ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAVAN
PLOT NO.4, CHUNOKOLI, SHAILASHREE VIHAR,
BHUBANESWAR - 751021
****

Present: Shri G. Mohapatra, Officiating Chairperson
Shri S. K. Ray Mohapatra, Member

Case No. 103/2023

M/s. TPNODL ……Petitioner
Vrs.
GRIDCO & Others ….....Respondents

In the matter of: **Application for approval of Capital Investment Plan for the FY 2024-25 & FY 2025-26 in the Licensed Area of TP Northern Odisha Distribution Ltd ("TPNODL").**

For Petitioner: Shri Bhaskar Sarkar, Chief Executive Officer, TPNODL.

For Respondents: Ms. Sonali Patnaik, Manager (Legal), DoE, GoO, Shri B.C. Padihary, GM (Finance), GRIDCO Ltd. and Shri Subhashis Samantaray, DGM (Electrical), RT&C, OPTCL. None appears on behalf of Shri Ananda Kumar Mohapatra.

O R D E R

Date of Hearing: 28.11.2023 **Date of Order: 12.12.2023**

The Petitioner, M/s. TP Northern Odisha Distribution Limited (TPNODL), has submitted an application for approval of Capital Expenditure (Capex) to the tune of Rs. 862.94 Cr. for the FY 2024-25 & FY 2025-26 to carry out various system improvement works and for taking up safety activities under six major categories such as statutory & safety, loss reduction, reliability, network optimization & load growth, technology & civil infrastructure and administration in its area of operation. TPNODL has submitted the aforesaid capex proposal in line with the approval in their Board Meeting held on 20.10.2023 and requests this Commission to consider the same while approving the Capex for the FY 2024-25 & FY 2025-26. The application has been filed in pursuance to the direction of the Commission at para 39 of the Vesting Order.

2. TPNODL's licensed area is spread over a geographical area of 27857 sq. km having coastal line of about 150 kms. and it serves a registered consumer base of around 19.40 Lakhs. TPNODL procures power from GRIDCO through Odisha Power Transmission Corporation Limited (OPTCL)'s 220/132/33 kV grid substations at sub transmission voltage of 33 kV and then distributes the power at 33 kV/ 11 kV/ 440V/ 230V depending on the demands of the consumers. The operation area, consumer base, no. of circles & divisions etc. are given in the Table below:

Table 1:

Sl. No.	Particulars	Unit	Details (as on 30.09.2023)
1.	Area	Sq. km	27,857
2.	No of Consumers	Lakh	19.40
3.	Circles	No.	5
4.	Divisions	No.	16
5.	Sub-divisions	No.	50
6.	Sections	No.	159

3. TPNODL in tune with the Vesting Order has to seek the approval of the Capital Expenditure Plan in line with the OERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022. The extracts from the Vesting Order are as follows:

"39. Capital investment plan

…….

(b) In its Bid submitted in response to the RFP, TPCL committed capital expenditure of Rs. 1,270 Cr (Indian Rupee One thousand two hundred and seventy Cr) only for period FY 2021-22 to FY 2025-26 as follows:

Table 1: Capital Expenditure Commitment by TPCL

Capex Commitment (INR Cr)					
FY 22	***FY 23***	***FY 24***	***FY 25***	***FY 26***	***Total***
246	*376*	*259*	*247*	*141*	*1,270*

(c) To allow flexibility in the capital expenditure planning, the Commission stipulates that, in the capital expenditure plan to be submitted by TPNODL as per the license conditions, the capital expenditure commitment for each year of the period FY 2021-22 to FY 2025-26 must be such that capital expenditure proposed up to a year shall be at least equal to the cumulative capital expenditure committed up to that year in the Bid submitted by TPCL. For avoidance of doubt, the minimum cumulative capital expenditure to be proposed by TPNODL for the period FY 2021-22 to FY 2025-26 must be as provided in the table below:

Table 2: TPCL Cumulative Capital Expenditure for 5 years

Cumulative Capex Expenditure (INR Cr)				
Upto 31-Mar- 2022	***Upto 31-Mar-2023***	***Upto 31-Mar-2024***	***Upto 31-Mar-2025***	***Upto 31-Mar-2026***
246	*622*	*882*	*1,129*	*1,270*

(d) TPNODL would be required to seek the Commission's approval on the detailed capital expenditure plan in line with the regulations. TPNODL shall satisfy the Commission that the capital expenditure plan submitted in line with regulations adheres to the capital expenditure plan submitted as part of the Bid."

