the terms of its respective contracts with NBET, MO and the provisions of the Market Rules and Supplementary TEM Order.
- f. KAEDCO shall maintain an adequate and unencumbered letter of credit covering three (3) months of the minimum payment obligations to NBET and MO in accordance with the provisions of the Market Rules and Market Participation Agreement.
- g. Where KAEDCO is unable to comply with its minimum remittance threshold to the market prescribed in this Order from its operations as a utility, the company may seek external financing under the CBN intervention to cover the payment deficit but subject to the following conditions:
- (i) A submission to the Commission providing details of the market remittance ramp up period, lenders term sheet, draw down period, moratorium (where applicable) and the repayment period of the loan.
  - (ii) The terms and conditions for the financing of the remittance shortfall shall be mutually agreed between KAEDCO and the lenders and filed with the Commission.
  - (iii) The submission to the Commission, no later than two (2) weeks from the effective date of this Order, of the utility's financial model covering the remittance ramp up period and projections for the repayment of the external financing.

## CAPACITY PAYMENT

21. The average tariff for KAEDCO was determined considering the projected energy offtake of the company based on its percentage load allocation in the Vesting Contract. NBET shall continue to invoice KAEDCO for capacity charge and energy based on its load allocation and metered energy respectively in accordance with the December 2019 Minor Review of MYTO-2015 and Minimum Remittance Order for Year-2020.
22. Where it is established that TCN is unable to deliver KAEDCO's load allocation, TCN shall be liable to pay for the associated capacity charge. Where KAEDCO fails to take its entire load allocation due to constraints in its own network, KAEDCO shall be liable to pay the capacity charge as allocated in its Vesting contract. Table 4 provides the minimum market remittance threshold for KAEDCO, with an effective date of 1<sup>st</sup> September 2020:





**Table – 4: Minimum Remittance Threshold for September – December 2020**

| <b>KAEDCO's Minimum Remittance Table - September 2020 - December 2020</b> |                                 |                  |  |
|---|---------------------------------|------------------|--|
| <b>Head</b>   | <b>Subhead</b>                  | <b>N,000,000</b> | <b>Remarks</b>   |
| <b>Revenue Required</b>   | <b>NEMSF</b>                    | <b>1,008</b>     | CBN - Loan   |
|   | <b>Genco Invoice</b>            | <b>23,952</b>    | Projected Generation cost  |
|   | <b>TCN &amp; Admin Services</b> | <b>7,264</b>     | Projected TCN and Admin Services cost  |
|   | <b>Disco</b>                    | <b>10,499</b>    | Approved recovery of capital and operating expenses  |
|   | <b>Total</b>                    | <b>42,723</b>    | <b>Total Revenue Required</b>  |
| <b>Allowed Recovery</b>   |                                 | <b>35,222</b>    | 82% Being Amount recoverable through allowed end-user tariffs of Kaduna Electric in 2020   |
| <b>Tariff Shortfall</b>   |                                 | <b>7,501</b>     | 18% Being the difference between Kaduna Electric's revenue requirement and its allowed recovery  |
| <b>Minimum Remittance Obligation</b>                                      | <b>NEMSF</b>                    | <b>1,008</b>     | 1st - Line Charge on Collection as per loan Agreement  |
|   | <b>NBET Minimum Remittance</b>  | <b>16,451</b>    | Being Minimum Remittance Obligation of 68.7% of NBET's Monthly Invoices for September to December 2020. Full settlement to be supplemented by the FGN intervention funds.        |
|   | <b>MO Minimum Remittance</b>    | <b>7,264</b>     | Being Minimum Remittance Obligation of 100% of MO's monthly Invoices of September to December 2020.  |
|   | <b>Disco</b>                    | <b>10,499</b>    | Being opportunity availed the DisCo to earn its revenue requirement based on its efficient operations and upon full settlement of the minimum remittances to NEMSF, NBET and MO. |
|   | <b>Total Distribution</b>       | <b>35,222</b>    |  |

