



ORDER/NERC/204/2020

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

TITLE

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

COMMENCEMENT

2. This Order shall take effect from 1st 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 Jos Electricity Distribution Plc ("JEDC") 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 JEDC taking into consideration the outcome of public consultations held in February - March 2020 and approved end-user tariffs for the period 1st September 2020 to 30th June 2025. This Order reflects the impact

of changes in macroeconomic parameters on JEDC'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. JEDC 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 JEDC 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 JEDC are fair to customers and are sufficient to allow JEDC 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 JEDC'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 JEDC.
- e. Ensure sustained improvement in reliability and quality of supply by incentivising JEDC 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 JEDC 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 JEDC.
- 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 JEDC 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 JEDC, 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 JEDC'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: JEDC Tariff Classification

Service Bands	New Tariff Class	Old Tariff Class
Lifeline	R1	R1
A (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 (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
C (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
D (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
E (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

JEDC 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 JEDC to customers in various tariff bands for the period 1st September 2020 to 31st December 2021.

14. Capital Expenditure (“CAPEX”) Plan

JEDC 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 JEDC 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 1st January 2021. CAPEX review proposals for the period 2021 – 2025 shall be evaluated and upon approval applied in the Tariff Order commencing on 1st 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 JEDC 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 JEDC 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 JEDC (MWh/h)	220	237	237	254
ATC&C Losses	39.12%	32.15%	32.15%	32.15%
End-use Cost-reflective Tariffs (₦/kWh)	76.13	70.77	70.77	70.89
End-use Allowed Tariffs (₦/kWh)	50.05	50.05	70.77	70.89
Tariff Shortfall (₦/kWh)	26.08	20.72	-	-

17. Approved End-user Tariffs Effective from 1st September 2020

Pursuant to JEDC'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 1st 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 JEDC

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	50.73	50.73	71.45	71.39	71.56	70.07	68.86
A - MD1	57.53	57.53	81.87	81.81	82.00	80.30	78.91
A - MD2	60.86	60.86	86.38	86.32	86.52	84.72	83.26
B - Non MD	48.99	48.99	68.67	68.68	68.84	67.41	66.25
B - MD1	55.79	55.79	79.09	79.10	79.28	77.63	76.29
B - MD2	57.83	57.83	84.30	84.30	84.50	82.74	81.31
C - Non MD	47.21	47.21	66.43	66.48	66.63	65.24	64.12
C - MD1	54.01	54.01	76.85	76.89	77.07	75.47	74.16
C - MD2	56.05	56.05	80.86	80.92	81.11	79.42	78.05
D - Non MD	45.30	45.30	63.66	63.63	63.78	62.46	61.38
D - MD1	52.10	52.10	74.07	74.05	74.22	72.68	71.42
D - MD2	54.38	54.38	77.20	77.18	77.35	75.75	74.44
E - Non MD	41.70	41.70	58.38	58.36	58.49	57.28	56.29
E - MD1	48.50	48.50	68.80	68.77	68.93	67.50	66.33
E - MD2	50.81	50.81	71.93	71.90	72.06	70.57	69.35

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 1st September 2020 to 1st January 2021. Accordingly, JEDC 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	R3	R4	C1	C2	C3	D1	D2	D3	A1	A2	A3	S1
Rate (N/kWh)	4.00	29.81	45.76	45.76	42.64	45.55	45.55	42.64	41.54	40.40	44.65	44.65	44.65	44.98
New Category	Life-Line	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 JEDC 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 JEDC is determined after deducting the revenue deficit arising from tariff shortfall from the aggregate NBET and MO market invoices. JEDC 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 30.1% of NBET's monthly invoices being the minimum remittance threshold prescribed in this Order.
- e. JEDC 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. JEDC 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 JEDC 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 JEDC 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 JEDC 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 JEDC 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 JEDC's load allocation, TCN shall be liable to pay for the associated capacity charge. Where JEDC fails to take its entire load allocation due to constraints in its own network, JEDC shall be liable to pay the capacity charge as allocated in its Vesting contract. Table 4 provides the minimum market remittance threshold for JEDC, with an effective date of 1st September 2020:



