



ORDER/NERC/2023/035

**BEFORE THE NIGERIAN ELECTRICITY REGULATORY COMMISSION
IN THE MATTER OF THE PERFORMANCE IMPROVEMENT PLAN OF THE
TRANSMISSION COMPANY OF NIGERIA PLC**

1.1 TITLE

This regulatory instrument may be cited as the Order on Performance Improvement Plan ("PIP") for the Transmission Company of Nigeria Plc ("TCN").

1.2 COMMENCEMENT

This Order shall take effect from 1st January 2024 and shall remain effective until 31st December 2026.

1.3 CONTEXT

- 1.3.1. The TCN, in November 2022, submitted its 3-year (2024 – 2026) Performance Improvement Plan ("PIP") and Capital Expenditure ("CAPEX") programme for the consideration and approval of the Nigerian Electricity Regulatory Commission ("NERC" or "the Commission") in line with the extant regulations and the Guidelines on Performance Improvement Plan for the TCN (2022) issued by the Commission.
- 1.3.2 The Power Sector Recovery Program ("PSRP") of the Federal Government of Nigeria ("FGN") requires the Commission to implement robust tariff review processes aimed at improving service delivery across the value chain of the Nigerian Electricity Supply Industry ("NESI"). The PIP shall form the basis for TCN optimising the implementation of its proposed CAPEX initiatives for improved performance. The approved PIP shall also form the basis for defining the key performance indicators ("KPIs") for TCN for the next 3 years by the Commission with emphasis on delivering an improvement in wheeling capability, system reliability, and reduction in system losses.
- 1.3.3 In pursuit of engendering stakeholder consultation for the development of the PIP, the Commission coordinated engagements between the Distribution Companies ("DisCos") and TCN to ensure alignment in the determination of priority objectives and project selection for effective implementation and optimal impacts. A Public Hearing was further held on 4th December 2023 to consider the application filed by TCN. On the basis of the feedback received during the consultations and subsequent deliberations with various stakeholders, further updates to TCN's initial PIP submission have been considered as part of this review to align the PIP

with the DisCos' PIPs and the Service Level Agreements ("SLAs") between TCN and DisCos.

1.4 OVERVIEW AND CURRENT STATE OF TCN'S NETWORK

1.4.1 The TCN is one of the eighteen (18) successor companies of the erstwhile Power Holding Company of Nigeria Plc ("PHCN") established as part of the power sector reform process. The TCN currently operates the Nigerian transmission grid under the Transmission Services Provider ("TSP") and the System Operations ("SO") Licences issued by the Commission. Details of TCN operation and control offices are provided in Table 1.

Table – 1: TCN Operational and Control Centres

A. Operational Centre	Nos.	Location
Corporate Headquarters	1	14, Zambezi Crescent, Maitama, Abuja, FCT.
Transmission Regions	10	Abuja, Bauchi, Benin, Enugu, Kaduna, Kano, Lagos, Oshogbo, Port Harcourt and Shiroro.
B. Control Centre	Nos.	Location
National Control Centre ("NCC")	1	Ikirun road, Osogbo.
Supplementary NCC	3	Benin, Lagos and Shiroro.
Regional Control Centres ("RCC")	10	Abuja, Bauchi, Benin, Enugu, Kaduna, Kano, Lagos, Oshogbo, Port Harcourt and Shiroro.

1.4.2 TCN currently owns and manages several lines and substations infrastructure constituting the power transmission system which interconnects several local and international connectors making up the Nigerian Electricity Grid. Details of the number of the infrastructure and connectors are provided in Table 2.

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Table – 2: TCN Infrastructures and Connectors

C. Infrastructure	Nos.
No. of 330kV Substation Infrastructure	43
Length of 330kV Lines (km)	5,530
No. of 132kV Substation Infrastructure	153
Length of 132kV Lines (km)	6,800
D. Connector	Nos.
No. of Interconnected Generation Companies ("GenCos")	29
No. of Connected Distribution Companies ("DisCos")	12
No. of International Connectors – Benin Republic, Niger & Togo	3
No. of Direct Connected (Eligible) Customers	20

1.4.3 Since 2016, the TCN has recorded some gains, particularly in the reduction of system losses and incidences of grid collapse as indicated in Figures 1 and 2. However, recent trends indicate that TCN is unable to sustain the gains given the observed rise in Transmission Loss Factor ("TLF"), the increasing system collapses, and the TCN-caused feeder interruptions averaging 2,757 monthly interruptions in 2023. This is mainly as a result of the limited and incoherent investments to address network infrastructure weaknesses.

Figure 1: TCN's Trend of Transmission Losses

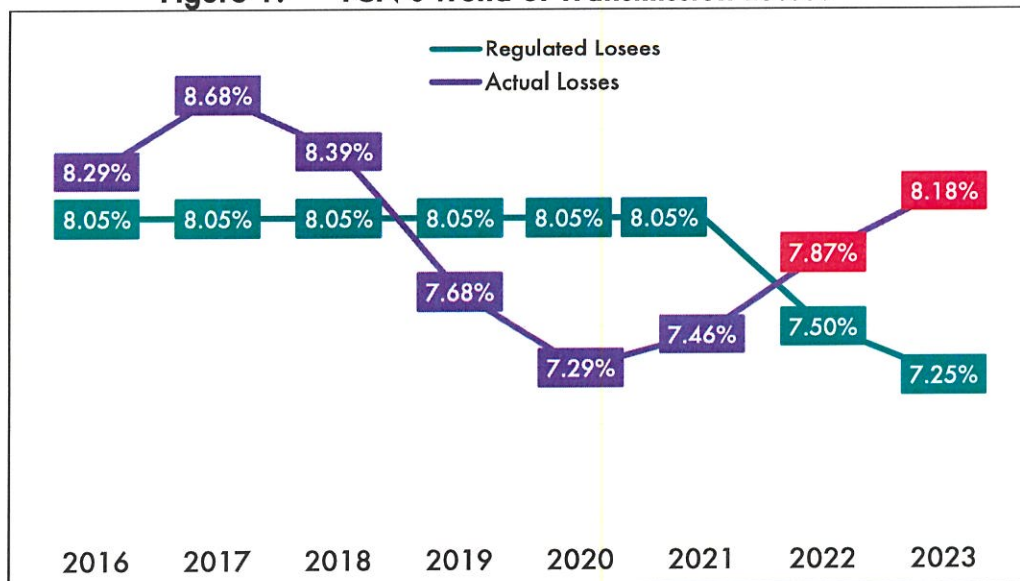
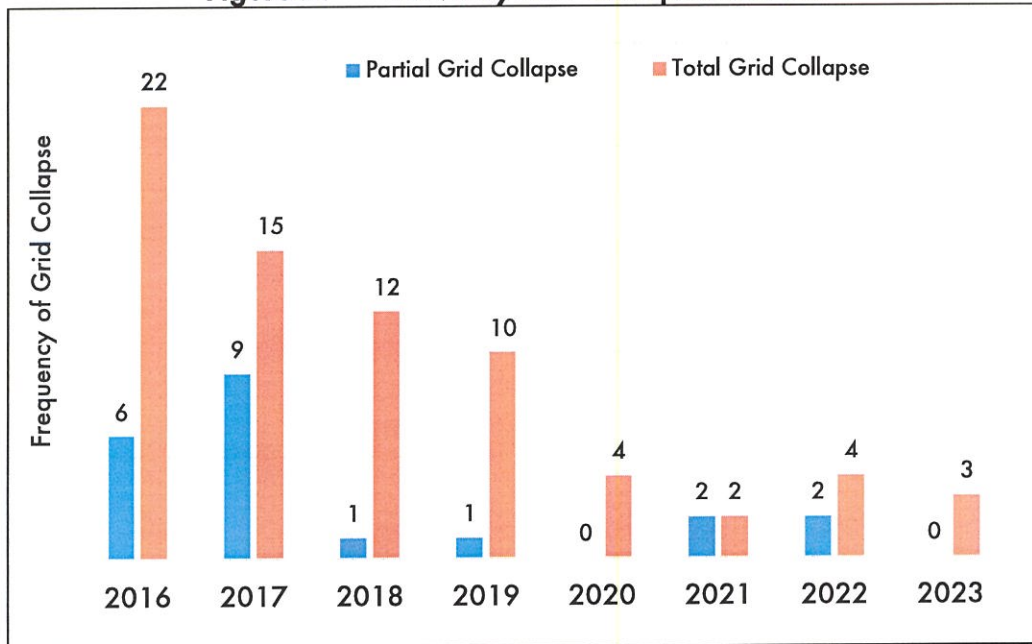


Figure 2: TCN's System Collapse Records



1.4.4 The summary in Table 3 shows that 14 out of the 86 units of 330kV transformers (representing 16% of the total capacity) are out of service while 57 units out of the 359 132kV/33kV transformers (12.8%) are either out of service or remain idle. The significant share of out-of-service TCN's infrastructure has contributed to low energy throughput, declining system reliability, and system losses. The remote visibility of TCN's infrastructure as summarised in Table - 4 indicates that only 23% of the TCN's infrastructure has been integrated into the Supervisory Control and Data Acquisition ("SCADA") and hence remotely visible. This has adversely affected the efficacy of the grid operation.

Table - 3: The Current Transformation Capacity of TCN

	330kV Transformers		132kV Transformers	
	Units	Capacity (MVA)	Units	Capacity (MVA)
Total	86	13,088	359	17,608
Effective availability	72	10,994	302	15360
Out of service	14	2,094	22	948
Idle capacity	-	-	35	1300

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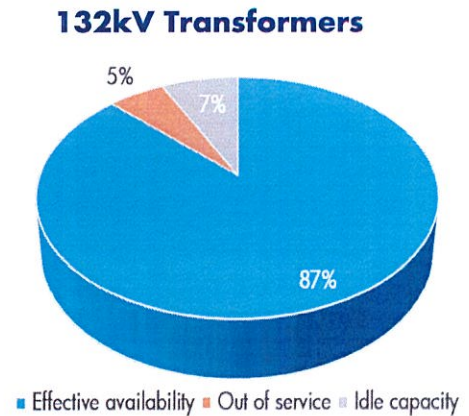
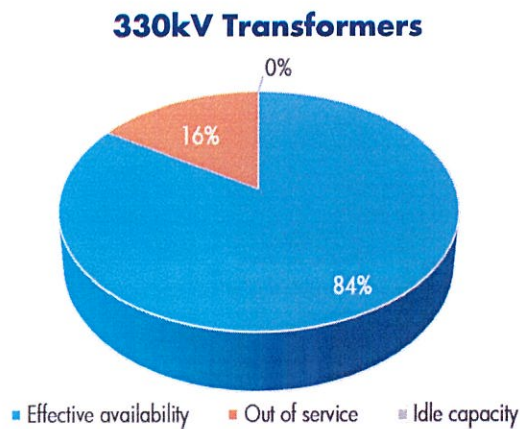


Table – 4: Remote Visibility of TCN’s Infrastructure

Stations	Total	SCADA Integration	% Integration	Visible to NCC	% Visibility
Power Stations	27	8	30%	5	19%
330kV Substations	43	19	44%	15	35%
132kV Substations	152	102	67%	30	20%
Total	222	129	58%	50	23%

1.5 STAKEHOLDER CONSULTATION

1.5.1 In line with the PIP guidelines issued by the Commission, the TCN held several consultative engagements with NESI stakeholders to assess their views and expectations on TCN’s services and determine priority areas of intervention to be considered in the PIP. These engagements supported the process in:

- ensuring an alignment between TCN and DisCos on the (priority of) investments required for operational improvement.
- ensuring a consideration is given to DisCos’ load demand forecast.
- ensuring that TCN’s targeted investments align with DisCos’ PIPs and address the misalignment at transmission and distribution interface points.
- ensuring that TCN’s wheeling capacity aligns with GenCos’ capacity recovery plan for optimal utilization of generation capacities and improved service delivery.
- Ensuring that accountability between TCN and DisCos on the services and justification for associated costs.