**EFFECTIVE DATE**

**23. This Order shall be effective from 1st September 2020.**

Dated this 27<sup>th</sup> day of August 2020

**James A. Momoh  
Chairman**

**Dafe C. Akpeneye  
Commissioner**



**Appendix – 1: KAEDCO's Customer Classifications**

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



Appendix – 2: KAEDCO's Service Level Commitments

| Service Level Proposal for Period-1: Sep - Dec 2020 |                          |                                      |  |   |  |   |                            |                                      |  | Service Level Proposal for Period-2: Jan - Jun 2021 |  |   |                            |  |
|---|--------------------------|--------------------------------------|--|---|--|---|----------------------------|--------------------------------------|--|---|--|---|----------------------------|--|
| Band  | Feeder Name              | Average Duration of Supply (Hrs/Day) | Average Frequency of Interruptions Per Day | Average Duration of Interruptions (minutes) | Average Response time to calls (minutes) | Average Response time to resolving complaints (Hours) | Service Voltage Level (kV) | Average Duration of Supply (Hrs/Day) | Average Frequency of Interruptions Per Day | Average Duration of Interruptions (minutes)         | Average Response time to calls (minutes) | Average Response time to resolving complaints (Hours) | Service Voltage Level (kV) |  |
| A   | 11KV KAKURI              | 20                                   | 0.87                                       | 2.73  | 4  | 15  | 10.4                       | 21                                   | 0.70                                       | 2.18  | 2  | 10  | 10.61                      |  |
| A   | 11KV BARNAWA MKR         | 20                                   | 0.86                                       | 2.90  | 4  | 15  | 8.4                        | 21                                   | 0.68                                       | 2.32  | 2  | 10  | 9.61                       |  |
| A   | 11KV NASSARAWA MKR       | 20                                   | 1.32                                       | 2.42  | 4  | 15  | 8.4                        | 21                                   | 1.05                                       | 1.94  | 2  | 10  | 9.62                       |  |
| A   | 11KV NORTEX              | 20                                   | 0.69                                       | 1.73  | 4  | 30  | 10.4                       | 21                                   | 0.55                                       | 1.39  | 2  | 20  | 10.61                      |  |
| A   | 33KV AREWA               | 20                                   | 1.03                                       | 6.28  | 4  | 10  | 9.5                        | 21                                   | 0.83                                       | 5.02  | 2  | 10  | 10.40                      |  |
| A   | 11KV UNGUWAN YELWA       | 20                                   | 1.15                                       | 1.73  | 4  | 15  | 10.1                       | 21                                   | 0.92                                       | 1.39  | 2  | 10  | 10.30                      |  |
| A   | 11KV FEDERAL HOUSING     | 20                                   | 0.86                                       | 2.90  | 4  | 15  | 9.6                        | 21                                   | 0.68                                       | 2.32  | 2  | 10  | 10.40                      |  |
| A   | 11KV GWARI AVENUE        | 20                                   | 0.28                                       | 1.00  | 4  | 15  | 9.9                        | 21                                   | 0.22                                       | 0.80  | 2  | 10  | 10.50                      |  |
| A   | 11KV SUNGLASS            | 20                                   | 0.46                                       | 0.88  | 4  | 15  | 9.6                        | 21                                   | 0.37                                       | 0.70  | 2  | 10  | 10.30                      |  |