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

JEDC's Minimum Remittance Table - September 2020 - December 2020			
Head	Subhead	₦,000,000	Remarks
Revenue Required	NEMSF	789	CBN - Loan
	NBET Invoice	16,467	Projected Generation cost
	MO Invoice	4,999	Projected TCN and Admin Services cost
	JEDC	7,528	Approved recovery of capital and operating expenses
	Total	29,782	Total Revenue Required
Allowed	Recovery	18,266	61% Being Amount recoverable through allowed end-user tariffs of JEDC in 2020
Tariff	Shortfall	11,515	39% Being the difference between JEDC's revenue requirement and its allowed recovery
Minimum Remittance Obligation	NEMSF	789	1st - Line Charge on Collection as per loan Agreement
	NBET Minimum Remittance	4,952	Being Minimum Remittance Obligation of 30.1% of NBET's Monthly Invoices for September to December 2020. Full settlement to be supplemented by the FGN intervention funds.
	MO Minimum Remittance	4,999	Being Minimum Remittance Obligation of 100% of MO's monthly Invoices of September to December 2020.
	JEDC	7,528	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.
	Total Distribution	18,266	

EFFECTIVE DATE

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

Dated this 27th day of August 2020

James A. Momoh
Chairman

Dafe C. Akpeneye
Commissioner

Appendix – 1: JEDC's Customer Classifications

Service Bands	New Tariff Class	Description
Lifeline	R1	Life-Line customers with energy consumption of not more than 50kWh/month
A (minimum of 20hrs/day)	A – Non-MD	Customers with single or three phase connection located within Band – A Service Level Feeders
	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
B (minimum of 16hrs/day)	B – Non-MD	Customers with single or three phase connection located within Band – B Service Level Feeders
	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 (minimum of 12hrs/day)	C – Non-MD	Customers with single or three phase connection located within Band – C Service Level Feeders
	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 (minimum of 8hrs/day)	D – Non-MD	Customers with single or three phase connection located within Band – D Service Level Feeders
	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 (minimum of 4hrs/day)	E – Non-MD	Customers with single or three phase connection located within Band – E Service Level Feeders
	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: JEDC's Service Level Commitments