1.5.2 Key discussion areas for the engagement sessions were:

- Network improvement (network reinforcement, etc.)
- Network expansion

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- c. Planned operations and maintenance
- d. Improved communication, automation, and system visibility
- e. Sustainability of Service-Level Agreements
- f. Network protection and coordination

1.6 PROPOSED OUTPUTS:

1.6.1 With a forecast peak demand of 12,521MW for the year 2027 by DisCos (excluding the peak demand of the direct and international customers), the current TCN's operational capacity is inadequate to meet the power supply needs of the NESI as well as supporting Nigeria's energy transition commitments for the integration of variable renewable energy resources to the national grid. Thus, this PIP proposes to undertake numerous interventions towards the improvement of network performance requirements in alignment with the current and future demands of the NESI. Over the period of 2024 – 2026, the proposed interventions are developed with the objective of achieving the following:

- a. Efficient dispatch of generation and reduced transmission losses
- b. Complete short- and medium-term system visibility
- c. Improve transmission line performance
- d. Improve network reliability and frequency control
- e. Improve the meter management system
- f. Improve long-term network visibility, communication and SCADA
- g. Enhance network protection systems
- h. Improve grid safety and security
- i. Empower employees with quality training and competitive remuneration

1.6.2 Specifically, the major output targets for TCN are summarized as follows:

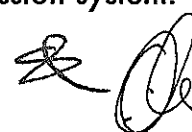
- a. Reduce Transmission Loss Factor ("TLF") to 6.50% in 2026
- b. Reduce network interruptions (partial/full grid collapse) from an annual average of nine (9) to one (1)
- c. Meet 100% of the DisCos' energy needs as approved by the Commission
- d. Achieve improved system reliability and eliminate system collapse
- e. Achieve 100% visibility of the grid through the implementation of SCADA
- f. Achieve 100% energy accountability
- g. Reduce accidents and improve safety and protection in grid operations
- h. Automated control of the grid and TCN processes.

1.7 INVESTMENT INITIATIVES & STRATEGY:

1.7.1 Key strategies proposed by TCN to attain the targeted service levels over the next 3 years include the following:

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- a. **Maintenance of Existing and Acquisition of New SCADA and Telecoms:** This initiative includes routine maintenance and restoration of SCADA RTUs and associated equipment, and database maintenance at the Master Station ("MS"). Establishment of well-equipped Operational Simulation Centres at the Regional Control Centres ("RCCs"). To overcome the deficit in the provision of SCADA and telecom systems, TCN has carefully planned and is currently embarking on new projects being funded by the World Bank NETAP to upgrade, replace, and refurbish the existing SCADA EMS and telecoms network.
- b. **Network Security (Availability and Reliability):** The strategy includes the operation of the grid based on the N-1 philosophy by ensuring that critical components have pairs or alternative parts to relieve them in case of failure. In preparing the TCN-PIP, the N-1 reliability criterion has been considered by running a contingency analysis to determine the critical lines in the system whose interruptions could lead to system disturbances.
- c. **Grid Stability:** The strategy includes procurement of SCADA/EMS that would enable the automatic deployment of spinning reserves procured for grid stability, and the use of IoT devices to monitor the compliance of the GenCos on the use of their governor to control slight deviation in grid frequency.
- d. **Power Quality:** The proposed strategy includes improved operational reserve policy, procurement of reserves, extensive operational studies to calibrate the settings of the capacitors to the local conditions they are operating in, medium and long-term planning, incentivise generators to control voltage at their nodes, repair and procurement of capacitor banks, procurement of reactors and dynamic compensators, and monitoring of power quality (waveforms) by large consumers.
- e. **Transfer Capability Performance:** The strategy includes prioritization of annual projects to be delivered towards meeting DisCo load projections, identification of new/ongoing projects critical to mitigating the current equipment limitation and infrastructure gaps, regular wheeling capacity studies to identify the maximum load the transmission infrastructure can deliver in its current configuration.
- f. **Connection of New Users to the Transmission System:** Some of the strategies include assessment of the availability of capacity on the network to connect new users at the connection point, management of constraint and congestion at the connection point, review of studies and plans to ensure readiness to integrate renewable energy resources to the transmission system.



- g. **TLF Reduction:** Some of the strategies include replacing old and inefficient transformers with new ones, reconductoring some lines with high-capacity/low-loss conductors and placement of capacitors and reactors at needed locations.
- h. **System Protection/Coordination:** Some of the strategies include the installation of protection relays in the system, reliability of protection relays, replacement of old protection relays and instrumentation transformers, protection coordination between TCN and GenCos as well as TCN and DisCos.

1.8 PROJECT CATEGORIES:

- 1.8.1 The CAPEX programme in the TCN's PIP is classified into 2 major categories for execution based on the funding sources. The sources of funds include the internally generated revenue from the market (i.e, tariff revenue), and the funding from other sources including FGN Appropriation, Presidential Power Initiatives (e.g., FGN PowerCo), Central Bank of Nigeria (i.e., completion of SLA projects) and the multilateral agencies including the World Bank, JICA, AfDB and AFD.

A. TCN-PIP Component to be Funded by Tariff:

This category constitutes TCN-PIP projects to be funded through market revenue (i.e., tariff). As indicated in Table 5 below, TCN proposed to execute 164 (both new and ongoing) priority projects over the next 3 years (2024 – 2026) using revenue from the market. The total cost of the projects and the operating expenditure to be funded through this source is estimated to be NGN690.95Bn over the next three years.

Table – 5: Proposed TCN PIP 2024–2026 funded from Tariff Revenues

S/N	Projects Funding Source	No of Project	N'000,000	% of Total
	CAPEX			
1	DisCos Prioritised transmission Projects	49	150,000.00	46.59%
2	TSP Prioritized Projects	35	147,480.00	45.81%
3	ISO Prioritised Projects	81	24,470.00	7.60%
	Sub-total	165	321,950.00	100.00%
	OPEX			
4	TSP – Operating and Admin Exp.		220,500.00	59.76%
5	ISO – Operating and Admin Exp.		148,500.00	40.24%
	Sub-total		369,000.00	100.00%
	Total		690,950.00	

B. TCN-PIP Component to be Funded from Other Sources:

This category includes TCN's projects funded from non-tariff/non-market related funding sources. The funding sources include budgetary appropriation and loans from bilateral and multilateral institutions. As shown in Table 6 below, TCN has proposed to execute 193 projects over the next 3 years (2024 – 2026) with funding from these other sources. The total estimated cost of the TCN-PIP components to be funded from other sources is NGN1.84Trn.

Table – 6: Proposed TCN PIP 2024–2026: Funded from Non-Tariff Sources

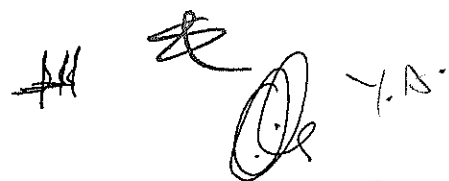
S/N	Projects Funding Source	No of Projects	N000,000	% of Total
1	Central Bank of Nigeria – SLA Projects	53	104,000.00	5.66%
2	World Bank – WB	55	388,800.00	21.17%
3	Japan International Cooperation Agency – JICA	15	160,000.00	8.71%
4	African Development Bank – AfDB	11	168,000.00	9.15%
5	Agence Française de Development – AFD	32	353,776.00	19.26%
6	Siemens Presidential Power Initiative – FGN PowerCo	17	138,588.74	7.55%
7	Projects with yet-to-be-identified funding sources – TCN	10	523,600.00	28.51%
	Total	193	1,836,765	100.00%

2.0 COMMISSION'S REVIEW

- 2.1 The Commission issued the Guidelines on the Preparation of PIP for TCN in March 2022. The Commission further issued NERC Order/2023/002 on the mandatory filing of annual expenditure plans and outcomes of the procurements process by TCN in May 2023. The two regulatory instruments mandated TCN to prepare an output-based plan that sets out the service improvement targets over a 3-year (2024 – 2026) planning horizon. The plan includes clear identification of resources, implementation of capital projects and development of improved human capital development that will lead to improved performance. It also includes the estimated projected costs and analysis of the risk factors and the proposed mitigation measures.
- 2.2 The NERC Order/2023/002 provides for mandatory filing of capital expenditure by TCN. The filing is expected to include the proposed annual investment plan and revenue requirements/estimates and any amendment made by the National Assembly and passed in the Appropriation Act, a clear indication of proposed

operating expenses under various headings with sufficient justifications, and all capital expenditure over a threshold of five billion naira (N5bn) or a variation of the contract sum of an existing contract sum in excess of 15%.

- 2.3 Further to the receipt of the TCN's PIP application, the Commission, in compliance with the provisions of the EA and extant regulatory instruments, published the application on its website and issued notices in four (4) national newspapers on the 14th November 2023 soliciting for stakeholders' comments and participation in a Public Hearing on the PIP Application.
- 2.4 Pursuant to the Electricity Act and the Business Rules of the Commission, a stakeholder consultation was held on the application on the 4th December 2023. The Public Hearing, which had in attendance key stakeholders including DisCos, GenCos, Nigerian Society of Engineers ("NSE"), registered intervenors, the Ministry of Power, Ministry of Finance Incorporated ("MOFI"), and the Bureau of Public Enterprise ("BPE"), provided an avenue to critically examine TCN's proposal and its expected improvement in performance.
- 2.5 Following the outcome of the Public Hearing, the Commission directed TCN to update its application by incorporating feedback from the various stakeholders to ensure prudent utilization of resources. A further review of TCN's updated submission was considered with a special focus on:
 - a. completeness and consistency of the description of each component of the PIP;
 - b. compliance of each project with the guidelines for the preparation of PIPs issued by the Commission;
 - c. robustness of TCN's consultation process especially with DisCos and GenCos to ensure alignment between transmission infrastructure development and operational focus of DisCos and GenCos;
 - d. benchmarking of proposed costs (CAPEX) and completion timelines for related projects or components of the PIP;
 - e. determining if the costs and timelines for delivering the output are efficient;
 - f. assessing the viability of the proposed financial arrangement;
 - g. analysing the level of technology/innovation leap proposed going forward;
 - h. consistency with cost projections and historical performance;
 - i. viability of strategy to deal with uncertainty and risk mitigation.

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3.0 OUTCOME OF THE REVIEW

The Commission, having considered TCN's application in line with the provision of the Act and relevant regulations, approved the PIP (CAPEX programme and operating and Admin cost) for the period 2024 to 2026. A summary of the approved projects' focus areas is provided in Table 7. Tables 8 and 9 provide annual provisions for CAPEX and Operating/Admin expenses respectively in TCN's tariff for the implementation of the PIP. The Commission further approved the PIP and CAPEX programme to be funded through other sources of finance including budgetary provisions by the FGN and donor funding. Other creative strategies of developing major capital projects may include Public Private Partnership/BOT concessions, vendor finance, and EPC+F. The detailed list of approved PIP projects to be funded from Tariff Revenue and Non-Tariff Revenue for the 3 years plan period is provided in the Annexes.