| A   | 11KV AREWA BOTTLEERS     | 20                                   | 0.92                                       | 4.16  | 4  | 15  | 9.6                        | 21                                   | 0.73                                       | 3.33  | 2  | 10  | 10.30                      |  |
| A   | 33KV PAN                 | 21                                   | 0.99                                       | 3.14  | 4  | 15  | 32                         | 22                                   | 0.80                                       | 2.51  | 2  | 10  | 32.64                      |  |
| A   | 33KV UNTL (DEDICATED)    | 21                                   | 0.90                                       | 4.80  | 4  | 15  | 32                         | 22                                   | 0.72                                       | 3.84  | 2  | 10  | 32.64                      |  |
| A   | 33KV OLAM                | 21                                   | 0.45                                       | 4.80  | 4  | 15  | 31                         | 22                                   | 0.36                                       | 3.84  | 2  | 10  | 31.62                      |  |
| A   | 11KV VILLAGE             | 20                                   | 1.87                                       | 2.48  | 4  | 15  | 9.5                        | 21                                   | 1.49                                       | 1.98  | 2  | 10  | 10.10                      |  |
| A   | 11KV HIGH COST           | 20                                   | 0.75                                       | 1.32  | 4  | 15  | 9.5                        | 21                                   | 0.60                                       | 1.05  | 2  | 10  | 10.10                      |  |
| A   | 33KV NARAYI VILLAGE      | 21                                   | 1.10                                       | 6.59  | 4  | 15  | 31                         | 22                                   | 0.88                                       | 5.27  | 2  | 10  | 31.62                      |  |
| A   | 11KV PAMA                | 20                                   | 1.03                                       | 2.35  | 4  | 15  | 9                          | 21                                   | 0.82                                       | 1.88  | 2  | 10  | 10.10                      |  |
| A   | 33KV UNGUWAN BORO        | 21                                   | 1.06                                       | 4.51  | 4  | 15  | 31                         | 22                                   | 0.85                                       | 3.61  | 2  | 10  | 31.62                      |  |
| A   | 11KV GOVERNMENT HOUSE KD | 20                                   | 0.55                                       | 3.71  | 4  | 15  | 10.1                       | 21                                   | 0.44                                       | 2.96  | 2  | 10  | 10.30                      |  |
| A   | 11KV POLY ROAD           | 20                                   | 0.12                                       | 0.95  | 4  | 15  | 10.2                       | 21                                   | 0.10                                       | 0.76  | 2  | 10  | 10.40                      |  |
| A   | 11KV LEVENTIS            | 20                                   | 0.97                                       | 5.94  | 4  | 15  | 10.2                       | 21                                   | 0.77                                       | 4.75  | 2  | 10  | 10.40                      |  |
| A   | 33KV MOGADISHU           | 21                                   | 0.61                                       | 1.79  | 4  | 15  | 31                         | 22                                   | 0.49                                       | 1.44  | 2  | 10  | 31.62                      |  |