Tariff Band	Feeder Name	Average Duration of Supply (Hrs/Day)	Average Frequency of Interruptions Per Day	Average Duration of Interruptions (minutes)	Average Response time to resolving complaints (Hours)	Service Voltage Level (kV)	Service Level Proposal for Period-1: July - Dec 2020					Service Level Proposal for Period-2: Jan - Jun 2021				
							Average Duration of Supply (Hrs/Day)	Average Frequency of Interruptions Per Day	Average Duration of Interruptions (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 resolving complaints (Hours)	Service Voltage Level (kV)
Band A	FMC STAFF QUARTERS GOMBE	23.17	0.15	49.53	5.00	32.80	23.17	0.11	49.53	4.00	33.00					
Band A	CBN GOMBE	23.17	0.15	49.53	5.00	32.80	23.17	0.11	49.53	4.00	33.00					
Band A	SECRETARIAT	23.05	0.68	56.92	6.00	32.00	23.05	0.51	56.92	5.00	32.50					
Band A	FMC	23.02	0.15	59.08	5.00	32.90	23.02	0.11	59.08	4.00	33.00					
Band A	DOGON DUTSE	22.99	0.60	60.76	6.00	29.00	22.99	0.45	60.76	5.00	32.00					
Band A	GOMBE TOWN	22.87	0.45	67.59	6.00	32.80	22.87	0.34	67.59	5.00	33.00					
Band A	NEW GOVT. HOUSE JOS	22.83	0.79	70.02	6.00	32.50	22.83	0.59	70.02	5.00	32.70					
Band A	ASHAKA	22.80	0.00	72.15	3.00	138.00	22.80	0.00	72.15	3.00	138.00					
Band A	MAKERI	22.73	0.53	76.49	6.00	32.00	22.73	0.39	76.49	5.00	32.50					
Band A	ANGLO JOS	22.50	0.83	90.01	6.00	32.00	22.50	0.62	90.01	5.00	32.50					
Band A	BARRACKS ROAD	22.49	0.45	90.65	6.00	32.60	22.49	0.34	90.65	5.00	32.60					
Band A	JUTH	22.49	0.68	90.67	6.00	32.00	22.49	0.51	90.67	5.00	32.60					
Band A	UNIJS DEDICATED	22.40	1.01	96.14	5.00	10.30	22.40	0.76	96.14	4.00	10.50					
Band A	IBRAHIM TAIWO	22.25	0.68	105.25	5.00	10.90	22.25	0.51	105.25	4.00	11.00					
Band A	SHONGO	22.21	1.39	107.13	7.00	32.50	22.21	1.04	107.13	6.00	32.70					
Band A	LIBERTY DAM	22.18	0.68	109.42	5.00	11.00	22.18	0.51	109.42	4.00	11.00					
Band A	GURA TOP/MAZ.	22.14	1.80	111.87	5.00	10.30	22.14	1.35	111.87	4.00	10.60					
Band A	WEST OF MINES	22.04	1.39	117.48	5.00	10.30	22.04	1.04	117.48	4.00	10.60					
Band A	RANTYA	22.03	1.28	117.94	5.00	10.30	22.03	0.96	117.94	4.00	10.50					
Band A	FMC GOMBE	21.91	0.15	125.58	5.00	32.80	21.91	0.11	125.58	4.00	33.00					
Band A	STATE LOWCOST	21.88	1.58	127.09	5.00	10.30	21.88	1.18	127.09	4.00	10.60					
Band A	RAYFIELD	21.84	1.95	129.62	5.00	11.00	21.84	1.46	129.62	4.00	11.00					
Band A	WATER WORKS BAUCHI	21.82	0.90	130.96	6.00	32.00	21.82	0.68	130.96	5.00	32.50					
Band A	CBN MAKURDI	21.80	0.45	132.00	5.00	32.00	21.80	0.34	132.00	4.00	32.50					
Band A	TEACHING HOSPITAL	21.48	0.64	151.29	4.00	11.00	21.48	0.48	151.29	3.00	11.00					
Band A	WATER WORKS GOMBE	21.35	0.90	158.80	7.00	32.50	21.35	0.68	158.80	6.00	32.70					