Table 7: Breakdown of Approved 3-year TCN - PIP and CAPEX programme

3-Year Approved PIP	
	N000,000
Total CAPEX	<u>294,715.79</u>
<u>DisCos - Prioritized Projects</u>	<u>141,596.91</u>
Additional transformers	2,617.76
Line reconductoring	32,528.26
Line Reconstruction	9,723.11
New substation	269.00
Ongoing line	43,076.85
Ongoing substation	16,307.58
Power quality	8,788.09
Substation reinforcement	9,548.65
Transformer upgrade	18,737.62
<u>TSP Prioritized Projects</u>	<u>128,643.64</u>
Additional transformer	11,883.80
Ongoing line	11,504.39
Land compensation	44,907.22
TCN TSP/Transmission service maintenance	6,759.65
Others	53,588.57
<u>ISO Prioritized Projects</u>	<u>24,475.24</u>
TCN ISO/Operations	16,699.54
TCN ISO/Telecoms	7,775.70

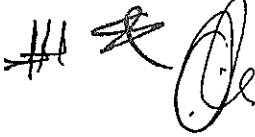
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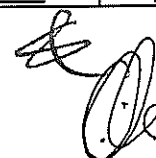
Table – 8: Approved Annual TCN - PIP and CAPEX

Year	2024	2025	2026
	Period – 1	Period – 2	Period – 3
	N000,000	N000,000	N000,000
<u>DisCos – Prioritized</u>			
Annual Proposed CAPEX	50,000	50,000	50,000
Annual Approved CAPEX	<u>47,199</u>	<u>47,199</u>	<u>47,199</u>
<u>TSP – Prioritized</u>			
Annual Proposed CAPEX	49,160	49,160	49,160
Annual Approved CAPEX	<u>42,881</u>	<u>42,881</u>	<u>42,881</u>
<u>ISO – Prioritized</u>			
Annual Proposed CAPEX	8,157	8,157	8,157
Annual Approved CAPEX	<u>8,158</u>	<u>8,158</u>	<u>8,158</u>
<u>TCN – Total CAPEX</u>			
Annual Proposed CAPEX	107,317	107,317	107,317
Annual Approved CAPEX	<u>98,239</u>	<u>98,239</u>	<u>98,239</u>

Table 9: Approved 3-year TCN – PIP – Operating Expenses Component

Year	2024	2025	2026
	Period – 1	Period – 2	Period – 3
	N000,000	N000,000	N000,000
<u>ISO</u>			
Annual Proposed OPEX	49,500	49,500	49,500
Annual Approved OPEX	<u>33,807</u>	<u>33,807</u>	<u>33,807</u>
<u>TSP</u>			
Annual Proposed OPEX	64,000	64,000	64,000
Annual Approved OPEX	<u>60,101</u>	<u>60,101</u>	<u>60,101</u>
<u>Annual SLA Loan Repayment</u>			
Proposed Loan Repayment	10,745	15,018	15,019
Approved Loan Repayment	<u>10,745</u>	<u>15,018</u>	<u>15,019</u>
<u>Ancillary Services Costs</u>			
Proposed Ancillary Services Costs	7,250	7,250	7,250
Approved Ancillary Services Costs	<u>7,250</u>	<u>7,250</u>	<u>7,250</u>
<u>TCN - Total OPEX</u>			
Annual Proposed OPEX	131,495	135,768	135,769
Annual Approved OPEX	<u>111,903</u>	<u>116,176</u>	<u>116,177</u>

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Table 10: Approved 3-year TCN Total Revenue Requirement

Year	2024	2025	2026
	N000,000	N000,000	N000,000
Total Proposed CAPEX	107,317	107,317	107,317
Total Approved CAPEX	<u>98,239</u>	<u>98,239</u>	<u>98,239</u>
Total Proposed OPEX	131,495	135,768	135,769
Total Approved OPEX	<u>111,903</u>	<u>116,176</u>	<u>116,177</u>
Total Proposed Revenue Requirement	238,812	243,085	243,086
Total Approved Revenue Requirement	<u>210,141</u>	<u>214,414</u>	<u>214,415</u>

4.0 ANNUAL UPDATE OF TCN-PIP

TCN shall be required to provide an annual update to the PIP to reflect the proposed investment programme as part of the review of its revenue requirement/tariffs on a continuous basis. The Commission recognizes this PIP as a dynamic roadmap of where TCN envisions to be in the next three (3) years and will continue to evolve in alignment with market development and changes to the operating environment. TCN may invest more than the indicated annual CAPEX figure in any particular year on account of front-loading proposed future investments or due to the unanticipated critical investment needs subject to the approval of the Commission.

5.0 CAPEX CLAWBACK

Annual CAPEX provisions that are unutilized or imprudently expended shall be clawed back during subsequent tariff reviews in line with the requirements of Section 7(a) of Regulations on Procedure for Electricity Tariff Reviews in the NESI.

6.0 COMMENCEMENT AND EFFECTIVENESS

The approved PIP and CAPEX programme shall take effect on the 1st day of January 2024 and shall remain effective until the 31st day of December 2026 unless otherwise revised by the Commission.

7.0 SIGNATURE

Dated this 28th day of December 2023


 Sanusi Garba
 Chairman


 Musiliu O. Oseni
 Vice-Chairman

Annexes



ANNEXURE 1: TCN Projects (DisCos' Prioritized) to be funded from Tariff Revenue

A. Abuja DisCo

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
AE09OI04	Completion of 54km Akwanga - Lafia 132kV DC Line	From Akwanga-Lafia	Ongoing Line	December, 2025	200	Tariff
AE16IR01	Reconductoring of 19km Katampe-Kubwa 132kV line from 90MVA wolf conductor to 236MVA ACCC Oriole" Conductor	From Katampe-Kubwa	Reconductoring Line		128	Tariff
AE17IR02	Re-conductoring of 10km Apo-Karu 132kV transmission line by TCN (to improve line capacity by 80-200MW) - with 250mm2 ACCC "Orole" Conductor)	From Apo-Karu	Reconductoring Line		128	Tariff
AE18IR03	Reconductoring of 68km Shiroro-Minna 132kV DC line from 90MVA wolf to ACCC	From Shiroro-Minna	Reconductoring Line		56	Tariff
AE19NS01	Completion of 1x150MVA, 330/132kV substation at Obajana	Obajana	New Substation	Dec., 2025	120	Tariff
AE20PQ01	Procurement and Installation of Mobile and variable capacitor bank at Bida 132kv S/S	Bida	Power Quality			Tariff
AE21PQ02	Procurement and Installation of Mobile and variable Reactor at Gwagwalada S/S	Gwagwalada	Power Quality			Tariff

B. Benin DisCo

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
BE01OS01	Construction of 2 X 150MVA 330/132kV S/S and 2 X 60MVA 132/33kV substation, Akure	Akure	Ongoing Substation	Dec., 2025	96	Tariff
BE02OS02	Construction of 1 x 60MVA, 132/33kV Substation at Kwale	Kwale	Ongoing Substation	Dec., 2025	48	Tariff
BE03OS03	Construction of 1 x 150MVA, 330/132kV Substation at Okpai	Okpai	Ongoing Substation	Dec., 2025	120	Tariff
BE04OI01	Construction of 132kV Okpai-Kwale DC Transmission Line (14km)	From Okpai-Kwale	Ongoing Line	June, 2024	200	Tariff

C. Eko DisCo

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
EK28OI16	Construction of 135km Omotosho-Epe-Ajah 330kV DC Line	From Omotosho-Epe-Ajah	Ongoing Line	Dec., 2025	1200	Tariff

D. Enugu Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
EE04OS03	Construction of 2x60 MVA 132kV substation Nnewi	Nnewi	Ongoing Substation	Dec., 2025	96	Tariff
EE05OS04	Construction/Completion of Arochukuwu 1 X 40MVA substation	Arochukuwu	Ongoing Substation	Sept., 2025	32	Tariff
EE06OS05	Construction of 2x60MVA, 132/33kV substation at Amasiri, Afikpo	Amasiri	Ongoing Substation	Dec. 2025	96	Tariff
EEl3OI05	Construction of 89km Abakaliki - Amasiri 132kV DC line	From Abakaliki-Amasiri	Ongoing line	Dec., 2025	200	Tariff
EEl4OI06	Construction of 90km Onisha-Oba-Nnewi-Ideato-Okiawe 132kV line (to reduce Feeder length of 189.96km)	From Onisha-Oba-Nnewi-Ideato-Okiawe)	Ongoing line	December, 2025	200	Tariff

E. Ibadan Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
IB10OS02	Construction of 2 x 60MVA 132/33kV Substation at Ogbomosho 132kV	Ogbomosho	Ongoing Substation	Dec., 2025	96	Tariff
IB12OI02	Construction of 45km Ganne-Ogbomosho 132kV DC line	Ganne-Ogbomosho	Ongoing Line	Dec., 2024	200	Tariff
IB24SR10	Upgrading of Iwo 1 x 40MVA, 132/33kV to 60MVA, 132/33kV Transformer	Iwo	Substation Reinforcement		18	Tariff

F. Ikeja Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
IK07SR07	Upgrading of 2 x 30MVA transformer to 2 X 60MVA transformer at Amuwo TS	Amuwo	Substation Reinforcement		48	Tariff
IK08SR08	Completion of conversion of 33kV indoor breaker to outdoor breaker at Akoka TS	Akoka	Substation Reinforcement			Tariff
IK09SR09	Upgrading of 45MVA transformer 60MVA at Isolo TS	Isolo	Substation Reinforcement		12	Tariff
IK10SR10	Construction of Additional Bays at Ejigbo TS	Ejigbo	Substation Reinforcement			Tariff
IK11SR11	Construction of Additional Bays at Ogba TS	Ogba	Substation Reinforcement			Tariff
IK17AT02	Reinforcement with addition of 1 x 60MVA 132/33kV Power Transformer at Oke Aro TS	Oke Aro	Additional Transformer		48	Tariff
IK18AT03	Reinforcement with addition of 1 x 60MVA 132/33kV Power Transformer at Oworo TS	Oworonsoki	Additional Transformer		48	Tariff
IK21LR01	Upgrade of Egbin-Ikorodu line (18.5km) from Wolf conductor to ACCC conductor	Egbin-Ikorodu	Line Reconductoring		200	Tariff

G. Jos Disco



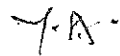
Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
JE04PQ01	Completion of Transposition on the Ugwuoji-Jos 330kV line	Ugwuaji-Jos	Power Quality	2nd Quarter, 2025		Tariff
JE05OL01	Construction of the Makeri-Pankshin 132KV DC Line(122km)	Makeri-Pankshin	Ongoing Line	December, 2024	200	Tariff
JE06TU01	Upgrade of 2X30MVA, 132/11kV transformers to 2X60MVA at Ashaka 132/33kV TS	Ashaka	Transformer Upgrade		48	Tariff

H. Kaduna Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
KA07OS07	Construction and Installation of 2x60MVA, 132/33KV Substation at Kafanchan with 2x132KV Line boys at Jos	Kafanchan	Ongoing Substation	Nov., 2025	96	Tariff

I. Kano Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
KE16LR02	Reconductoring of 12km Kumbotso - Dakata 132kV line from Wolf conductor to ACCC conductor	Kumbotso-Dakata	Line Reconductoring	Jun-25	128	Tariff
KE17LR03	Reconstruction of 9km Kano - Dan Agundi 132kV single circuit transmission line from Wolf conductor to ACCC Silvasa Conductor	Kano-Dan Agundi	Line Reconductoring	Jun-25	128	Tariff
KE19PQ01	Refurbishment of all 132kV substations existing capacitor Banks and installation of additional ones in stations where there is none within KEDCO operational area for power quality	KEDCO operational areas	Power Quality			Tariff

J. Port Harcourt Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
PHE12SR05	Construction of 2x330kV line bays extensions each at Delta and Port Harcourt substations(150km)	Port Harcourt, Delta	Substation Reinforcement			Tariff
PHE13SR06	Procurement of spare breakers, VTs, CTs, 33kv breakers, T-connectivity, transformer oil, etc at Port Harcourt Mains, Port Harcourt Town, Afaha Ube, Eket TS, Ekin TS, Calabar, Yenagoa TS		Substation Reinforcement			Tariff
PHE19LR01	Reconstruction of Existing Double 132kV Line Circuit to 4 x 132kV Line Circuit Using the Same Right of Way from Afam to Port Harcourt Main (37.8km), and Creating Additional 3 x 132kV Line Bays at Afam and Port Harcourt Main TS	Afam-Port Harcourt main	Line Reconstruction		128	Tariff
PHE20OS01	Completion and Commissioning of On-going 2X60MVA 132/33kV TS at Ogoja	Ogoja	Ongoing Substation	Nov., 2025	96	Tariff

K. Yola Disco

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
YE04OI01	Construction of 233km Yola/Song/Little Gombi/Gulak/Mubi 132kV DC line	Yola-Song/Little Gombi-Gulak-Mubi	Ongoing Line	June, 2025	200	Tariff
YE05OS01	Construction of 2X60MVA, 132/33kV TS at Mubi	Mubi	Ongoing Substation	Dec., 2025	96	Tariff

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ANNEXURE 2: TCN Projects (TSP Prioritized) to be funded from Tariff Revenue