|   |                            |    |      |      |   |    |      |    |      |      |   |    |       |
|---|----------------------------|----|------|------|---|----|------|----|------|------|---|----|-------|
| A | 11KV WATER RESOURCES RIG   | 20 | 0.65 | 5.94 | 4 | 15 | 10.8 | 21 | 0.52 | 4.75 | 2 | 10 | 11.00 |
| A | 11KV YANTUKWANE            | 20 | 1.01 | 2.92 | 4 | 15 | 10.5 | 21 | 0.81 | 2.33 | 2 | 10 | 10.71 |
| A | 33KV KINKINAU              | 21 | 0.85 | 4.41 | 4 | 15 | 31   | 22 | 0.68 | 3.53 | 2 | 10 | 31.62 |
| A | 33KV AIRPORT ROAD          | 21 | 0.59 | 1.14 | 4 | 35 | 32   | 22 | 0.48 | 0.91 | 2 | 28 | 32.64 |
| A | 33KV RIGASA                | 20 | 1.21 | 5.37 | 4 | 15 | 31   | 21 | 0.97 | 4.30 | 2 | 10 | 31.62 |
| A | 11KV DANKANDE              | 20 | 0.85 | 3.59 | 4 | 15 | 8.6  | 21 | 0.68 | 2.87 | 2 | 10 | 10.10 |
| A | 11KV MC (DEDICATED)        | 20 | 0.99 | 1.13 | 4 | 15 | 8.9  | 21 | 0.79 | 0.90 | 2 | 10 | 10.10 |
| A | 11KV NTA DKA               | 20 | 1.03 | 1.41 | 4 | 15 | 8.9  | 21 | 0.82 | 1.13 | 2 | 10 | 10.10 |
| A | 11KV NAFBASE               | 20 | 0.48 | 1.29 | 4 | 15 | 9    | 21 | 0.38 | 1.04 | 2 | 10 | 10.10 |
| A | 11KV ZARIA ROAD            | 20 | 0.67 | 4.39 | 4 | 15 | 8.9  | 21 | 0.54 | 3.51 | 2 | 10 | 10.10 |
| A | 11KV STATEHOUSE            | 20 | 0.85 | 4.41 | 4 | 30 | 8.9  | 21 | 0.68 | 3.53 | 2 | 20 | 10.10 |
| A | 33KV NAF                   | 21 | 1.29 | 8.38 | 4 | 15 | 32   | 22 | 1.03 | 6.70 | 2 | 10 | 32.64 |
| A | 11KV LEGISLATIVE QUARTERS  | 20 | 0.87 | 1.38 | 4 | 15 | 9.1  | 21 | 0.70 | 1.11 | 2 | 10 | 10.30 |
| A | 11KV ISA KAITA             | 20 | 0.55 | 2.26 | 4 | 15 | 9    | 21 | 0.44 | 1.81 | 2 | 10 | 10.30 |
| A | 11KV AHMADU BELLO WAY      | 20 | 0.41 | 1.79 | 4 | 15 | 10.1 | 21 | 0.33 | 1.43 | 2 | 10 | 10.30 |
| A | 11KV NDA                   | 20 | 0.86 | 2.50 | 4 | 35 | 9    | 21 | 0.69 | 2.00 | 2 | 28 | 10.30 |
| A | 33KV ABAKPA                | 21 | 0.57 | 2.52 | 4 | 15 | 32   | 22 | 0.46 | 2.01 | 2 | 10 | 32.64 |
| A | 33KV JAJI                  | 20 | 0.86 | 2.50 | 4 | 15 | 32   | 21 | 0.69 | 2.00 | 2 | 10 | 32.64 |
| A | 11KV NACB                  | 20 | 0.73 | 0.96 | 4 | 15 | 8.7  | 21 | 0.58 | 0.77 | 2 | 10 | 9.60  |
| A | 11KV UNGUWAN RIMI          | 20 | 1.40 | 4.46 | 4 | 15 | 8.7  | 21 | 1.12 | 3.57 | 2 | 10 | 9.60  |
| A | 11KV DAWAKI                | 20 | 0.86 | 1.20 | 4 | 15 | 8.6  | 21 | 0.69 | 0.96 | 2 | 10 | 9.60  |
| A | 11KV MALALI                | 20 | 1.01 | 5.04 | 4 | 30 | 8.6  | 21 | 0.81 | 4.03 | 2 | 20 | 9.60  |
| A | 33KV WATER WORKS           | 21 | 0.64 | 3.54 | 4 | 15 | 29   | 22 | 0.51 | 2.83 | 2 | 10 | 31.62 |
| A | 11KV TEACHING HOSPITAL DKA | 20 | 0.79 | 2.99 | 4 | 15 | 9.7  | 21 | 0.63 | 2.39 | 2 | 10 | 10.10 |
| A | 11KV CONSTITUTION ROAD     | 20 | 1.32 | 2.34 | 4 | 15 | 9.6  | 21 | 1.06 | 1.87 | 2 | 10 | 10.10 |
| A | 11KV LUGGARD HALL          | 21 | 0.35 | 1.32 | 4 | 15 | 9.2  | 22 | 0.28 | 1.06 | 2 | 10 | 10.10 |
|   | 33KV DOKA                  | 22 | 3.76 | 6.17 | 4 | 15 | 31   | 23 | 3.01 | 4.94 | 2 | 10 | 31.62 |
| A | 11KV GRA ZAR               | 20 | 0.85 | 3.90 | 4 | 15 | 8.9  | 21 | 0.68 | 3.12 | 2 | 10 | 10.10 |
| A | 11KV CANTEEN               | 20 | 1.37 | 3.81 | 4 | 15 | 9    | 21 | 1.09 | 3.05 | 2 | 10 | 10.10 |
| A | 11KV SABON GARIN ZAR       | 20 | 0.57 | 2.52 | 4 | 30 | 8.9  | 21 | 0.46 | 2.01 | 2 | 20 | 10.10 |