Band A	BCC I	21.13	0.23	171.95	4.00	32.00	21.13	0.17	171.95	3.00	32.50
Band A	NABORDO	21.11	0.64	173.55	7.00	32.50	21.11	0.48	173.55	6.00	32.50
Band A	GUBI DAM 1	21.06	0.64	176.50	6.00	31.00	21.06	0.48	176.50	5.00	31.50
Band A	GUBI DAM 2	21.05	0.64	177.15	6.00	31.00	21.05	0.48	177.15	5.00	31.40
Band A	DOMA	20.98	6.11	181.30	8.00	32.00	20.98	4.58	181.30	7.00	32.20
Band A	BUKURU	20.95	1.73	182.86	7.00	32.00	20.95	1.29	182.86	6.00	32.00
Band A	DEDICATED (NASCO)	20.90	1.46	185.89	5.00	11.00	20.90	1.10	185.89	4.00	11.00
Band A	NNPC MAKURDI	20.89	1.24	186.79	8.00	31.00	20.89	0.93	186.79	7.00	31.40
Band A	YANDEV	20.61	2.25	203.60	8.00	32.00	20.61	1.69	203.60	7.00	32.00
Band A	DADIN KOWA WATER WORKS	20.53	0.90	208.00	6.00	30.50	20.53	0.68	208.00	5.00	21.00
Band A	MAKURDI TOWN	20.42	2.25	214.98	7.00	32.00	20.42	1.69	214.98	6.00	31.00
Band A	GOVT. HOUSE GOMBE	20.40	1.61	216.00	7.00	10.90	20.40	1.21	216.00	6.00	10.90
Band A	NNPC DEPOT MAKURDI 3.3KV	20.13	1.31	232.00	5.00	32.50	20.13	0.98	232.00	4.00	32.50
Band A	INDUSTRIAL JOS	19.92	1.61	244.70	5.00	11.00	19.92	1.21	244.70	4.00	32.30
Band A	BCC II	19.72	0.23	256.61	4.00	32.00	19.72	0.17	256.61	3.00	32.30
Band A	JUTH I	19.61	0.68	263.45	5.00	32.00	19.61	0.51	263.45	4.00	32.30
Band A	JUTH II	19.61	0.68	263.45	5.00	32.00	19.61	0.51	263.45	4.00	32.30
Band B	NORTH BANK	23.32	1.54	40.55	8.00	32.50	23.32	1.15	40.55	7.00	32.50
Band B	AIRFORCE BASE BAUCHI	23.27	1.01	43.73	6.00	31.00	23.27	0.76	43.73	5.00	31.30
Band B	ATBU PERMANENT SITE	23.27	1.05	43.99	6.00	31.00	23.27	0.79	43.99	5.00	31.30
Band B	ANKPA	21.22	2.70	166.86	8.00	32.00	21.22	2.03	166.86	7.00	32.30
Band B	ZUMA STEEL 6.6KV	23.20	0.00	48.00	0.00	32.00	23.20	0.00	48.00		32.30
Band B	NINGI	23.17	0.98	49.56	8.00	31.90	23.17	0.73	49.56	7.00	32.00
Band B	TUNFURE	23.13	1.61	52.00	6.00	10.90	23.13	1.21	52.00	5.00	10.90
Band B	NVRI	23.02	2.03	58.72	6.00	10.50	23.02	1.52	58.72	5.00	10.60
Band B	RUKUBA	20.99	2.03	180.40	7.00	32.00	20.99	1.52	180.40	6.00	10.20
Band B	ATBU	22.98	0.64	60.92	7.00	10.90	22.98	0.48	60.92	6.00	10.90
Band B	WATER TREATMENT SHEN	22.90	1.76	66.17	6.00	31.00	22.90	1.32	66.17	5.00	31.40
Band B	PANTAMI	22.80	3.19	72.00	6.00	10.80	22.80	2.39	72.00	5.00	10.80
Band B	GBOKO ROAD	22.73	2.85	76.00	5.00	10.50	22.73	2.14	76.00	4.00	10.60
Band B	COCA COLA	22.73	2.21	76.24	6.00	10.90	22.73	1.66	76.24	5.00	10.90
Band B	GRA/PALACE	22.70	0.68	77.90	4.00	32.00	22.70	0.51	77.90	3.00	32.30
Band B	KATSINA ALA	20.67	2.70	199.72	7.00	31.00	20.67	2.03	199.72	6.00	31.00
Band B	WURUKUM	22.67	1.76	80.00	6.00	10.70	22.67	1.32	80.00	5.00	10.70