A. TSP – System Reliability Projects

Project Code	Project Description	Location	Route Length (km)	Project Completion Date (MM - YY)	Expected Impact (in MW)	Funding Source
TCN01AT01	Additional 2X162MVA Interbus Transformers at Afam IV 330/132/33kV Substation	Afam IV		December, 2025		Tariff
TCN02AT02	1X162MVA Interbus transformer at Afam I-III Substation	Afam I-III		December, 2025		Tariff
TCN03OI01	Completion of Turn in Turn out of Benin-Ajaokuta 330kV line into Ihovbor	Benin-Ajaokuta		March, 2024		Tariff
TCN04OI02	Completion of Turn in Turn out of existing 251km Ihovbor-Osogbo 330kV Line at Akure 330/132/33kV substation	Ihovbor-Oshogbo		June, 2024		Tariff
TCN05OI03	Completion of 251 km Ihovbor-Akure-Osogbo 330kV SC Line	Ihovbor-Akure-Osogbo		June, 2024		Tariff
TCN06OI04	Commissioning of Second Kaduna-Jos 330kV line	Kaduna-Jos		June, 2024		Tariff
TCN17MEPP	Evacuation of MEPP	MEPP				Tariff
TCN07OI05	Completion of the second 132kV circuit from Omoku-Runuosi-Port Harcourt Main	Omoku-Runuosi-Port Harcourt Main		Dec, 2025	200	Tariff
TCN08NI01	Turn in Turn out of ongoing Afam to Onne 330kV line into Rivers IPP	Afam-Rivers IPP-Onne		Dec, 2025		Tariff
TCN09NI02	Construction of about 265km second Jos-Gombe 330kV Line	Jos-Gombe	265	Dec, 2026	1200	Tariff
TCN10NI03	Construction of Gwagwalada-New Apo 330kV DC line (47km)	Gwagwalada-New Apo	47	Dec, 2026	1200	Tariff
TCN11NI04	Construction of 330kV line from Makurdi to Jalingo (341km)	Makurdi-Jalingo	341	Dec, 2026	1200	Tariff
TCN12NI05	Construction of 330kV line from Yola to Maiduguri (285km)	Yola-Maiduguri	285	Dec, 2026	1200	Tariff
TCN13NI06	Mararaba- Millennium City 330kV Line (200km)	Mararaba-Millennium City	200	Dec, 2026	1200	Tariff
TCN14NI07	Construction of Delta-Okpai 330kV DC line (86.2km)	Delta-Okpai	86.2	Dec, 2026	1200	Tariff
TCN15LR01	Reinforcement of Shiroro-Kaduna 330kV double circuit transmission line from Twin Bison to Quad conductor (96)	Shiroro-Kaduna	96	Dec, 2026	1200	Tariff
TCN16LR02	Upgrade of Benin-Omotosho 330kV Line to Quad Circuit 330kV line (140)	Benin-Omotosho	140	Dec, 2026	1500	Tariff

B. TSP – Land Compensation Projects

Project Code	Project Description	Funding Source
TCN95LC0	Alboji-Onitsha line	Tariff
TCN96LC02	Delta-Benin line	Tariff
TCN97LC03	Mando-Rimi Zakara line	Tariff
TCN98LC04	WAPP North Core line	Tariff
TCN99LC05	WAPP South Core line	Tariff
TCN100LC06	Kainji – Birnin Kebbi – Sokoto line	Tariff
TCN101LC07	Katsina-Daura-Gwiwa Jigana-Kura line	Tariff

C. TSP – Transmission Service and Maintenance Projects

Project Code	Project Description	Funding Source
TCN68TSP01	Replacement of 16Nos. 330kV Circuit Breaker in TCN network	Tariff
TCN69TSP02	Replacement of 23Nos. 1320kV Circuit Breaker in TCN network	Tariff
TCN70TSP03	Replacement of 58Nos. 33kV Circuit Breaker in TCN network	Tariff
TCN71TSP04	Replacement of 11Nos. 330kV Isolators in TCN network	Tariff
TCN72TSP05	Replacement of 29No. 132kV Isolators in TCN network	Tariff
TCN73TSP06	Replacement of 60Nos. 33kV Isolators in TCN network	Tariff
TCN74TSP07	Maintenance of 330kV, 132kV and 33kV Circuit Breakers in TCN network	Tariff
TCN75TSP08	Maintenance of 330kV, 132kV and 33kV Isolators in TCN network	Tariff
TCN76TSP09	Improvement of earthing system in TCN Substations	Tariff
TCN77TSP10	Maintenance of 110VDC Battery Banks in TCN network	Tariff
TCN78TSP11	Emergency Repairs/Refurbishment of defective 9 Nos. 330kV, 13Nnos. 132kV and 26Nnos. 33kV Crompton Greaves (CG) make circuit breakers in TCN network	Tariff
TCN79TSP12	Emergency rehabilitation of Aja-Alagbon 330kV GIS Bay (diameter 01) at Alagbon Transmission Substation.	Tariff
TCN80TSP13	Urgent unbanking of 162MVA 330/132/33kV AT2 Power Transformer Bay at Ajokuta 330/132kV Transmission Substation.	Tariff
TCN81TSP14	Construction of 2Nos. 132kV lattice terminal towers, 132kV line bay extension gantries and stringing of 132kV conductor for Turn - in and Turn - out at Amukpe Transmission Substation.	Tariff
TCN82TSP15	Conversion of indoor 33kV GIS Circuit Breakers on 40MVA, 132/33kV Transformer (T1) Secondary Circuit Breakers and 3Nos. 33kV outgoing Circuit Breakers bays at Duse Transmission Substation.	Tariff
TCN83TSP16	Construction of 33kV Secondary Bay outdoor and 33kV feeder bay for IBA feeder at Ojo Transmission Substation.	Tariff
TCN84TSP17	Construction of 132kV Line Bay for Turn - in and Turn - out at Okpella Transmission Substation.	Tariff
TCN85TSP18	Construction of 132kV Line Bay for Turn - in and Turn - out at Okene Transmission Substation.	Tariff
TCN86TSP19	Construction of two 2Nos. 132kV Bays at Oja and Popolanto Transmission Substations.	Tariff
TCN87TSP20	Procurement of 20Nos. 110VDC 600AH Battery Banks for system use	Tariff
TCN88TSP21	Procurement of new 15Nos. 330kV, 20Nos. 132kV and 70Nos 33kV Circuit Breaker for use in TCN network	Tariff
TCN89TSP22	Procurement of 10 sets 330kV, 20 sets 132kV and 30 set 33kV Lightning Arresters for system use	Tariff
TCN90TSP23	Procurement of new 15Nos 330kV, 25Nnos. 132kV and 100Nnos 33kV Isolators for use in TCN network	Tariff
TCN91TSP24	Procurement of 5 sets 30kVA Generators for station use	Tariff
TCN92TSP25	Procurement of 150 cylinders of SF6 gas for system use	Tariff
TCN93TSP26	Regulatory Compliance Software System	Tariff
TCN94TSP27	Asset Maintenance Software	Tariff

ANNEXURE 3: TCN Projects (ISO Prioritized) to be funded from Tariff Revenue

A. ISO – TELECOMS Projects

Project Code	Project Description	Funding Source
TCN47ISO30	Design, Supply and installation of OPGW in critical transmission lines in critical links in the grid	Tariff
TCN48ISO31	Consultancy Services, Upgrade and rehabilitation of OPGW & digital telecommunications systems	Tariff
TCN49ISO32	Provision Telecommunications Measuring Instrument, tools and test kits	Tariff
TCN50ISO33	Provision of outdoor switchyard equipment (wave trap, CVT, LMU and Accessories)	Tariff
TCN51ISO34	Emergency preliminary works on the rehabilitation of OPGW and FOTS facilities in the grid	Tariff
TCN52ISO35	Supply and Installation of Battery Banks and Chargers in the grid	Tariff
TCN53ISO36	Installation of Surge Suppressors and Diverters for Telecom equipment	Tariff
TCN54ISO37	Installation of Radio Communication facilities in the following Regions -	Tariff
TCN55ISO38	Provision of Telecoms Equipment spares for SDH, PLC, Microwave Radio, Multiplexer	Tariff
TCN56ISO39	Provision of Ano. Toyota Hilux maintenance Vehicle for Telecoms Engineers in the Operation Region	Tariff
TCN57ISO40	Hands on training & Project Management training for telecommunication engineers	Tariff
TCN58ISO41	Provision of Distance Protection Signaling for telecoms equipment	Tariff
TCN59ISO42	Digital Communication for new substations	Tariff
TCN60ISO43	Rehabilitation and Maintenance of OPGW and FOTS facilities in the grid	Tariff
TCN61ISO44	Rehabilitation & Maintenance of Voice & Data communication services to NCC and rest of the grid for new and existing substations in TCN network	Tariff
TCN62ISO45	Provision & deployment of grid telecoms interoperability scheme for multi-vendor telecoms equipment	Tariff
TCN63ISO46	Provision of wave traps and Line Matching units for grid	Tariff
TCN64ISO47	Provision of new / Reactivation and Extension of existing SDH signal to stations in the grid	Tariff
TCN65ISO48	Rehabilitation and ancillary works on Digital Communications equipment	Tariff
TCN66ISO49	Development of grid telecoms schematic layout with GPS equipment location	Tariff
TCN67ISO50	Supply and Installation of 50V Battery Banks and chargers for telecoms equipment in the grid	Tariff

B. ISO – Operations Projects

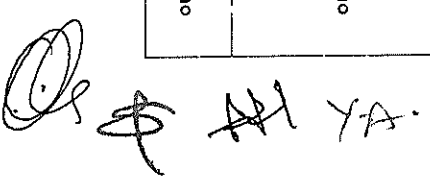
Project Code	Project Description	Funding Source
TCN18ISO01	Establishment of well-equipped Operational Simulation Centers at the Regional Control Centers	Tariff
TCN19ISO02	Operational Intelligence Tool for System Performance Management	Tariff
TCN20ISO03	Provision, deployment and extension of fiber optic-based internet connectivity to CHQ, NCC, 10 Regional Offices, and All Sub Regional Offices, all 330KV sub stations, 132KV Sub Stations nationwide, to support and boost ISO operations in NESI market.	Tariff
TCN21ISO04	Provision of physical and virtual backup/storage facilities at CHQ, NCC and 10No Regional Offices.	Tariff
TCN22ISO05	Provision. Deployment and maintenance of digital surveillance equipment including replacement/reinforcement of physical access doors at CHQ, NCC, 10No, Regional Offices nationwide.	Tariff
TCN23ISO06	Extension of LAN and maintenance in CHQ, NCC and 10No. Regional Offices	Tariff
TCN24ISO07	Acquisition and provision of Software suites - Server Operating systems, Client Operating System, Microsoft Office Productivity Tools	Tariff
TCN25ISO08	Systems Development kits, Software upgrades, Subscriptions, licenses acquisitions and renewal and maintenance of existing software solutions	Tariff
TCN26ISO09	ISO data integration & Cloud backup / Provision and maintenance of backup database at CHQ, & NCC Oshogbo.	Tariff
TCN27ISO10	System Operation website and web portals (HR Employee Manager, Iterm.net, SO dashboard, nigrid.org, SO Grid dispatch, nsong.org, TCN document repository, VIOT/VPN sync DB with nsong; Audit vending software, EVER; ICT Digital Asset software portal etc.) upgrades and maintenance.	Tariff
TCN28ISO11	Provision & reinforcement of cyber security features on all ISO online portals/infrastructure governance & Cyber security awareness training	Tariff
TCN29ISO12	Annual subscriptions & maintenance of internet subscriptions and bandwidth for SLA monitoring and compliance software in all 132KV sub stations nationwide (in all 10No. Operations region and NCC)	Tariff
TCN30ISO13	Hardware maintenance (Servers, Switches, Routers, Digital equipment like printers, copiers, scanners, desktops, laptops, CCTV etc.)	Tariff
TCN31ISO14	Capacity building Onshore & Offshore on Network Administration, Data center Administration, Security Administration & Application Development etc.	Tariff
TCN32ISO15	Extension of ICT Infrastructure to proposed Dual National Control Centre at Gwagwada, including construction of data center facilities to host SCADA hardware devices and other critical ISO operations among others.	Tariff
TCN33ISO16	Testing and Monitoring Tools for the Market Operator	Tariff
TCN34ISO17	Automation of the Market Registration, Market Settlement Processes and Market Analysis Processes	Tariff
TCN35ISO18	Annual License Maintenance and upgrade of existing System Planning software and tools (PSS/E), DIGSILENT Power Factory, NEPLAN, ArcGIS Pro) and subscriptions for Cloud services.	Tariff
TCN36ISO19	Deployment of Accurate weather forecasting tools and software in readiness for integration of variable renewable energy generation.	Tariff
TCN37ISO20	Development of a robust database system for storage and management of power system data and implementation of a secured platform for internal and external data sharing and collaboration to facilitate efficient data-driven power system planning functions.	Tariff
TCN38ISO21	High-performance hardware and servers for power system simulations and data analysis.	Tariff
TCN39ISO22	Local/overseas Training and skill development programs for Planning Engineers to stay updated with the latest advancements in power systems studies based on the new emerging technologies and AI for planning and optimization of transmission systems.	Tariff
TCN40ISO23	Local/overseas Capacity building for Planning Engineers on ArcGIS visualization and analysis of spatial data related to power system infrastructure and renewable energy resources.	Tariff
TCN41ISO24	Consultancy services and experts support in power systems, grid integration studies and forecasting, considering the complexities of demand and supply dynamics using AI and emerging technologies	Tariff
TCN42ISO25	Consultancy supports for long term expansion planning and reinforcing the transmission infrastructure to accommodate increased renewable energy capacity integration.	Tariff
TCN43ISO26	Consultancy services for Transmission Loss Determination and Reduction studies. This is to scientifically analyze the sources of the losses and conduct feasibility analysis for optimized actions and investment required for the loss reduction.	Tariff
TCN44ISO27	Construction of New National Control Centre at Osojobo	Tariff
TCN45ISO28	Construction of New National Control Centre, Gwagwada	Tariff
TCN46ISO29	Remodeling Of Old Control Room Building to National Control Center for New SCADA EMS-Cum Telecoms	Tariff