|   |                                    |    |      |       |   |    |      |    |      |      |   |    |       |
|---|------------------------------------|----|------|-------|---|----|------|----|------|------|---|----|-------|
| A | 33KV PZ                            | 21 | 0.47 | 7.79  | 4 | 15 | 27.4 | 22 | 0.38 | 6.23 | 2 | 10 | 29.00 |
| A | 11KV ABU                           | 20 | 0.53 | 4.89  | 4 | 15 | 8.4  | 21 | 0.43 | 3.91 | 2 | 10 | 10.10 |
| A | 11KV NNPC ZAR                      | 20 | 0.77 | 5.00  | 4 | 30 | 8.5  | 21 | 0.62 | 4.00 | 2 | 20 | 9.80  |
| A | 33KV HANWA                         | 20 | 0.75 | 5.20  | 4 | 15 | 29   | 21 | 0.65 | 4.20 | 2 | 10 | 29.50 |
| A | 11KV SAMARU                        | 20 | 1.24 | 5.71  | 4 | 15 | 8.2  | 21 | 0.99 | 4.57 | 2 | 10 | 9.80  |
| A | 33KV AVIATION                      | 21 | 0.77 | 5.00  | 4 | 15 | 27.7 | 22 | 0.62 | 4.00 | 2 | 10 | 29.00 |
| A | 11KV GASKIYA                       | 20 | 0.57 | 2.52  | 4 | 30 | 9.1  | 21 | 0.46 | 2.01 | 2 | 20 | 10.10 |
| A | 33KV KOFAN DOKA                    | 20 | 1.20 | 8.31  | 4 | 35 | 28.2 | 21 | 0.96 | 6.65 | 2 | 28 | 29.00 |
| A | 33KV ZARIA WATER WORKS (DEDICATED) | 20 | 0.57 | 0.08  | 4 | 15 | 28   | 21 | 0.46 | 0.06 | 2 | 10 | 29.00 |
| A | 33KV POWER HOUSE                   | 21 | 0.49 | 8.22  | 4 | 15 | 27   | 22 | 0.40 | 6.57 | 2 | 10 | 29.00 |
| A | 33KV NNPC GUSAU                    | 21 | 0.79 | 3.17  | 4 | 15 | 27   | 22 | 0.63 | 2.54 | 2 | 10 | 29.00 |
| A | 11KV KADUNA ROAD                   | 20 | 0.86 | 1.78  | 4 | 15 | 8.9  | 21 | 0.69 | 1.42 | 2 | 10 | 10.10 |
| A | 11KV LODGE ROAD                    | 20 | 0.54 | 0.46  | 4 | 15 | 8.9  | 21 | 0.43 | 0.37 | 2 | 10 | 10.10 |
| A | 33KV POWER STATION                 | 20 | 1.02 | 10.50 | 4 | 15 | 30   | 21 | 0.82 | 8.40 | 2 | 10 | 30.60 |
| A | 11KV INDUSTRIAL SOK                | 20 | 0.76 | 0.51  | 4 | 25 | 9.6  | 21 | 0.61 | 0.41 | 2 | 20 | 10.20 |
| A | 33KV TOWNSHIP                      | 21 | 1.03 | 8.52  | 4 | 15 | 27   | 22 | 0.83 | 6.82 | 2 | 10 | 29.00 |
| A | 11KV NTA SOK                       | 20 | 0.85 | 3.40  | 4 | 25 | 10.1 | 21 | 0.68 | 2.72 | 2 | 20 | 10.30 |
| A | 33KV NEW INJECTION                 | 21 | 0.86 | 9.93  | 4 | 15 | 28   | 22 | 0.69 | 7.95 | 2 | 10 | 29.00 |
| A | 33KV CCNN                          | 21 | 0.09 | 1.16  | 4 | 15 | 28   | 22 | 0.07 | 0.93 | 2 | 10 | 29.00 |
| A | 33KV KWARE/UNIVERSITY              | 20 | 0.62 | 3.18  | 4 | 15 | 29   | 21 | 0.50 | 2.55 | 2 | 10 | 29.58 |
| A | 33KV YABO/SHAGARI                  | 20 | 0.63 | 3.85  | 4 | 15 | 28   | 21 | 0.51 | 3.08 | 2 | 10 | 29.50 |
| A | 11KV GRA KBI                       | 20 | 0.76 | 5.12  | 4 | 20 | 10.5 | 21 | 0.61 | 4.10 | 2 | 14 | 10.71 |
| A | 11KV BULASA                        | 20 | 0.53 | 0.96  | 4 | 20 | 10.5 | 21 | 0.43 | 0.77 | 2 | 14 | 10.71 |
| A | 11KV GWADANGWAJI                   | 20 | 0.68 | 1.06  | 4 | 20 | 10.1 | 21 | 0.54 | 0.85 | 2 | 14 | 10.30 |
| A | 11KV GRA JEGA                      | 20 | 0.76 | 3.41  | 4 | 15 | 9.8  | 21 | 0.61 | 2.73 | 2 | 0  | 10.00 |
| A | 33KV LABANA (DEDICATED)            | 21 | 0.37 | 2.22  | 4 | 20 | 31   | 22 | 0.30 | 1.78 | 2 | 14 | 31.62 |
| A | 33KV UNIVERSITY (DEDICATED)        | 21 | 1.14 | 2.98  | 4 | 20 | 31   | 22 | 0.91 | 2.38 | 2 | 14 | 31.62 |
| A | 11KV BANK KAFANCHAN                | 20 | 0.41 | 5.37  | 4 | 20 | 8.7  | 21 | 0.33 | 4.30 | 2 | 14 | 9.60  |
| A | 11KV KAFANCHAN (TOWNSHIP)          | 20 | 0.57 | 2.52  | 4 | 30 | 8.7  | 21 | 0.46 | 2.01 | 2 | 20 | 9.80  |
| B | 11KV CHELCO                        | 16 | 0.66 | 2.42  | 4 | 15 | 9.9  | 17 | 0.53 | 1.94 | 2 | 10 | 10.10 |