Band B	WUKARI	19.82	2.03	250.51	8.00	31.00	19.82	1.52	250.51	7.00	31.30
Band B	AZARE	22.60	2.25	84.23	7.00	32.00	22.60	1.69	84.23	6.00	32.00
Band B	NAKA ROAD	22.47	3.30	92.00	5.00	10.70	22.47	2.48	92.00	4.00	10.70
Band B	ZARIA ROAD	22.36	0.49	98.18	5.00	32.50	22.36	0.37	98.18	4.00	32.50
Band B	DISTRICT	21.27	2.48	164.00	7.00	10.80	21.27	1.86	164.00	6.00	10.80
Band B	MURTALA MOHAMMED	21.21	2.70	167.47	6.00	10.00	21.21	2.03	167.47	5.00	10.30
Band B	SRS	21.13	3.04	172.00	6.00	10.50	21.13	2.28	172.00	5.00	10.50
Band B	GOVT. HOUSE BAUCHI	21.11	1.50	173.26	5.00	11.00	21.11	1.13	173.26	4.00	11.00
Band B	Gamawa/Dambam	18.92	2.03	304.67	8.00	31.00	18.92	1.52	304.67	7.00	31.30
Band B	DOROWA	18.92	4.61	304.87	8.00	29.00	18.92	3.46	304.87	7.00	30.00
Band B	NNPC DEPOT GOMBE	18.60	1.80	324.00	5.00	32.50	18.60	1.35	324.00	4.00	32.50
Band B	DARAZO 11KV	18.14	2.33	351.87	6.00	10.90	18.14	1.74	351.87	5.00	10.90
Band B	GOMBE STATE UNIVERSITY	19.96	6.15	242.38	5.00	32.00	19.96	4.61	242.38	4.00	32.20
Band B	KUMO	19.96	1.73	242.55	8.00	30.00	19.96	1.29	242.55	7.00	30.30
Band B	DASS	17.62	2.70	383.05	8.00	32.00	17.62	2.03	383.05	7.00	31.00
Band C	AIRFORCE BASE	15.33	1.24	520.00	5.00	30.50	19.00	0.93	300.00	4.00	31.00
Band C	RUKUBA BARRACKS	15.23	1.05	525.98	6.00	32.00	15.23	0.79	525.98	5.00	32.20
Band C	TABRA PUMPING STATION	15.13	0.90	532.00	6.00	32.00	19.00	0.68	300.00	5.00	32.20
Band C	ASA	14.80	3.15	552.28	4.00	31.00	14.80	2.36	552.28	3.00	31.30
Band C	HWOLSHE	14.58	1.76	565.12	6.00	10.90	18.00	1.32	360.00	5.00	10.90
Band C	ZAWAN	14.27	2.03	583.58	6.00	10.60	16.00	1.52	480.00	5.00	10.70
Band C	OJU	14.19	2.48	588.48	8.00	31.00	17.00	1.86	420.00	7.00	31.30
Band C	BSU	14.13	1.50	592.00	5.00	10.80	18.00	1.13	360.00	4.00	10.80
Band C	OBARIKE TOWN	14.07	2.51	596.00	6.00	10.00	18.00	1.88	360.00	5.00	30.30
Band C	OJU I	13.93	2.51	604.00	6.00	30.00	17.00	1.88	420.00	5.00	30.30
Band C	TARAKU	13.90	2.03	605.96	7.00	31.00	17.00	1.52	420.00	6.00	31.20
Band C	HIGH LEVEL	13.87	1.88	608.00	6.00	10.70	18.00	1.41	360.00	5.00	10.80
Band C	DAUDU	13.73	3.30	616.00	6.00	10.70	18.00	2.48	360.00	5.00	10.80
Band C	WUNTI ROAD	13.72	2.59	616.65	5.00	10.50	18.00	1.94	360.00	4.00	10.70
Band C	MAKURDI TOWN 11KV	13.60	1.69	624.00	6.00	10.50	18.00	1.27	360.00	5.00	10.60
Band C	OTUKPO TOWN	13.53	2.21	628.00	5.00	10.80	18.00	1.66	360.00	4.00	10.80