ANNEXURE 4: TCN Projects (DisCos' Prioritized) to be funded from Non-Tariff Revenue

A. Agence Française de Development – AFD

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
AE01OS01	Construction of complete new 330/132/33kV substation at New Apo (Pigba) a) 2X150MVA 330/132/33kV transformers b) 3X60MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 6 X 132kV line bay e) 3 X 132kV line bay extension at Old Apo 132kV Substation. f) 2x 330kV line bays extension at Lafia g) 9X33kV distribution feeders all civil works, testing and commissioning.	New Apo (Pigba)	Ongoing Substation	June, 2024	96	Abuja
AE02OS02	1. Construction of complete new 330/132/33kV AIS substation at West Main (Lugbe). a) 2X150MVA 330/132/33kV Transformers. b) 3X60MVA, 132/33kV Transformers (with 132kV outdoor GIS Switchgear). c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 2 X 330kV line bay and 4 X 132kV line bays. e) 33kV indoor metal clad switchgears. f) 9X33kV distribution feeders all civil works, testing and commissioning.	West Main (Lugbe)	Ongoing Substation	30th, June, 2024	96	Abuja
AE03OS03	Construction of complete new 132/33kV substation at Kuje a) 3X60MVA, 132/33kV transformers b) 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. c) 4 X 132kV line Bay d) 9X33kV distribution feeders all civil works, testing and commissioning.	Kuje	Ongoing Substation	Completed. The line to supply the station is under construction	96	Abuja
AE04OS04	1. Construction of complete new 132/33kV substation at Wumba/Lokogoma. a) 2X60MVA, 132/33kV transformers. b) 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. c) 2 X 132kV line Bay d) 2 X 5km underground 132kV XLPE Cable line, from New Apo to Wumba/Lokogoma. e) 6X33kV distribution feeders all civil works, testing and commissioning.	Wumba/Lokogoma	Ongoing Substation	Completed. The line to supply the station is under construction	96	Abuja
AE05OL01	Construction of about 172km of new 330kV double circuit line from Lafia 330kV 330/132/33kV substation to the proposed New Apo (Pigba) 330/132/33kV substation.	Lafia-New Apo	Ongoing Line		1200	Abuja
AE06OL01	Construction of about 11km of new 132kV double circuit line from New Apo (Pigba) 330/132/33kV substation to Old Apo 132/33kV substation	New Apo-Old Apo	Ongoing Line	30th, Sept, 2024	200	Abuja
AE07OL02	Construction of 42km of new 132kV double circuit line from New Apo 330/132/33kV substation to the Kuje 132/33kV substation.	New Apo-Kuje	Ongoing line	30th, Sept, 2024	200	Abuja
AE08OL03	Construction of 29km of new 132kV double circuit line from the proposed Kuje 132/33kV Substation to West Main (Lugbe) 330/132/33kV substation	West Main-Kuje	Ongoing line	30th, Sept, 2024	200	Abuja
KA01OS01	Construction of complete new 330/132/33kV Substation at Kalgo a) 1X150MVA 330/132/33kV transformers b) 1X100 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection	Kalgo	Ongoing Substation	March, 2027	80	Kaduna

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
	systems and automation. d) 6 x 330kV line bays e) 6 x 330kV bay extension at B/Kebbi f) 2 x 330kV bay extension at Kainji					
KAEO2OS02	Construction of complete new 330/132/33kV Substation at New Sokoto a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 4 x 330kV line bays e) 2 x 132kV line bays	Sokoto	Ongoing Substation	March, 2027	96	Kaduna
KAET9OL01	3. Birnin Kebbi (Kalgo) - Sokoto 330kV DC transmission line on the existing 132kV Birnin Kebbi Sokoto ROW and reconducting the existing 132 kV single circuit Birnin-Kebbi line to double its capacity Construction of complete new 330/132/33kV Substation at Daura a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 4 x 330kV line bays e) 6 x 33kV feeder bays f) 2x330kV line bay extension at Katsina 330/132/33kV substation.	Kalgo-Sokoto	Ongoing Line	March, 2027	1200	Kaduna
KEO1OS01	Construction of complete new 330/132/33kV Substation at Daura a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 4 x 330kV line bays e) 6 x 33kV feeder bays f) 2x330kV line bay extension at Katsina 330/132/33kV substation.	Daura	Ongoing Substation	March, 2027	96	Kano
KEO2OS02	Construction of complete new 330/132/33kV Substation at Jogana a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 6 x 330kV line bays e) 6 x 33kV feeder bays f) 2x330kV line bay extension at Katsina 330/132/33kV substation.	Jogana	Ongoing Substation	March, 2027	96	Kano
KEO4OL01	Construction of length of 330kV DC twin line between Katsina - Daura - Gwiwa - Jogana - Kura.	Katsina - Daura - Gwiwa - Jogana - Kura.	Ongoing Line	March, 2027	1200	Kano



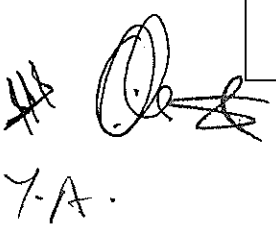
B. African Development Bank – AfDB/NTEP

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
BE18LRE01	Reconstruction of one of Delta-Benin 330kV Transmission Line (125 km) Double Circuit to Quad Conductor 330 Double Circuit Line	Delta-Benin	Line Reconstruction	N/A (To be re-rendered due to cost overrun)	1500	Benin
EE01LRE01	Reconstruction of one of Alaoji-Ihiala-Onitsha 330kV Transmission Line (138km) Double Circuit to Quad Conductor 330 Double Circuit Line and 1X330kV line bay extension each at Onitsha and Alaoji	Alaoji-Ihiala-Onitsha	Line Reconstruction	26th, January, 2026	1500	Enugu
KAEO3OS03	Construction of complete new 330/132/33kV Substation at Zaria by turning in and turning out of the existing 330kV SC Kaduna Kano line at Zaria, a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 6 x 330kV line bays e) 2 x 132kV line bays f) 6 x 33kV feeder bay	Zaria	Ongoing Substation	1st, August, 2025	96	Kaduna
KAEO4OS04	Construction of complete new 330/132/33kV Substation at Millennium City, Kaduna by turning in and turning out of the existing 330kV DC Kaduna Jos line at Millennium City, a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 6 x 330kV line bay extension e) 2 x 132kV line bays f) 6 X 33kV feeder bay	Millennium City	Ongoing Substation		96	Kaduna
KAEO5OS05	Construction of complete new 132/33kV Substation at Rigasa by turning in and turning out of the existing 132kV DC Kaduna Zaria line at Rigasa a) 2X60 MVA, 132/33kV transformers b) 6 X 33kV feeder bay	Rigasa	Ongoing Substation		96	Kaduna
KAEO6OS06	Construction of complete new 132/33kV Substation at Jaji by turning in and turning out of the existing 132kV DC Kaduna - Zaria line at Jaji a) 2X60 MVA, 132/33kV transformers b) 6 X 33kV feeder bay	Jaji	Ongoing Substation	1st, August, 2025	96	Kaduna
KE03OS03	Construction of 2X150MVA and 2X60MVA Ririn Zakara 330/132/33kV TS	Ririn Zakara	Ongoing Substation	completed	240	Kano
KE05OL02	Construction of Mando - Kumbotso 2nd 330kV Line (204km)	Mando-Kumbotso	Ongoing Line	Jan-26	1500	Kano

C. Japan International Cooperation Agency – JICA


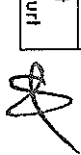
Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
EK01NI01	Construction of 12.5km of new 330kV double circuit line from new Arigbajo 330/132/33kV substation to Olorunsogo 330kV switchyard inclusive of 1.5km 2x 330KV DC multi circuits line	Olorunsogo-Arigbajo	New Line		1200	Eko
EK02NI02	Construction of 29.6km of new 330kV double circuit line from new Arigbajo 330/132/33kV substation to Aiegunle (New Agbara) 330/132/33kV substation	Arigbajo- New Agbara	New Line		1200	Eko
EK03NI03	4. Construction of about 21.7km of new 132kV double circuit line from new Agbara (Aiegunle) 330/132/33kV substation to existing Agbara 132/33kV substation.	Agbara-New Agbara	New line		200	Eko
EK04NI04	Construction of 36.2km New Agbara-Badagry of 132kV double circuit line	New Agbara-Badagry	New Line		200	Eko
EK05NS01	Construction of complete new 330/132/33kV AIS substation at Aiegunle (New Agbara) a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 6 X 330kV line bays e) 4 X 132kV line bay f) 6 x 33kV line bays	New Agbara	New Substation		96	Eko
EK06NS02	g) 2 x 132kV line bays extension at the existing Agbara 132/33kV Construction of complete new 132/33kV AIS substation at Badagry a) 2X60 MVA, 132/33kV transformers b) 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. c) 2 x 132kV line bays d) 6 x 33kV line bays	Badagry	New Substation		96	Eko
IB01NS01	Construction of complete new 330/132/33kV AIS substation at Likosi (Ogiro) a) 2X150MVA 330/132/33kV transformers b) 2X100 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 10x 330kV line bays e) 6 X 132kV line bay f) 6 x 33kV line bays g) Termination works with the existing 330 KV Transmission lines	Likosi (Ogiro)	New Substation		160	Ibadan
IB02NS02	Construction of complete new 330/132/33kV AIS substation at Efo (Arigbajo) a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 12x 330kV line bays e) 2 X 132kV line bay f) 6 x 33kV line bays	Efo (Arigbajo)	New Substation		96	Ibadan