|   |                            |    |      |      |   |    |      |    |      |      |   |    |       |
|---|----------------------------|----|------|------|---|----|------|----|------|------|---|----|-------|
| B | 11KV NOCACO                | 16 | 0.69 | 6.28 | 4 | 15 | 10.3 | 17 | 0.55 | 5.02 | 2 | 10 | 10.51 |
| B | 11KV MAHUTA                | 16 | 0.56 | 2.48 | 4 | 30 | 9    | 17 | 0.45 | 1.98 | 2 | 20 | 10.10 |
| B | 11KV MANDO ROAD            | 16 | 0.51 | 1.41 | 4 | 30 | 9.8  | 17 | 0.41 | 1.13 | 2 | 20 | 10.00 |
| B | 11KV NASFAT                | 16 | 0.65 | 5.94 | 4 | 30 | 8.9  | 17 | 0.52 | 4.75 | 2 | 20 | 10.10 |
| B | 11KV TEACHING HOSPITAL ZAR | 16 | 0.75 | 1.85 | 4 | 30 | 9.1  | 17 | 0.60 | 1.48 | 2 | 20 | 10.10 |
| B | 11KV TUDUN WADA ZAM        | 16 | 0.86 | 1.78 | 4 | 15 | 8.9  | 17 | 0.69 | 1.42 | 2 | 10 | 10.10 |
| B | 11KV GADA BIYU             | 16 | 0.71 | 4.49 | 4 | 15 | 8.9  | 17 | 0.57 | 3.59 | 2 | 10 | 10.10 |
| B | 11KV GRA ZAM               | 16 | 0.83 | 3.39 | 4 | 15 | 9.1  | 17 | 0.67 | 2.71 | 2 | 10 | 10.20 |
| B | 11KV INDUSTRIAL ZAM        | 16 | 0.59 | 5.97 | 4 | 15 | 9.3  | 17 | 0.47 | 4.78 | 2 | 10 | 10.30 |
| B | 11KV DAMBA                 | 16 | 0.86 | 1.78 | 4 | 15 | 9.2  | 17 | 0.69 | 1.42 | 2 | 10 | 10.20 |
| B | 11KV ZAMTEX                | 16 | 0.54 | 4.62 | 4 | 27 | 9.4  | 17 | 0.43 | 3.69 | 2 | 20 | 10.20 |
| B | 11KV FGGC                  | 16 | 0.77 | 5.00 | 4 | 27 | 9.6  | 17 | 0.62 | 4.00 | 2 | 20 | 10.20 |
| B | 33KV MAFARA                | 17 | 1.45 | 2.00 | 4 | 35 | 27   | 18 | 1.16 | 1.60 | 2 | 28 | 29.00 |
| B | 11KV MABERA                | 16 | 1.02 | 6.49 | 4 | 15 | 9.2  | 17 | 0.81 | 5.19 | 2 | 10 | 10.30 |
| B | 11KV ARMY BARRACK          | 16 | 0.71 | 7.19 | 4 | 15 | 9.5  | 17 | 0.57 | 5.75 | 2 | 10 | 10.30 |
| B | 11KV TOWN                  | 16 | 0.54 | 7.30 | 4 | 15 | 9.6  | 17 | 0.43 | 5.84 | 2 | 10 | 10.20 |
| B | 11KV ARKILLA               | 16 | 0.95 | 4.40 | 4 | 15 | 9.8  | 17 | 0.76 | 3.52 | 2 | 10 | 10.00 |
| B | 11KV BADO                  | 16 | 0.93 | 1.16 | 4 | 25 | 9.3  | 17 | 0.74 | 0.93 | 2 | 20 | 10.30 |
| B | 11KV INDUSTRY              | 16 | 0.93 | 3.18 | 4 | 15 | 9.8  | 17 | 0.74 | 2.55 | 2 | 10 | 10.00 |
| B | 33KV FARFARU               | 22 | 1.03 | 8.59 | 4 | 15 | 29   | 23 | 0.83 | 6.87 | 2 | 10 | 30.00 |
| B | 11KV NASSARAWA KBI         | 16 | 0.76 | 5.12 | 4 | 30 | 9.9  | 17 | 0.61 | 4.10 | 2 | 20 | 10.10 |
| B | 11KV KARA                  | 16 | 0.64 | 3.36 | 4 | 20 | 10.2 | 17 | 0.51 | 2.69 | 2 | 14 | 10.40 |
| B | 11KV GRA ARGUNGU           | 16 | 0.74 | 4.36 | 4 | 48 | 10.1 | 17 | 0.59 | 3.49 | 2 | 36 | 10.30 |
| B | 11KV KANTA                 | 16 | 0.87 | 2.14 | 4 | 48 | 10.3 | 17 | 0.69 | 1.71 | 2 | 36 | 10.51 |
| B | 33KV ARGUNGU               | 17 | 1.44 | 4.04 | 4 | 48 | 30   | 18 | 1.15 | 3.23 | 2 | 36 | 30.60 |
| B | 11KV YELWA                 | 16 | 0.39 | 3.10 | 4 | 20 | 9.6  | 17 | 0.31 | 2.48 | 2 | 14 | 10.50 |
| B | 11KV YAURI                 | 16 | 1.06 | 0.96 | 4 | 20 | 9.6  | 17 | 0.85 | 0.77 | 2 | 14 | 10.30 |
| B | 33KV NASCO/YELWA           | 16 | 0.85 | 0.98 | 4 | 20 | 29   | 17 | 0.78 | 0.90 | 2 | 14 | 29.50 |
| C | 11KV KURMIIN MASHI         | 15 | 1.06 | 6.77 | 4 | 35 | 9    | 16 | 0.84 | 5.42 | 2 | 28 | 10.20 |
| C | 11KV COSTAIN               | 13 | 0.81 | 5.04 | 4 | 35 | 9.7  | 14 | 0.65 | 4.03 | 2 | 28 | 10.30 |
| C | 11KV WUSASA                | 13 | 0.79 | 2.09 | 4 | 30 | 9.4  | 14 | 0.63 | 1.67 | 2 | 20 | 10.40 |