Band C	OKPOGA	13.20	1.76	648.00	6.00	29.00	17.00	1.32	420.00	5.00	29.40
Band C	NNPC JOS	13.13	2.03	651.97	7.00	32.50	16.00	1.52	480.00	6.00	32.50
Band C	DADIN KOWA	13.06	3.00	656.67	6.00	10.90	16.00	2.25	480.00	5.00	10.90
Band C	ALIABE	12.37	1.50	698.06	6.00	10.00	15.00	1.13	540.00	5.00	10.00
Band C	NIPSS KURU	11.99	4.46	720.81	6.00	10.00	16.00	3.35	480.00	5.00	10.20
Band C	YANKARI	11.82	6.53	730.92	8.00	31.00	14.00	4.89	600.00	7.00	31.20
Band C	OJU II	11.80	2.51	732.00	6.00	30.00	11.80	1.88	732.00	5.00	30.20
Band C	GOVT. HOUSE MAKURDI						11.73		736.00		
Band D	TUDUN WADA JOS	11.49	2.74	750.41	6.00	10.80	11.49	2.05	750.41	5.00	10.80
Band D	FED. LOW COST BAUCHI	11.36	3.08	758.29	6.00	10.50	11.36	2.31	758.29	5.00	10.60
Band D	BUKURU TOWN	11.30	6.53	762.18	6.00	10.20	11.30	4.89	762.18	5.00	10.40
Band D	TAFAWA BALEWA	11.19	3.60	768.40	6.00	10.00	11.19	2.70	768.40	5.00	31.30
Band D	TORO	11.15	6.08	770.91	8.00	31.00	11.15	4.56	770.91	7.00	31.30
Band D	GRA MAKURDI	11.07	1.99	776.00	6.00	10.70	11.07	1.49	776.00	5.00	10.80
Band D	GWALLAMEI	10.86	2.74	788.44	6.00	10.80	10.86	2.05	788.44	5.00	10.80
Band D	GADA BIU	10.84	2.03	789.52	6.00	10.60	10.84	1.52	789.52	5.00	10.60
Band D	KATAKO	10.84	3.86	789.52	6.00	10.60	10.84	2.90	789.52	5.00	10.60
Band D	ZARIA ROAD 11KV	10.76	3.15	794.14	6.00	10.90	10.76	2.36	794.14	5.00	10.90
Band D	NNPC DEPOT JOS 3.3KV	10.67	2.03	799.66	4.00	31.50	10.67	1.52	799.66	3.00	9.50
Band D	BYPASS	10.67	7.43	800.00	6.00	9.30	10.67	5.57	800.00	5.00	9.50
Band D	DILIMI	10.62	4.16	802.52	6.00	9.80	10.62	3.12	802.52	5.00	10.00
Band D	UTAN	10.30	3.15	821.90	6.00	9.90	10.30	2.36	821.90	5.00	10.00
Band D	TUDUN SALMANU	10.27	3.23	823.88	5.00	10.40	10.27	2.42	823.88	4.00	10.50
Band D	NARAGUTA	10.27	3.41	824.05	6.00	10.60	10.27	2.56	824.05	5.00	10.60
Band D	RIYEL	10.20	7.58	828.00	6.00	9.20	10.20	5.68	828.00	5.00	9.50
Band D	CONGO	9.97	3.83	841.61	6.00	10.80	9.97	2.87	841.61	5.00	10.80
Band D	NASARAWA	9.97	4.09	841.75	6.00	10.80	9.97	3.07	841.75	5.00	10.80
Band D	BAUCHI ROAD TOWNSHIP	9.95	3.83	843.16	6.00	10.40	9.95	2.87	843.16	5.00	10.50
Band D	LAMINGO	9.94	4.35	843.78	6.00	10.80	9.94	3.26	843.78	5.00	10.80
Band D	POLO	9.87	3.53	847.77	6.00	10.50	9.87	2.64	847.77	5.00	10.60
Band D	FOBOR	0.00	0.00	1440.00	0.00	0.00	10.00		840.00		0.00
Band D	MALLAM SIDI	9.86	3.60	848.38	8.00	29.00	9.86	2.70	848.38	7.00	29.40
Band D	RUKUBA ROAD	9.83	3.56	850.07	7.00	10.50	9.83	2.67	850.07	6.00	10.50