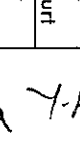
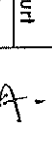
Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
	g) Construction of 2 x 330kV line bays extension at Olorunsogo 330kV switchyard h) Construction of 2 x 132kV line bays extension at New Abeokuta 132/33kV substation					
IB03NS03	Construction of complete new 330/132/33kV AIS substation at Makogi (MFM) a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV, 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. d) 4 x 330kV line bays e) 4 x 132kV line bay f) 6 x 33kV line bays	Makogi/MFM	New Substation		96	Ibadan
IB04NS04	Construction of complete new 132/33kV AIS substation at Abule Oba (Redeem) a) 2X60 MVA, 132/33kV transformers b) 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation. c) 6 x 33kV line bays	Abule Oba (Redeem)	New Substation		96	Ibadan
IB05NI01	Construction of 5.1km of 2x 330kV double circuit line (multi circuits) from Makogi 330/132/33kV substation to the existing Omotoso /Ikeja West double circuit line.	Makogi/MFM- Omotoso/Ikeja West	New Line		200	Ibadan
IB06NI02	Construction of about 35.5km of new 132kV double circuit line from new Ejo 330/132/33kV substation to New Abeokuta 132/33kV substation	Ejo (Arigbajo)- New Abeokuta	New Line		200	Ibadan
IB07NI03	Construction of 7.78km of new 132kV double circuit line from Likosi 330/132/33kV substation to the proposed Redeem 132/33kV substation.	Likosi (Ogijo)- Redeem	New Line		200	Ibadan
IB08NI04	Construction of 2.41 km of new 2x 132kV double circuit (multi circuits - quad) line from the proposed Likosi 330/132/33kV substation to Ikorodu /Shagamu 132kV double circuit line.	Likosi (Ogijo)- Ikorodu Shagamu	New Line		400	Ibadan



D. Niger Delta Power Holding Company - NDPHC

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
AE10SR01	Replacement of faulty 60MVA, 132/33kV power Transformer at Gwagwada 2X60MVA, 132/33kV TS to improve power supply by NIPP	Gwagwada	Substation Reinforcement		48	Abuja
EE02OS01	Construction of Owerri 2X150MVA and 2X60MVA 30/132/33kV Substation	Owerri	Ongoing Substation		240	Enugu
EE03OS02	Construction of 1 X 60 MVA Ihiala 132/33kV Substation	Ihiala 132kV	Ongoing Substation		48	Enugu
EE07OS06	Construction of Ihiala 330/132/33kV Substation with turn in and turn out of 330kV Alaoji-Onisha line at Ihiala	Ihiala 330kV	Ongoing Substation		120	Enugu
EE09OL01	Construction of 330kV Nnewi - Ihiala DC Transmission Line	Nnewi-Ihiala	Ongoing Line		200	Enugu
EE10OL02	Construction of 132kV DC Ihiala-Orlu Transmission Line	Ihiala-Orlu	Ongoing Line		200	Enugu
EE11OL03	Construction of 330kV Alaoji - Owerri DC Transmission Line	Alaoji-Owerri	Ongoing Line		1200	Enugu
EE12OL04	Construction of 132kV DC New Haven- Nsukka Transmission Line	New Haven- Nsukka	Ongoing Line		200	Enugu
IB09OS01	Construction of 2X60MVA, 132/33kVSS at Sagamu Ore Road Sagamu 132kV Substation Line Bay Extension	Sagamu Ore road	Ongoing Substation		96	Ibadan
IB11OL01	Construction of 132kV DC Transmission line from Shagamu to Shagamu-Ore Road	Shagamu Ore road	Ongoing Line		200	Ibadan
IB15SR01	Rehabilitation of existing TCN 2 x bay extension at Popolanto Substation	Popolanto	Substation Reinforcement			Ibadan
IK01SR01	132kV Alausa SS Line Bay Extension	Alausa	Substation Reinforcement			Ikeja
IK14OL01	132kV Multi-Circuit Oke Aro to Alausa Transmission Line	Oke Aro-Alausa	Ongoing Line		200	Ikeja
PHE01OS01	Construction of 2x150MVA, 330/132kV Ikot Abasi Substation	Ikot Abasi	Ongoing Substation		240	Port Harcourt
PHE02OS02	Construction of 2x150MVA & 1x60MVA, 330/132/33kV Onne Substation	Onne	Ongoing Substation		48	Port Harcourt
PHE03OS03	Construction of 2X60MVA 132/33kV Substation at Ikom	Ikom	Ongoing Substation		96	Port Harcourt
PHE04OS04	Construction of 2X60MVA 132/33kV Substation at Obudu	Obudu	Ongoing Substation		96	Port Harcourt
PHE05OL01	Construction of 132 KV Trans Amadi- Rumuolumini DC Transmission Line	Trans Amadi- Rumuolumini	Ongoing Line		200	Port Harcourt
PHE06OL02	Construction of 330kV Afam- Ikot Ekpena DC Transmission Line 65Km	Afam-Ikot Ekpena	Ongoing Line		1200	Port Harcourt
PHE08SR01	Afam IV (330kV) Substation Ext	Afam IV	Substation Reinforcement			Port Harcourt

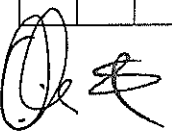





E. Central Bank of Nigeria – SLA Projects

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
AE13SR04	Upgrade of 2x60MVA 132/33kV to 2x100MVA 132/33kV Transformers at Karu Transmission Station (to resolve transformer capacity limitation at Karu TS)	Karu	Substation Reinforcement	June, 2024	64	Abuja
AE14AT01	Transformers Spares: Power Transformers (1x150MVA, 1X100MVA)		Additional Transformer	June, 2024		Abuja
AE15AT02	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Abuja
BE07SR03	a. Replacement of the faulty 1x150MVA, 330/132kV Power Transformer at Asaba 330/132/33kV TS b. Upgrading of 2x60MVA with 2x100MVA, 132kV/33kV, Power Transformers c. Construction of additional 2X33kV Feeder Bays	Asaba	Substation Reinforcement	June, 2024		Benin
BE08SR04	Construction of 2 numbers of additional 33kV Line Bays at Ihovbor 132/33kV TS	Ihovbor	Substation Reinforcement	June, 2024		Benin
BE09SR05	a. Replacement of 3No 132kV and 9Nos 33kV Current transformers and b. Differential relay at Oghara 132kV TS to restore the standby 30MVA power transformer	Oghara	Substation Reinforcement	June, 2024	24	Benin
BE10SR06	Upgrading of faulty 1x30MVA, 132/33kV Transformer with 1x60MVA power transformer at Afiesere 132/33kV TS	Afiesere	Substation Reinforcement	June, 2024	16	Benin
BE11SR07	a. Replacement of faulty grounding transformer on 1x40MVA, 132/33kV at Okada 132/33kV TS. b. Replacement of differential relay and surge Arrester on 1x40MVA transformer.	Okada	Substation Reinforcement	June, 2024	32	Benin
BE19LR01	Reconductoring of 96km Oshogbo - Akure 132kV Single Circuit transmission line	Oshogbo-Akure	Line Reconductoring	June, 2024	48	Benin
BE20LR02	Reconductoring of undersized conductor on the 132kV line between Ughelli and Effurun (10Km)	Ughelli-Effurun	Line Reconductoring	June, 2024	48	Benin
BE21AT01	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Benin
EK15SR03	a. Upgrading of 1X40MVA & 1x45MVA with 2 x60MVA, 132/33kV Power Transformer at Akoka TS b. Construction of additional 33kV feeder bay c. Conversion of indoor Circuit breaker to outdoor.	Akoka	Substation Reinforcement	June, 2024	32	Eko
EK16SR04	a. Replacement of faulty 60MVA 132/33kV Transformer with 100MVA, 132/33kV at Isolo b. Installation of 3nos 33kVA Feeder bays	Isolo	Substation Reinforcement	June, 2024	32	Eko
EK17SR05	Replacement of failed 60MVA transformer at Ilire TS	Ilire	Substation Reinforcement	June, 2024	48	Eko
EK18SR06	a. Construct 3nos 33kV bays at the transmission station b. Rehabilitation of problematic indoor circuit breakers -(Elimson -Turkey type)- Faulty 33kV panel to be replaced for System Reliability	Ojo	Substation Reinforcement	June, 2024		Eko
EK19SR07	a. Upgrading of 2x45MVA with 2x100MVA, 132/33kV Transformers at Agbara. b. Construction of additional 6x33kV feeder bays	Agbara	Substation Reinforcement	June, 2024	88	Eko
EK20SR08	a. Installation of 1x100MVA, 132/33kV Transformers at Ajia TS b. Construction of additional outdoor 3x33kV feeder bays	Ajia	Substation Reinforcement	June, 2024	80	Eko

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
EK26AT14	Transformers Spares: Power Transformers (1x150MVA, 1X100MVA)		Additional Transformer	June, 2024		Eko
EK27AT15	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Eko
EE15AT01	Power Transformers Spares (1x150MVA, 330/132/33kV + 1X100MVA, 132/33kV)		Additional Transformer			Enugu
EE16AT02	Power Transformers Spares (i) 2x60MVA, 132/33kV		Additional Transformer			Enugu
IB17SR03	a) Replacement of faulty 60MVA, 132/33kV transformer (T3) at Ijebu-Ode	Ijebu Ode	Substation Reinforcement	June, 2024	48	Ibadan
IB18SR04	a) Upgrading of 1x40MVA & 1x45MVA Mobira with 2x60MVA, 132/33kV Transformer including 2x33kV feeder bays at Jericho 132/33kV TS	Jericho	Substation Reinforcement	June, 2024	32	Ibadan
IB19SR05	Installation of 1x60MVA, 132/33kV Transformer at Ile Ife 132/33kV TS which is already on plinth including 2x33kV feeder bays for connection.	Ile Ife	Substation Reinforcement	June, 2024	48	Ibadan
IB20SR06	Installation of additional 1x150MVA, 330/132kV transformer at Ayede 330/132/33kV TS	Ayede	Substation Reinforcement	June, 2024	120	Ibadan
IB21SR07	Upgrading of 2x60MVA, 132/33kV transformers to 2X100MVA, 132/33kV transformers at Ibadan North 132/33kV TS	Ibadan North	Substation Reinforcement	June, 2024	64	Ibadan
IB26AT12	Transformers Spares: Power Transformers (1x150MVA, 1X100MVA)		Additional Transformer	June, 2024		Ibadan
IB27AT13	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Ibadan
IK02SR02	Additional 33kV line bay at Egbin 132/33kV Substation	Egbin	Substation Reinforcement	June, 2024		Ikeja
IK03SR03	a. Replacement of Differential protection relay and other materials on 300MVA, 330/132/33kV transformer at Oke Aro 330/132/33kV Substation. b. Installation of additional 1x100MVA, 132/33kV Power Transformer. c. Installation of additional 3x33kV feeder bays at Oke Aro TS	Oke Aro	Substation Reinforcement	June, 2024	80	Ikeja
IK04SR04	a. Upgrading of T3 45MVA transformer to 60MVA, 132/33kV to accommodate more load b. Upgrading of 1x30MVA to 1x60MVA, 132/33kV transformer at Isolo TS	Isolo	Substation Reinforcement	June, 2024	40	Ikeja
IK05SR05	a. Upgrading of 1x30MVA to 1x60MVA, 132/33kV transformer, b. Upgrading of 1x40MVA to 1x100MVA, 132/33kV power transformer	Ilfre	Substation Reinforcement	June, 2024	72	Ikeja
IK06SR06	a. Replacement of 1x30MVA transformer with 1x60MVA, 132/33kV Power Transformer b. construction of associated additional 2x33kV feeder Bay at Oworonsoki TS	Oworonsoki	Substation Reinforcement	June, 2024	24	Ikeja
IK16AT01	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Ikeja
IK19AT04	Transformers Spares: Power Transformers (1x150MVA) + (1x100MVA)		Additional Transformer	June, 2024		Ikeja
JE02AT01	Transformers Spares: Power Transformers (1x150MVA) + (1x100MVA)		Additional Transformer	June, 2024		Jos
JE03AT02	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Jos
KA013SR04	Upgrading of 1x30 MVA to 1x60 MVA, 132/33kV Transformer at Gusau 132/33kV TS	Gusau	Substation Reinforcement	June, 2024	24	Kaduna