4. Further, in line with the Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 the licensee is required to take approval from the Commission for undertaking Capex

in its licensed area. The relevant extract of the said Regulations are as follows:

""3.2 Capital Investment:

3.2.1 The Distribution Licensee shall submit detailed capital investment plan, financing plan and physical targets for each year of the Control Period for strengthening and augmentation of distribution network, meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering, reduction in congestion, etc., to the Commission for approval, as a part of the Business Plan applicable for the entire control period and annual proposal for each year of the Control Period.

3.2.2 The Distribution Licensee shall file a separate annual Capital Investment Plan comprising of capital investment plan, financing plan and physical targets for each year of the Control Period as per the timelines specified in Annexure-I.

3.2.3 The Distribution Licensee shall be required to ensure optimum investments to enhance efficiency, productivity and meet performance standards prescribed by the Commission and strictly adhering to the approved annual Capital Expenditure plan as per provisions of the Vesting Order.

3.2.4 Capital Investment in network expansion in Distribution shall be based on Load Flow studies and in accordance with the requirements of the State Grid Code.

3.2.5 The Distribution licensee shall submit the Capital Investment Plan that shall show separately, on-going projects that will spill over from previous years, and new projects (along with justification) that will commence but may be completed within or beyond the control period. The capital investment plan shall contain the scheme details, justification for the work, scheduled / expected date of commissioning, justification for delay (if any) in commissioning, cost over-run, time over-run, capitalization schedule, capital structure and cost benefit analysis (wherever applicable).

3.2.6 The Distribution Licensee shall submit the Detailed Project Reports (DPRs) for all the schemes (including network strengthening and expansion/ augmentation projects based on load flow study) which shall include:

a. Scope and Objective;
b. Purpose of investment;
c. Broad Technical Specifications of the proposed investment and supporting details;
d. Capital Structure;
e. Capitalization Schedule;
f. Financing Plan, including identified sources of investment;
g. Physical targets;
h. Cost-benefit analysis;
i. Approval from Board of Directors (BoD)
j. Prioritization of proposed Investments.

3.2.7 The Capital Investment Plan shall be a least cost plan for undertaking investments and shall cover all capital expenditure projects of proposed investment schemes or such other amount as may be stipulated by the Commission from time to time and shall be in such form as may be stipulated.

3.2.8 The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required including but not limited to the information such as number of power & distribution substations, consumer strength, transformation capacity (in MVA), HT:LT ratio, distribution line length

at HT & LT level etc. showing the need for the proposed investments, alternatives considered, cost/benefit analysis and other aspects that may have a bearing on the wheeling charges of the Wheeling Business.

3.2.10 Capital investment plan shall incorporate list of schemes in order of priority so as to enable the Commission to approve the schemes in that order and in case lesser amount of capital expenditure is to be approved then the schemes of lower priority could be disallowed.

3.2.11. The Distribution Licensee shall be required to consider the annual capital investment plan as approved by the Commission in its Order, in preparation of the Petition for determination of Aggregate Revenue Requirement (ARR) for each year of the control period. The ARR Petition shall include details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require for assessing the progress.

5. As per the Licence Conditions 11 and 32, investment above Rs. 5 Cr. is to be made by the distribution licensee in the licensed business area of operation with the approval of the Commission. Licence Conditions at 11 and 32 stipulate as follows:

"11. INVESTMENTS

11.1 Unless otherwise directed by the Commission, every licensee shall obtain prior approval of the Commission for making investment in the Licensed Business if such investment is above the limits laid down in Condition 32.

11.2 The Licensee shall duly comply with the Regulations, guidelines, directions and orders the Commission may issue from time to time in regard to the investments to be made in the Distribution Business.

11.3 The Licensee shall submit to the Commission investment plans as a part of the business plan under Condition 10.9 above giving details of investment schemes to be undertaken during the concerned period for the approval of the Commission. The Licensee shall demonstrate to the satisfaction of the Commission that:

(a) there is a need for such investments in the Distribution System;

(b) the Licensee has made techno-economic analysis and environmental aspects of all viable alternatives to the proposal for investing in or acquiring new Distribution System assets to meet such need.