Band D	INDUSTRIAL MAKURDI	9.73	2.29	856.00	7.00	11.00	9.73	1.72	856.00	6.00	11.00
Band D	BAUCHI RING RD	9.68	3.83	859.47	6.00	10.40	9.68	2.87	859.47	5.00	10.50
Band D	GRA GOMBE	9.57	0.79	866.07	7.00	10.80	9.57	0.59	866.07	6.00	10.80
Band D	BAPTIST	9.43	3.53	874.35	6.00	10.40	9.43	2.64	874.35	5.00	10.50
Band D	NASIME	9.07	3.15	896.00	6.00	10.70	9.07	2.36	896.00	5.00	10.70
Band D	UNIAGRIC	8.80	2.03	912.00	5.00	11.00	8.80	1.52	912.00	4.00	11.00
Band D	MALLAM INNA	8.36	1.28	938.22	7.00	10.80	8.36	0.96	938.22	6.00	10.80
Band D	BCGA	8.26	8.33	944.25	6.00	10.80	8.26	6.24	944.25	5.00	10.80
Band D	JAWAARE	8.26	3.38	944.52	7.00	32.80	8.26	2.53	944.52	6.00	32.80
Band D	BBL	7.87	1.20	968.00	5.00	10.80	7.87	0.90	968.00	4.00	10.80
Band D	STADIUM	7.67	2.14	979.81	5.00	10.40	7.67	1.60	979.81	4.00	10.50
Band D	AMINU STREET	7.61	2.25	983.35	5.00	10.40	7.61	1.69	983.35	4.00	10.50
Band E	MUDA LAWAL	11.41	3.38	755.28	5.00	10.40	11.41	2.53	755.28	4.00	10.50
Band E	PANKSHIN FCE	11.41	4.65	755.43	4.00	9.90	11.41	3.49	755.43	3.00	10.00
Band E	POLICE STAFF COLLEGE/POLY	11.11	7.20	773.65	6.00	10.50	11.11	5.40	773.65	5.00	10.50
Band E	DARAZO/DUKKU	10.82	4.50	790.78	8.00	30.00	10.82	3.38	790.78	7.00	30.30
Band E	BANK ROAD	10.70	2.96	797.91	5.00	10.30	10.70	2.22	797.91	4.00	10.30
Band E	INDUSTRIAL BAUCHI	10.65	3.19	800.78	5.00	10.30	10.65	2.39	800.78	4.00	10.30
Band E	SCIENCE SCH. KURU	10.57	8.44	805.90	6.00	10.50	10.57	6.33	805.90	5.00	10.50
Band E	MANGU TOWN	10.57	6.49	805.91	5.00	10.50	10.57	4.87	805.91	4.00	9.80
Band E	GBOKO/ADIKPO	10.07	3.60	836.00	6.00	29.00	10.07	2.70	836.00	5.00	29.50
Band E	MISAU	10.03	4.05	838.15	7.00	32.90	10.03	3.04	838.15	6.00	32.90
Band E	RAILWAY	10.02	3.11	839.03	6.00	10.50	10.02	2.33	839.03	5.00	10.50
Band E	BARRACK	10.00	6.75	839.93	6.00	10.30	10.00	5.06	839.93	5.00	10.50
Band E	RAN ROAD	9.95	3.26	843.10	6.00	10.40	9.95	2.45	843.10	5.00	10.50
Band E	MISAU TOWN	9.83	3.04	850.31	6.00	10.80	9.83	2.28	850.31	5.00	10.80
Band E	ZARTEX	9.69	6.75	858.38	6.00	10.00	9.69	5.06	858.38	5.00	10.00
Band E	MADARA/VOM TOWN	9.64	1.73	861.69	6.00	10.20	9.64	1.29	861.69	5.00	10.20
Band E	OLD ENUGU ROAD	9.60	4.24	864.00	5.00	10.90	9.60	3.18	864.00	4.00	10.90
Band E	PILGANI	9.60	4.61	864.00	6.00	9.00	9.60	3.46	864.00	5.00	9.20
Band E	VANDEKYA	9.55	3.60	867.04	6.00	30.00	9.55	2.70	867.04	5.00	30.00
Band E	KALSHINGI TOWN II	9.54	1.73	867.45	6.00	10.90	9.54	1.29	867.45	5.00	10.90
Band E	BENPOLY	9.53	1.76	868.00	6.00	29.00	9.53	1.32	868.00	5.00	30.00
Band E	BARIKIN LADI TOWN	9.43	4.91	874.38	6.00	10.00	9.43	3.68	874.38	5.00	10.30
Band E	SHIRA-YANA	9.20	1.58	888.08	6.00	10.50	9.20	1.18	888.08	5.00	10.50