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
KAEL4SR05	Construction and installation of 1x45MVA Mobira 132/33kV down dropper (on existing B/Kebbi-Sokoto 132kV S/C transmission line) TS at Argungu	Argungu	Substation Reinforcement	June, 2024	36	Kaduna
KAEL3SR06	Installation 1x60 MVA, 132/33kV power transformer at Sokoto 132/33kV TS	Sokoto	Substation Reinforcement	June, 2024	48	Kaduna
KAEL6AT01	Transformers Spares: Power Transformers (1x150MVA) +(1x100MVA)		Additional Transformer	June, 2024		Kaduna
KAEL7AT02	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Kaduna
KAEL8LR01	Reconductoring of Zaria - Funtua - Gusau 132kV Transmission Line (190KM)	Zaria-Funtua	Line Reconductoring	June, 2024	48	Kaduna
KE08SR03	Installation of additional 60MVA 132/33kV transformer to enable evacuation of power from Wudil T/S to Kano and de-load Dakata and Dan-Agundi Substations and create flexibility	Wudil	Substation Reinforcement	June, 2024	48	Kano
KE13AT01	Transformers Spares: Power Transformers (1x150MVA) + (1x100MVA)		Additional Transformer	June, 2024		Kano
KE14AT02	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Kano
KE15LR01	Reconductoring of Kankia - Katsina 132kV Transmission line (70km)	Kankia-Katsina	Line Reconductoring	June, 2024	48	Kano
PHE09SR02	a. Addition of 2nd 1 x60MVA, 132/33kV transformer b. Installation of 3x33kV feeder Bays at Eielenwo	Eielenwo	Substation Reinforcement	June, 2024	48	Port Harcourt
PHE10SR03	a. Installation of additional 1x60MVA, 132/33kV transformer b. Replacement of faulty bushing on Transformer TR2 at Rumuosi	Rumuosi	Substation Reinforcement	June, 2024	48	Port Harcourt
PHE11SR04	Extension of 1 circuit (ZZ) of 132kV Omoku D/C transmission line from ZZ Port-Harcourt main 132/33kV TS - Z4	Port Harcourt Main	Substation Reinforcement	June, 2024		Port Harcourt
PHE17AT01	Transformers Spares: Power Transformers (1x150MVA) + (1x100MVA)		Additional Transformer	June, 2024		Port Harcourt
PHE18AT02	Transformers Spares: Power Transformers (2x60MVA)		Additional Transformer	June, 2024		Port Harcourt

F. World Bank – WB

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
AE23SR01	a) Upgrading of 2x60MVA with 2x100MVA 132/33kV Power Transformer b) Rehabilitation of civil structures of the Control Room and Digital Control System at Abuja Central Area	Central Area	Substation Reinforcement	June, 2024	64	Abuja
AE24SR02	Construction of complete new 132/33kV substation at Kabba a) 2X60MVA, 132/33kV transformers b) 132kV, 33kV primary and secondary switchgears, Control/protection systems and automation.	Kabba	Substation Reinforcement	Completed	96	Abuja
AE25SR03	Rehabilitation of 330kV Substation, High Voltage Switchgears, Associated Equipment b) Rehabilitation of Control Room including Digital Control System at Kainji	Kainji	Substation Reinforcement	June, 2024		Abuja
AE26SR04	o Replacement of obsolete Control and Relay Panels with Digital Control System at Shiroro 330kV TS, o Replacement of High Voltage 330kV Switchgears and Associated Equipment	Shiroro	Substation Reinforcement	June, 2024		Abuja
BE12SR08	" Reinforcement of Benin 330/132/33kV TS with 2 X 300MVA 330/132kV Power Transformers" Reinforcement with 1 x 100MVA 132/33kV Power Transformer Replacement of High Voltage Switchgears, and Associated Equipment. Replacement of Obsolete Control and Relay Panels with Digital Control System	Benin	Substation Reinforcement	June, 2024	80	Benin
BE13SR09	o Replacement of defective 1x 60MVA 132/33kV at Effurun 132/33kV TS with a new 1x 1000MVA 132/33kV Power Transformer o Replacement High Voltage Switchgears, and Associated Equipment o Installation of 4 No Additional Feeder Bays at Effurun, o Replacement of Obsolete Control and Relay Panels with Digital Control System at Effurun 132/33kV TS	Effurun	Substation Reinforcement	June, 2024	80	Benin
BE14SR10	Reinforcement of Delta 132/33kV TS with 1 x 100MVA 132/33kV Power Transformer	Delta	Substation Reinforcement	June, 2024	80	Benin
BE15SR11	Supply and installation of 100MVA 132/33kV power Transformer and associated Switchgears at Irrua 132/33kV TS	Irrua	Substation Reinforcement	June, 2024	80	Benin
BE16SR12	Reinforcement with 1 x 150MVA 330/132kV Interbus Transformer at Delta 330/132/33kV TS	Delta	Substation Reinforcement	June, 2024	120	Benin
BE17SR13	Upgrading of 2 x 30MVA at Ondo 132/33kV TS with 2x 60MVA, 132/33kV Power Transformers. o Replacement of High Voltage Switchgears, Control & Relay panel with Digital Control system and	Ondo	Substation Reinforcement	June, 2024	48	Benin
EK21SR09	o Conversion of 6nos. 33kV Indoor to 8No Outdoor. Rehabilitation of control room o Upgrading of 2 x 30MVA with 2 x 100MVA 132/33kV at Ijora 132/33kV TS o Rehabilitation of civil structures of the Control Room and Digital Control System	Ijora	Substation Reinforcement	June, 2024	112	Eko
EK22SR10	o Supply & Installation of 1 x300MVA 330/132kV and 2x100MVA 132/33kV Power Transformers at Lekki 330/132/33kV TS o High Voltage Switchgears and Associated Equipment	Lekki	Substation Reinforcement	June, 2024	240	Eko
EK23SR11	Supply & Installation of 1 x300MVA 330/132kV, 2 x 100MVA 132/33kV Power Transformers o Switchgears and Associated Equipment	Alogbon	Substation Reinforcement	June, 2024	240	Eko

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
EK24SR12	<ul style="list-style-type: none"> o Rehabilitation of building structure and sinking surrounding area o Replacement of obsolete 132kV equipment, 33kV Metal clad Switchgears, Control & Relay panel o Reinforcement with 1 x 60MVA 132/33kV Power Transformer. o Refurbishment of the 2x 45MVA transformers and GIS component at Akoka 	Akoka	Substation Reinforcement	June, 2024	84	Eko
EK25SR13	<ul style="list-style-type: none"> o Rehabilitation of building structure and sinking surrounding area o Replacement of obsolete 132kV equipment, 33kV Metal clad Switchgears, Control & Relay panel o Reinforcement with 1x 60MVA 132/33kV Power Transformer. o Refurbishment of the 1 x 40 & 60MVA transformers and GIS components at Ilire TS 	Ilire	Substation Reinforcement	June, 2024	80	Eko
EE08OS07	<ul style="list-style-type: none"> Construction of complete new 132/33kV substation at Ninth Mile o 2X60MVA, 132/33kV transformers b) 132kV 33kV primary and secondary switchgears, Control/protection systems and automation. 	Ninth Mile	Ongoing Substation	Dec., 2022	96	Enugu
EE17SREH01	<ul style="list-style-type: none"> a) Rehabilitation of 330kV Substation, Control Room, Digital Control System b) Replacement of High Voltage Switchgears and Associated equipment at Alaoji 	Alaoji	Substation Rehabilitation			Enugu
EE18SREH02	<ul style="list-style-type: none"> a) Rehabilitation of 132kV Substation, 132kV Control Room, Digital Control System b) Replacement of High Voltage Switchgears and Associated equipment at Aba a) Reinforcement with 1 x 150MVA 330/132/33kV, 2 x 60MVA Transformers with Associated Equipment b) Replacement of High Voltage Switchgears c) Rehabilitation of Control Room with Digital Control System at New Haven 	New Haven	Substation Reinforcement	June, 2024	96	Enugu
EE20SR01	<ul style="list-style-type: none"> a) Reinforcement with 1No. 60MVA 132/33kV Power Transformers b) Replacement of High Voltage Switchgears and Associated Equipment at Abakaliki a) Supply & Installation of 1 x 75Mvar Reactor b) Reinforcement with 1 x 60MVA 132/33kV c) Replacement of High Voltage Switchgears and Associated Equipment at Uguwaji 	Abakaliki	Substation Reinforcement	June, 2024	48	Enugu
EE21SR02	<ul style="list-style-type: none"> a) Reinforcement with 100MVA 132/33kV Power Transformers b) Extension of 132kV Bus with 3 No. Additional Feeder Bays at Umuhia c) Replacement of High Voltage Switchgears and Associated Equipment at Uguwaji 	Uguwaji	Substation Reinforcement	June, 2024	48	Enugu
EE22SR03	<ul style="list-style-type: none"> a) Reinforcement with 100MVA 132/33kV Power Transformers b) Extension of 132kV Bus with 3 No. Additional Feeder Bays at Umuhia Complete installation of 1 x 60MVA, 132/33kV Transformer OJI (to stop load shedding on Udi, Achi, Oji-Urban and Orumba 33kV Feeders) a) Reinforcement with 2 x 100MVA 132/33kV Power Transformers at Ilorin 132/33kV TS, b) High Voltage Switchgears, and Associated Equipment. c) Construction of New Control Room d) Replacement of control & relay panel with Digital Control System (DCS) 	Umuhia	Substation Reinforcement	June, 2024	80	Enugu
EE23SR04	<ul style="list-style-type: none"> a) Reinforcement with 2 x 100MVA 132/33kV Power Transformers at Ilorin 132/33kV TS, b) High Voltage Switchgears, and Associated Equipment. c) Construction of New Control Room d) Replacement of control & relay panel with Digital Control System (DCS) 	Oji	Substation Reinforcement	June, 2024		Enugu
IB22SR08	<ul style="list-style-type: none"> a) Reinforcement with 1x 90MVA 330/132kV transformer to 1x300MVA transformer b) Reinforcement with 1x100MVA 330/132kV Power Transformers c) Replacement of High Voltage Switchgears and Associated equipment d) Installation of a 75MX Reactor e) renovation of control room at Osoqbo 	Ilorin	Substation Reinforcement	June, 2024	160	Ibadan
IB23SR09	<ul style="list-style-type: none"> a) Reinforcement with 1x 90MVA 330/132kV transformer to 1x300MVA transformer b) Reinforcement with 1x100MVA 330/132kV Power Transformers c) Replacement of High Voltage Switchgears and Associated equipment d) Installation of a 75MX Reactor e) renovation of control room at Osoqbo 	Osoqbo	Substation Reinforcement	June, 2024	168	Ibadan
IB25SR11	<ul style="list-style-type: none"> a) Reinforcement with 1x 90MVA 330/132kV transformer to 1x300MVA transformer b) Reinforcement with 1x100MVA 330/132kV Power Transformers c) Replacement of High Voltage Switchgears and Associated equipment d) Installation of a 75MX Reactor e) renovation of control room at Osoqbo 	Alausa	Substation Reinforcement	June, 2024	80	Ikeja