(c) the investment plan is in conformance to the conditions for capital investment specified in the Vesting Order

11.4 In the application for investment approval, the Licensee shall furnish the following information or particulars:

(a) A detailed project report containing techno-economic analysis and environmental aspects of the investment together with the outline of the works to be undertaken the salient features and particulars demonstrating the need for investment;

(b) The project cost together with the cost benefit analysis;

(c) Whether the investment is in a new project or for expansion or up-gradation of an existing system;

(d) Sanctions and statutory clearances required for execution of the project and status of such sanctions and statutory clearances;

(e) Phasing of investment over the financial years and commissioning schedule;

(f) The manner in which investments will be capitalised for the purposes of inclusion in the revenue requirements of the Licensee;

(g) Constraints which the Licensee may face in making the investments or in implementing the project including constraints on information available;

(h) Resource mobilisation and financial plans for meeting the investment;

(i) Process for inviting and finalizing tenders for procurement of equipment, material and /or services relating to investment, in accordance with a transparent tendering procedure as may be approved by the Commission; and

(j) Such other particulars as the Commission may from time to time direct.

32. INVESTMENT AND TRANSFER OF ASSETS (IN CONTINUATION TO CONDITION 11 AND 12)

32.1 For the purposes of Condition 11.10, the term "major investment" means any planned scheme wise investment in or acquisition of distribution facilities like Rural Electrification, System Improvement, Major Renovation & Modernization works, the cost of which, when aggregated with all other investments or acquisitions (if any) forming part of the same overall transaction/scheme, equals or exceeds Rs. 5 Cr or otherwise determined by the Commission from time to time by a general or special order. For smaller transactions for which prior approval of the Commission has not been obtained, the proposals will be considered at the time of annual true-up subject to prudence check by the Commission."

6. Accordingly, in line with the above provisions, TPNODL has submitted the DPR with Capex proposal to the tune of Rs.447.29 Cr. for FY 2024-25 and Rs.415.65 Cr. for FY 2025-26 on 31.10.2023 in line with the approval of BoD for the FY 2024-25 & FY 2025-26.

7. The petitioner has submitted that, in line with the vesting order, the Commission had approved capex commitment of Rs.258.78 Cr. for FY 2021-22 (vide its Order dated 18.09.2021 in Case No 41/2021), Rs.326.54 Cr. for FY 2022-23 (vide its Order dated 14.07.2022 in Case No 15/2022) & Rs.433.10 Cr. for FY 2023-24 (vide its order dated 19.06.2023 in Case No 99/2022). The progress status vis-à-vis the approved capex submitted by the petitioner is shown in the table below:

Table 2: TPNODL CAPEX Approved Vis-a Vis Actual up to 30.09.2023

(Rs. Crore)

Sl. No	Major Category	Vesting Order	Capex Approved	Capitalised as on 30.09.2023	WIP as on 30.09.2023
FY 2021-22					
1	Statutory & Safety	246.00	28.45	20.55	4.65
2	Loss Reduction		16.39	13.40	1.79
3	Reliability		94.35	72.44	20.12
4	Load Growth		21.71	22.57	0.87
5	Technology & Infrastructure		97.88	88.60	6.96
6	Disaster Mitigation		0.00	0.00	0.00
	Total	**246.00**	**258.78**	**217.56**	**34.39**
FY 2022-23					
1	Statutory & Safety	376.00	9.35	16.48	2.14
2	Loss Reduction		12.53	8.73	4.38
3	Reliability		60.18	32.78	31.36
4	Load Growth		92.88	71.41	35.40
5	Technology & Infrastructure		97.81	72.14	28.13
6	Disaster Mitigation		53.79	8.98	8.62
	Total	**376.00**	**326.54**	**210.52**	**110.03**
FY 2023-24					
1	Statutory & Safety	260.00	49.41	8.23	19.94
2	Loss Reduction		56.61	2.31	34.25
3	Reliability		103.15	3.97	27.03
4	Load Growth		102.14	5.85	55.89
5	Technology & Infrastructure		119.80	8.65	58.81
6	Reducing carbon footprint		1.99	0.00	0.00
	Total	**260.00**	**433.10**	**29.01**	**195.92**
Cumulative till 30.09.2023					
1	Statutory & Safety	882.00	87.21	45.26	26.73
2	Loss Reduction		85.53	24.44	40.42
3	Reliability		257.68	109.19	78.51
4	Load Growth		216.73	99.83	92.16
5	Technology & Infrastructure		315.49	169.39	93.90
6	Disaster Mitigation / Reducing Carbon Footprint		55.78	8.98	8.62
	Total	**882.00**	**1018.42**	**457.10**	**340.33**