|   |                     |    |      |      |   |    |      |    |      |      |   |    |       |
|---|---------------------|----|------|------|---|----|------|----|------|------|---|----|-------|
| C | 11KV ZARIA CITY     | 13 | 0.93 | 2.48 | 4 | 30 | 9.4  | 14 | 0.75 | 1.98 | 2 | 20 | 10.40 |
| C | 11KV KOFAN KIBO     | 13 | 0.35 | 3.97 | 4 | 30 | 8.8  | 14 | 0.28 | 3.18 | 2 | 20 | 10.30 |
| C | 11KV DAM            | 13 | 1.22 | 5.04 | 4 | 30 | 8.4  | 14 | 0.97 | 4.03 | 2 | 20 | 10.50 |
| C | 11KV SHIKA          | 13 | 0.77 | 5.00 | 4 | 30 | 8.2  | 14 | 0.62 | 4.00 | 2 | 20 | 9.80  |
| C | 11KV BARRACKS ZURU  | 13 | 0.83 | 5.37 | 4 | 30 | 7.4  | 14 | 0.66 | 4.30 | 2 | 20 | 9.50  |
| C | 11KV RIKOTO/ZURU    | 13 | 0.57 | 2.52 | 4 | 30 | 7.4  | 14 | 0.46 | 2.01 | 2 | 20 | 9.40  |
| C | 33KV ZURU           | 15 | 0.58 | 2.24 | 4 | 48 | 29   | 16 | 0.46 | 1.79 | 2 | 36 | 9.70  |
| C | 11KV MAKARFI ROAD   | 14 | 0.97 | 5.94 | 4 | 30 | 9.4  | 15 | 0.77 | 4.75 | 2 | 20 | 10.10 |
| C | 11KV SULTAN PALACE  | 15 | 0.76 | 3.41 | 4 | 25 | 9.8  | 16 | 0.61 | 2.73 | 2 | 20 | 10.00 |
| C | 11KV WATERWORKS SOK | 13 | 1.24 | 3.18 | 4 | 30 | 9.6  | 14 | 0.99 | 2.55 | 2 | 20 | 10.10 |
| C | 33KV TAMBUNAL       | 15 | 1.48 | 4.36 | 4 | 30 | 31   | 16 | 1.19 | 3.49 | 2 | 20 | 31.62 |
| C | 33KV GONIN GORA     | 15 | 0.55 | 3.71 | 4 | 35 | 32   | 16 | 0.44 | 2.96 | 2 | 28 | 32.64 |
| C | 11KV SABON TASHA    | 13 | 0.40 | 2.09 | 4 | 35 | 9    | 14 | 0.32 | 1.67 | 2 | 28 | 10.30 |
| C | 11KV UNGUWAN MUAZU  | 12 | 0.41 | 1.41 | 4 | 35 | 9.9  | 13 | 0.33 | 1.13 | 2 | 28 | 10.10 |
| C | 11KV TUDUN WADA KBI | 13 | 0.37 | 2.22 | 4 | 48 | 10.6 | 14 | 0.30 | 1.78 | 2 | 36 | 10.81 |
| C | 33KV JEGA           | 12 | 0.77 | 3.10 | 4 | 48 | 30   | 13 | 0.62 | 2.48 | 2 | 36 | 30.60 |
| C | 33KV KAMBA          | 12 | 1.06 | 2.56 | 4 | 20 | 29   | 13 | 0.85 | 2.05 | 2 | 14 | 29.58 |
| C | 33KV ALIERO         | 12 | 0.76 | 3.24 | 4 | 48 | 30   | 13 | 0.61 | 2.59 | 2 | 36 | 30.60 |
| C | 33KV GWANDU         | 12 | 1.70 | 4.59 | 4 | 48 | 29   | 13 | 1.36 | 3.67 | 2 | 36 | 29.58 |
| C | 33KV BUNZA          | 12 | 1.44 | 2.14 | 4 | 48 | 28   | 13 | 1.16 | 1.71 | 2 | 36 | 29.00 |
| C | 11KV KAGORO         | 12 | 0.35 | 3.97 | 4 | 48 | 8.2  | 13 | 0.28 | 3.18 | 2 | 36 | 9.90  |
| C | 11KV MANCHOK        | 12 | 0.38 | 6.17 | 4 | 48 | 8.3  | 13 | 0.30 | 4.94 | 2 | 36 | 9.80  |
| D | 11KV KAWO           | 11 | 1.03 | 1.41 | 4 | 35 | 8.9  | 12 | 0.82 | 1.13 | 2 | 28 | 9.60  |
| D | 11KV RAFIN GUZA     | 11 | 1.06 | 6.77 | 4 | 35 | 8.8  | 12 | 0.84 | 5.42 | 2 | 28 | 9.80  |
| D | 11KV KATABU         | 8  | 1.03 | 1.41 | 4 | 35 | 8.6  | 9  | 0.82 | 1.13 | 2 | 28 | 9.80  |
| D | 11KV JAJI           | 8  | 0.65 | 5.94 | 4 | 35 | 9    | 9  | 0.52 | 4.75 | 2 | 28 | 9.90  |
| D | 11KV RABAH ROAD     | 9  | 0.86 | 2.50 | 4 | 30 | 9.2  | 10 | 0.69 | 2.00 | 2 | 20 | 9.90  |
| D | 11KV HAYIN RIGASA   | 9  | 1.03 | 1.41 | 4 | 30 | 9.4  | 10 | 0.82 | 1.13 | 2 | 20 | 10.10 |
| D | 11KV TUDUN WADA RIG | 9  | 0.78 | 3.44 | 4 | 35 | 9.8  | 10 | 0.62 | 2.75 | 2 | 28 | 10.00 |
| D | 33KV JERE           | 11 | 0.55 | 0.98 | 4 | 45 | 30   | 12 | 0.44 | 0.79 | 2 | 28 | 30.60 |
| D | 33KV KAFANCHAN      | 11 | 2.25 | 5.82 | 4 | 48 | 33   | 12 | 1.80 | 4.65 | 2 | 36 | 33.00 |