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
IK13SR13	a) Upgrading of 2 x 30MVA to 2 x 100MVA 132/33kV Power Transformers, b) Replacement of High Voltage Switchgears and Associated Equipment	Maryland	Substation Reinforcement	June, 2024	112	Ikeja
IK20SREH01	a) Replacement of obsolete Control and Relay Panels with Digital Control System. b) Rehabilitation of Control Room, High Voltage Switchgears and Associated Equipment at Egbin	Egbin	Substation Rehabilitation	June, 2024		Ikeja
JE07SR01	a) Reinforcement with 1 x 300MVA 330/132kV and 1 x 100MVA 132/33kV Transformers b) Replacement of High Voltage Switchgears, and associated equipment c) 3 No Additional Feeder Bays at Gombe	Gombe	Substation Reinforcement	June, 2024	80	Jos
JE08SR02	a) Reinforcement with 1 x 300MVA 330/132kV and 1 x 100MVA 132/33kV Transformers b) Replacement of High Voltage Switchgears, and associated equipment c) Rehabilitation of Civil Structures of the Control Room and Digital Control System at Jos TS	Jos	Substation Reinforcement	June, 2024	80	Jos
JE09SR03	Upgrade of 7.5MVA Power Transformer to 1 x 60MVA 132/33kV, High Voltage Switchgears and Associated Equipment at Olukpo	Olukpo	Substation Reinforcement	June, 2024	42	Jos
JE10SR04	Reinforcement with 1x150MVA 330/132/33kV and 1x 60MVA 132/33kV Power Transformers High Voltage Switchgears and Associated Equipment at Apir Construction of complete new 132/33kV substation at Biliri a) 2X60MVA, 132/33kV transformers b) 132kV,33kV primary and secondary switchgears, Control/protection systems and automation.	Apir	Substation Reinforcement	June, 2024	48	Jos
JE11OS01	Construction of complete new 330/132/33kV Substation at Bauchi by turning in and turning out of the existing 3 30kV SC Jos-Gombe line at Bauchi, a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV,132kV,33kV primary and secondary switchgears, Control/protection systems and automation. d) 4 x 330kV line bays e) 2 x 132kV line bays f) 6 x 33kV feeder bay g) 6 x 33kV feeder bays	Biliri	Ongoing Substation	Dec, 2023	96	Jos
JE12OS02	Construction of complete new 330/132/33kV Substation at Bauchi by turning in and turning out of the existing 3 30kV SC Jos-Gombe line at Bauchi, a) 2X150MVA 330/132/33kV transformers b) 2X60 MVA, 132/33kV transformers c) 330kV,132kV,33kV primary and secondary switchgears, Control/protection systems and automation. d) 4 x 330kV line bays e) 2 x 132kV line bays f) 6 x 33kV feeder bay g) 6 x 33kV feeder bays	Bauchi	Ongoing Substation	June, 2024	96	Jos
JE13OS03	a) Upgrading of 22.5MVA and 30MVA Transformers to 2X 60MVA 132/33kV Transformers b) Rehabilitation of Control Room with Digital Control System c) Replacement of High Voltage Switchgears and Associated Equipment at Bauchi a) Reinforcement with 2 x 150MVA 330/132kV b) Installation of 1 x 60MVA 132/33kV Power Transformers with associated 3no. Outgoing 33kV Feeders c) Rehabilitation of Control Room at Birnin Kebbi	Bauchi	Ongoing Substation	June, 2024	48	Jos
KAE12SR03	b) Installation of 1 x 60MVA 132/33kV Power Transformers with associated 3no. Outgoing 33kV Feeders c) Rehabilitation of Control Room at Birnin Kebbi	Birnin Kebbi	Substation Reinforcement	June, 2024	48	Kaduna
KE09SR04	a) Reinforcement with 1 x 300MVA 330/132kV Power Transformer, b) Replacement of High Voltage Switchgears and Associated Equipment c) Replacement of Control and Relay Panel with Digital Control System at Kumbotso	Kumbotso	Substation Reinforcement	June, 2024	240	Kano

Project Code	Project Description	Location	Category	Project Completion Date (MM - YY)	Expected Impact (in MW)	DisCo Impacted
KE10SR05	a) Reinforcement with 1 x 100MVA 132/33kV Power Transformer, Switchgears b) Replacement of High Voltage Switchgears and Associated Equipment c) Replacement of Control and Relay Panel with Digital Control System d) Rehabilitation of Control Room e) Installation of Additional 3 No. Feeders Bay and at Dakota	Dakota	Substation Reinforcement	June, 2024	80	Kano
KE11SR06	a) Replacement of Faulty 1 x 30MVA b) Upgrading of 1 x 30MVA Transformers to 2 x 60MVA 132/33kV Transformers c) Replacement of High Voltage Switchgears and Associated Equipment d) High Voltage Switchgears and Associated Equipment e) Replacement of Control and Relay Panel with Digital Control System at Kankia	Kankia	Substation Reinforcement	June, 2024	48	Kano
KE12SR07	a) Reinforcement of 1 x 100MVA 132/33kV Transformers b) Replacement of High Voltage Switchgears and Associated Equipment c) Replacement of Control and Relay Panel with Digital Control System d) Rehabilitation of Control Room at Dan Agundi	Dan Agundi	Substation Reinforcement	June, 2024	80	Kano
PHE14SR07	a) Reinforcement with 1 x 100MVA 132/33kV Power Transformers, b) Replacement of High Voltage Switchgears and Associated Equipment c) Replacement of Control and Relay Panel with Digital Control System d) Rehabilitation of Control Room at Port Harcourt Main	Port Harcourt Main	Substation Reinforcement	June, 2024	80	Port Harcourt
PHE15SR08	a) Reinforcement with 1 x 100MVA 132/33kV Power Transformers, b) Replacement of High Voltage Switchgears and Associated Equipment c) Replacement of Control and Relay Panel with Digital Control System d) Rehabilitation of Control Room at Port Harcourt town	Port Harcourt Town	Substation Reinforcement	June, 2024	80	Port Harcourt
PHE16SR09	a) Reinforcement with 1 x 60 MVA 132/33kV Power Transformers, b) Replacement of High Voltage Switchgears and Associated Equipment c) Replacement of Control and Relay Panel with Digital Control System d) Rehabilitation of Control Room at Ilu	Ilu	Substation Reinforcement	June, 2024	48	Port Harcourt
YE06SR01	a) Reinforcement with 1 x 150MVA 330/132kV transformer b) Reinforcement 2x 100MVA 132/33kV transformers, c) Replacement of High Voltage Switchgears and Associated Equipment d) 3 No Additional Feeder Bays at Yola	Yola	Substation Reinforcement	June, 2024	160	Yola
YE07SR02	a) Reinforcement with 1 x 150MVA 330kV/132kV transformer b) Replacement of High Voltage Switchgears and Associated Equipment c) 3 No Additional Feeder Bays at Mayo Belwa	Mayo Belwa	Substation Reinforcement	June, 2024	120	Yola
YE08SR03	a) Reinforcement with 1 Nos. 150MVA 330/132kV transformer b) Replacement of High Voltage Switchgears and Associated Equipment c) 3 No Additional Feeder Bays at Damaturu	Damaturu	Substation Reinforcement	June, 2024	120	Yola
YE09SR04	Reinforcement of Biu 132/33kV with 1X60MVA 132/33kV transformer at Biu	Biu	Substation Reinforcement	June, 2024	48	Yola
YE10SR05	a) Reinforcement with 1 x 150 MVA 330kV/33kV transformer b) Replacement of High Voltage Switchgears and Associated Equipment c) 3 No Additional Feeder Bays at Maiduguri	Maiduguri	Substation Reinforcement	June, 2024	120	Yola
YE11SR06	a) Upgrading from 132kV to 330kV Substation with 1x150MVA, 330/132/33kV Power Transformers and 1 x 100MVA 132/33kV Transformer, b) High Voltage Switchgears and Associated Equipment. c) Construction of 330/132kV Control Room at Jalingo	Jalingo	Substation Reinforcement	June, 2024	80	Yola

G. Siemens/Presidential Power Initiative (FGN PowerCo.)

Project Code	Project Description	Location	Category	Project Completion Date	Expected Impact (in MW)	DisCo Impacted
AE11SR02	Installation of 1X100MVA, 132/33kV Transformer at Apo 132/33kV TS, Secondary Current Transformers and Disconnect switches, Control/Protection Panel, Testing & Commissioning and Removal of the Existing 45MVA transformer at Apo.	Apo	Substation Reinforcement		80	Abuja
AE12SR03	Upgrade of 30MVA (T1) to 1 x 60MVA at Okene 132/33kV TS	Okene	Substation Reinforcement		24	Abuja
BE05SR01	Upgrade of 60MVA (T1) at Ihovbor 330/132/33kV TS to 1 x 100MVA	Ihovbor	Substation Reinforcement		32	Benin
BE06SR02	Upgrade of 30MVA (T1) at Amukpe 132/33kV TS to 1 x 60MVA	Amukpe	Substation Reinforcement		24	Benin
EK13SR01	Replacement of burnt 45MVA Transformer by a new 60MVA	Ajich	Substation Reinforcement		12	Eko
EK14SR02	Upgrade of 30MVA to 60MVA at Ojo 132kV S/S	Ojo	Substation Reinforcement		24	Eko
IB16SR02	Upgrade of 60MVA Transformer to 100MVA at Onuaron 132/33kV TS	Onuaron	Substation Reinforcement		32	Ibadan
KAET10SR01	a) Installation of 1X150MVA 330/132/33kV transformer b) Installation of 1X60MVA, 132/33kV transformers c) Extension of existing 330kV and 132kV busbar structures at Mando, d) Primary, Secondary Switchgears and Control/Protection systems, e) All civil works and Testing & Commissioning. at Mando	Mando	Substation Reinforcement		48	Kaduna
KAET11SR02	f) Installation of 1X60MVA, 132/33kV Transformers, g) Installation of Earthing transformer h) 132kV Primary and 33kV Secondary switchgears i) Control/Protection systems j) All civil works k) Testing & Commissioning at Talata Mafara	Talata Mafara	Substation Reinforcement		48	Kaduna
KE06SR01	a) Design, Engineering, Supply & Installation of: 1) 1X60MVA, 132/33kV Transformers. b) 132kV Primary and 33kV Secondary Switchgears. c) Control/Protection Systems d) All civil works e) Testing & Commissioning at Kwanar Dangora	Kwanar Dangora	Substation Reinforcement		48	Kano
KE07SR02	Replacement of 30MVA by a new 60MVA at Birnin Kebbi	Birnin Kebbi	Substation Reinforcement		24	Kano

H. Other Sources Including Siemens/Presidential Power Initiative (FGN PowerCo.)

Project Code	Project Description	Location	Category	Project Completion Date	Expected Impact (in MW)	DisCo Impacted
ALIO1PG01	FACTS device at Kano for voltage stabilization in the North West	Kano	Power Quality	June, 2024		All Discos
ALIO2PG02	FACTS device at Gombe for voltage stabilization in the North East	Gombe	Power Quality	June, 2024		All Discos
EK07PS01	Construction of 2x150MVA, 2X60MVA 330/132/33kV substation at Epe	Epe	Proposed Substation	Dec., 2026	96	Eko
EK08PS02	Construction of 2X150MVA, 330/132kV and 2X60 MVA, 132/33kV substations fully equipped at LFTZ	LFTZ	Proposed Substation		96	Eko
EK09PS03	Construction of 2 X 60MVA 132/33kV Substation at Oko-Abe	Oko Abe	Proposed Substation		96	Eko
EK10PL01	Epe - Lekki EPZ (25km) 330kV Double Circuit Transmission Line	Epe-Lekki FTZ	Proposed Line		1200	Eko
EK11PL02	132 kV DC line from Epe TS to Oko-Abe (40km) TS	Epe-Oko Abe	Proposed Line		200	Eko
EK12PL03	Lekki EPZ to Lekki Double Circuit Transmission Line	Lekki EPZ to Lekki	Proposed Line		1200	Eko
IB13PL01	Construction of 330kV line at Ayede-Shagamu Interchange	Ayede-Shagamu	Proposed Line		1200	Ibadan
IB14PS01	Construction of 330kV at Shagamu Interchange	Shagamu	Proposed Substation			Ibadan
IK15PS01	Propose KARA/BERGER 2X60MVA 132/33kV Station.	Karo/Berger	Proposed Substation		96	Ikeja
JE01PS01	Construction of 2X60MVA substation at Alkalari	Alkalari	Proposed Substation		96	Jos
KAEO8PS01	Construction of 2X60MVA 132/33kV Transmission Station at Eastern and associated feeding 132kV line By-pass Kaduna To Take Care Of The Growing Expansion In The Region	Eastern Bye pass Kaduna	Proposed Substation		96	Kaduna
KAEO9PS02	Construction of new substation at New Industrial Zone and associated 132kV line along Kaduna – Abuja express way	New Industrial Zone	Proposed Substation			Kaduna
KE18LR04	Reconductoring of Kumbotso_Hadejia 132kV line	Kumbotso-Hadejia	Line Reconductoring	Dec., 2025	64	Kano
YE01TU01	Uprating of 2X15MVA to 2X60MVA, at Savannah 132/33kV TS	Savannah	Transformer Upgrade		72	Yola
YE02PL01	Molai/Bama 132kV DC Line	Molai-Bama	Proposed Line		200	Yola
YE03PS01	2X60MVA, 132/33kV TS at Bama	Bama	Proposed Substation		96	Yola