8. TPNODL has submitted that it receives power at 33 kV level from 29 nos. of Grid Sub stations (GSS) out of which 4 nos. of GSS are at 220/33 kV level and 25 nos. at 132/33 kV level located within the vicinity of TPNODL operational area. The information of existing supply system of TPNODL is given in the table below:

Table 3:

Sl. No.	Particulars	Unit	Details as on 30.09.2023
1	TPNODL licensed Area	Sq. Kms	27857
2	Consumers	Nos. in lakhs	19.40
3	Grid Substations	Nos.	29
4	33 kV Feeders	Nos.	111
5	33/11 kV Sub-Station	Nos.	245
6	Power Transformer	Nos.	553
7	33/11 kV Transformer Capacity	MVA	2640.20
8	11kV Feeder	Nos.	835
9	DTR	Nos.	76366
10	33/0.415 kV, 11/.415/0.230 kV Transformer Capacity	MVA	2861.90
11	33 kV Line	Kms	3074.10
12	11 kV Line	Kms	40747.60
13	LT Line with Bare Conductor	Kms	21103.30
14	LT Line with Ab Cable	Kms	46747.30
15	Total LT Line	Kms	67850.60

9. Further, TPNODL has identified multiple challenges related to safety, network reliability across various voltage levels, metering infrastructure, customer service, and technology usage which are planned to be addressed through systematic investment plan. The proposed plan entails a justified and efficient level of capital investment aimed at meeting service obligations, enhancing safety, improving network reliability, and elevating service standards. Key interventions in the proposed plan include network reinforcement and the adoption of technology to minimize equipment failures, reduce tripping occurrences, enhance billing and collection efficiency, and urgently refurbish the network infrastructure. This involves actions such as feeder re-conductoring, feeder length optimization, dedicated feeders for specific customer segments, pole replacements, system protection enhancements, and network augmentation to boost power supply reliability. The plan emphasizes the introduction of advanced technologies and analytics to enhance meter reading accuracy, prevent meter tampering, and provide superior customer service. Business process re-engineering is also deemed necessary to elevate customer service quality. Furthermore, technology adoption is crucial for ensuring high-quality customer service, streamlining revenue cycle processes to minimize AT&C losses, and effectively delivering reliable and safe power supply while adhering to operational standards.

10. To confirm reliable power supply and ensuring best customer services to the end consumers, the petitioner has proposed Capital Investments under six major heads i.e. (i) Statutory & Safety, (ii) Loss Reduction, (iii) Reliability, (iv) Network optimization & Load Growth, (v) Technology and (vi) Civil Infrastructure and Administration.

11. atutory & Safety, (ii) Loss Reduction, (iii) Reliability, (iv) Network optimization & Load Growth, (v) Technology and (vi) Civil Infrastructure and Administration.

12. The petitioner has submitted that, it has conducted detailed network studies projecting a five-year load growth scenario for all five circles. Based on these studies, specific areas of distribution system have been identified for reinforcement/augmentation/addition through Capex Investments of Rs. 447.29 Cr. during FY 2024-25 and Rs. 415.65 Cr. during FY 2025-26.

13. Accordingly, TPNODL has submitted the Detailed Project Report (DPR) for Capex plan of Rs. 447.29 Cr. for FY 2024-25 and Rs. 415.65 Cr. for FY 2025-26 under the following six major categories i.e. (i) Statutory and safety, (ii) Loss reduction, (iii) Reliability, (iv) Network optimization and load growth (v) Technology and (vi) Civil Infrastructure & Administration.