|   |                      |    |      |      |   |    |      |    |      |      |   |    |       |
|---|----------------------|----|------|------|---|----|------|----|------|------|---|----|-------|
| D | 11KV SABON GARIN ZAM | 11 | 0.99 | 5.48 | 4 | 35 | 9.3  | 12 | 0.79 | 4.38 | 2 | 28 | 10.30 |
| D | 33KV KAURAN NAMODA   | 11 | 1.39 | 5.75 | 4 | 35 | 27   | 12 | 1.11 | 4.60 | 2 | 28 | 29.10 |
| D | 33KV MARADUN         | 8  | 1.01 | 2.30 | 4 | 45 | 27   | 9  | 0.81 | 1.84 | 2 | 38 | 29.30 |
| D | 33KV ANKA            | 8  | 1.72 | 2.48 | 4 | 60 | 28   | 9  | 1.38 | 1.99 | 2 | 38 | 29.30 |
| D | 11KV DURBAWA         | 11 | 0.44 | 4.36 | 4 | 30 | 9.1  | 12 | 0.36 | 3.49 | 2 | 20 | 10.10 |
| D | 11KV KUEPPERS        | 11 | 0.86 | 1.78 | 4 | 30 | 9.3  | 12 | 0.69 | 1.42 | 2 | 20 | 10.10 |
| D | 11KV DIORI HAMMANI   | 11 | 0.54 | 4.62 | 4 | 30 | 9.3  | 12 | 0.43 | 3.69 | 2 | 20 | 10.20 |
| D | 11KV SARKIN FADA     | 11 | 0.46 | 1.16 | 4 | 30 | 8.9  | 12 | 0.37 | 0.93 | 2 | 20 | 10.00 |
| D | 11KV ILELEA ROAD     | 11 | 0.62 | 3.18 | 4 | 30 | 8.7  | 12 | 0.50 | 2.55 | 2 | 20 | 10.00 |
| E | 33KV TURUNKU         | 5  | 0.83 | 5.79 | 4 | 15 | 28   | 6  | 0.67 | 4.63 | 2 | 10 | 29.00 |
| E | 33KV SOBA            | 20 | 1.10 | 4.12 | 4 | 15 | 28   | 21 | 0.88 | 3.29 | 2 | 10 | 29.00 |
| E | 33KV KUDAN           | 5  | 0.78 | 6.17 | 4 | 35 | 27   | 6  | 0.63 | 4.94 | 2 | 28 | 29.00 |
| E | 11KV BIRNIN GWARI    | 12 | 1.03 | 1.41 | 4 | 35 | 10.2 | 13 | 0.82 | 1.13 | 2 | 28 | 10.40 |
| E | 33KV BIRNIN GWARI    | 12 | 1.18 | 6.58 | 4 | 45 | 28   | 13 | 0.95 | 5.26 | 2 | 38 | 29.00 |
| E | 33KV MAGAMI          | 12 | 0.44 | 1.86 | 4 | 35 | 27   | 13 | 0.35 | 1.49 | 2 | 28 | 29.00 |
| E | 33KV BAKURA          | 12 | 0.45 | 6.69 | 4 | 35 | 27   | 13 | 0.36 | 5.35 | 2 | 28 | 29.00 |
| E | 33KV TSAFE           | 17 | 1.41 | 3.40 | 4 | 35 | 27   | 18 | 1.13 | 2.72 | 2 | 28 | 29.00 |
| E | 11KV SABON GARIN RIG | 16 | 0.40 | 2.09 | 4 | 30 | 9.4  | 17 | 0.32 | 1.67 | 2 | 20 | 10.20 |
| E | 11KV ASIKOLAYE       | 16 | 0.39 | 2.50 | 4 | 30 | 9.7  | 17 | 0.35 | 2.10 | 2 | 20 | 10.10 |
| E | 11KV WUSASA          | 13 | 0.79 | 2.09 | 4 | 30 | 9.4  | 14 | 0.63 | 1.67 | 2 | 20 | 10.40 |
| E | 11KV ZARIA CITY      | 13 | 0.93 | 2.48 | 4 | 30 | 9.4  | 14 | 0.75 | 1.98 | 2 | 20 | 10.40 |
| E | 11KV KOFAN KIBO      | 13 | 0.35 | 3.97 | 4 | 30 | 8.8  | 14 | 0.28 | 3.18 | 2 | 20 | 10.30 |
| E | 33KV MAKARFI         | 5  | 0.87 | 8.47 | 4 | 35 | 27   | 6  | 0.69 | 6.78 | 2 | 28 | 29.00 |
| E | 33KV NNPC SAMINAKA   | 5  | 0.88 | 3.27 | 4 | 35 | 27   | 6  | 0.70 | 2.62 | 2 | 28 | 29.00 |
| E | 33KV KOKO            | 5  | 1.16 | 9.61 | 4 | 48 | 29   | 6  | 0.93 | 7.69 | 2 | 36 | 29.00 |