Band E	AZARE TOWN	9.18	2.74	889.18	5.00	10.50	9.18	2.05	889.18	4.00	10.50
Band E	UGBOKOLO	9.13	1.76	892.00	6.00	29.00	9.13	1.32	892.00	5.00	29.00
Band E	COE/FIRE SERVICE	9.11	2.78	893.49	5.00	11.00	9.11	2.08	893.49	4.00	11.00
Band E	NAFADA TOWN	9.05	2.81	896.95	6.00	10.80	9.05	2.11	896.95	5.00	10.80
Band E	GRA AZARE	9.01	2.93	899.37	5.00	10.50	9.01	2.19	899.37	4.00	10.50
Band E	GRA MISAU	8.98	1.84	900.92	6.00	10.80	8.98	1.38	900.92	5.00	10.80
Band E	GINDIRI	8.95	6.23	902.77	6.00	10.50	8.95	4.67	902.77	5.00	9.80
Band E	FGC/RADIO MONITORING	8.93	2.70	904.06	5.00	11.00	8.93	2.03	904.06	4.00	11.00
Band E	TUDUN WADA GOMBE	8.77	1.50	913.89	6.00	10.90	8.77	1.13	913.89	5.00	10.90
Band E	FED. LOW COST GOMBE	8.74	1.43	915.65	6.00	10.90	8.74	1.07	915.65	5.00	10.90
Band E	OTADA	8.67	3.38	920.00	5.00	10.50	8.67	2.53	920.00	4.00	10.50
Band E	IGBANOMAJE	8.60	3.19	924.00	5.00	10.50	8.60	2.39	924.00	4.00	10.50
Band E	GAMES VILLAGE				0.00		8.47		932.00		
Band E	J.D. GOMWALK	8.43	5.70	934.33	6.00	9.70	8.43	4.28	934.33	5.00	9.70
Band E	GENERAL HOSPITAL PANKSHIN	8.39	5.59	936.35	6.00	9.70	8.39	4.19	936.35	5.00	9.70
Band E	HARDAWA	8.27	1.84	943.65	6.00	10.80	8.27	1.38	943.65	5.00	10.80
Band E	KUMO TOWN 11KV	7.96	1.76	962.63	6.00	10.90	7.96	1.32	962.63	5.00	10.90
Band E	JAMAARE 11KV	7.89	1.58	966.32	6.00	10.80	7.89	1.18	966.32	5.00	10.80
Band E	KALSHINGI TOWN I	7.81	1.73	971.45	6.00	10.90	7.81	1.29	971.45	5.00	10.90
Band E	BOGORO I	6.71	5.63	1037.43	5.00	11.00	6.71	4.22	1037.43	4.00	11.00
Band E	BOGORO II	6.70	5.63	1037.94	5.00	11.00	6.70	4.22	1037.94	4.00	11.00
Band E	TOTAL	6.27	4.65	1064.00	6.00	8.70	6.27	3.49	1064.00	5.00	9.50
Band E	GRA SHENDAM	6.27	4.69	1064.00	6.00	8.70	6.27	3.52	1064.00	5.00	9.50
Band E	SHENDAM BARRACKS	6.27	4.61	1064.00	6.00	8.70	6.27	3.46	1064.00	5.00	9.50
Band E	PAJAT	6.27	5.03	1064.00	6.00	9.00	6.27	3.77	1064.00	5.00	9.50
Band E	KUFFEN	6.27	5.25	1064.00	6.00	9.00	6.27	3.94	1064.00	5.00	9.50
Band E	WASE GARRUKWA	6.27	4.61	1064.00	6.00	9.00	6.27	3.46	1064.00	5.00	9.20
Band E	WASE PRISON	5.47	4.61	1112.00	6.00	9.00	5.47	3.46	1112.00	5.00	9.20
Band E	DENGI TOWN	5.47	4.61	1112.00	6.00	9.00	5.47	3.46	1112.00	5.00	9.20
Band E	EMIR PALACE	4.00	2.18	1200.00	6.00	10.90	4.00	1.63	1200.00	5.00	10.90