A. Statutory & Safety:

The following activities are considered under this head:

a) Safety HOTT & LOTO Development:

TPNODL has proposed to develop 5 nos. Hands On Technical Training center (HOTT) at 5 circles (Balasore, Baripada, Keonjhar, Jajpur and Bhadrak) towards Hands on technical training including safety training for 11000 business associate employees to develop their skill and building competency. TPNODL has also proposed capex investment for discharge lamp, pole climber, full body harness, Virtual reality (VR) training module emergency light, safety mirror & Lock Out & Tag Out (LOTO) for safety practice and prevention of any accidents. Accordingly, the expenditure proposed for safety HOTT & LOTO Development is Rs 9.60 Cr & Rs.8.00 Cr. for FY 2024-25 and FY 2025-26 respectively.

b) Fencing of Distribution Substations (DSS):

The petitioner has raised concerns about the condition of fencing around DSS, which pose a safety threat to stray animals and the public. Fencing is an essential requirement for ensuring the protection of transformers, which in turn reduces the risk of power cuts due to equipment failure. Therefore, it is necessary to provide fencing to safeguard the DSS and maintain safety clearances. To address these concerns,

TPNODL has proposed to install fencing around 800 (3phase DT>100KVA) DSS in FY 2024-25 at the estimated cost of Rs.13.10 Cr. and 800 more in FY 2025-26 at the cost of Rs.13.10 Cr.

c) Boundary wall work at Primary Substations (PSS):

TPNODL has submitted that the condition of the Boundary wall for PSS is in very bad condition. Ensuring the safety of People & equipment is very much needed for safe operation. Hence TPNODL has proposed the Capex of Rs.12.59 Cr. towards 7482 meters boundary walls for PSS in FY 2024-25 and Rs.6.78 Cr. towards 4028 meters boundary walls for PSS during FY 2025-26.

d) Fire wall between the Power Transformers (PTR) "6Mtr*8Mtr":

The petitioner has submitted that as per CEA regulation and IS 1646, Transformers and equipment installed outdoors, having an individual or aggregate oil content of 2,000 liters or more shall be located in a suitably fenced and locked enclosure separated on all sides by at least 6mtr from any building including Substation. Separating walls is necessary between transformers having an individual or aggregate oil content of 2,000 liters. Further, the Electrical Inspector during the last visits has also recommended the installation of a firewall in PSSs between two transformers where applicable. the installation of a transformer firewall between two adjacent PTRs is crucial for safety, equipment protection, and business continuity. It serves as a preventive measure to contain fires and prevent their propagation to neighboring areas. In view of the above, TPNODL has proposed Rs.1.14 Cr. for FY 2024-25 & Rs.1.21 Cr. for FY 2025-26 towards 60 nos. Firewall between the Power PTRs.

e) Defective cable replacement:

TPNODL has submitted that the existing service lines of most of the meters are very old and have multiple joints, especially in govt connections like hospitals, govt schools, govt offices, etc. At many locations, these joints are necked and accessible to the consumer/public, which may be a safety risk to the consumer or general public. So, for the elimination of the safety risk, TPNODL has proposed Rs.8.00 Cr. for FY 2024-25 & Rs. 7.50 Cr. for FY 2025-26 for the replacement of a damaged service line of 939900 Mtr. & 880800 Mtr. respectively.

f) Gravel Filling and Switchyard Development in PSS:

Gravel is commonly used in 11kV and 33kV switchyards as part of the grounding system. This is done for several reasons, including electrical safety, soil stabilization, corrosion protection, and easy maintenance. To ensure safety standards are met and an effective grounding system is designed and implemented, TPNODL has proposed Rs.

2.65 Cr. for FY 2024-25 & Rs. 2.32 Cr. for FY 2025-26 towards gravel filling and switchyard development in 150 nos. PSSs.

Accordingly, to make the network fully compliant to safety and statutory standards, TPNODL has proposed an investment of Rs 85.99 Cr towards Network Refurbishment for Safety (Rs.47.08 Cr. for FY 2024-25 & Rs. 38.91 Cr. for FY 2025-26). The Summary of CAPEX proposed by TPNODL under the head Statutory and Safety is as under:

Table 4: Summary under the head Statutory & Safety for FY 2024-25 & FY 2025-26

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total (Rs Cr.)
1	Safety HOTT & LOTO deployment	9.60	8.00	17.60
2	Fencing of Distribution Substations	13.10	13.10	26.20
3	Boundary wall work at Primary Substations	12.59	6.78	19.37
4	Fire wall for PTR between the PTRs "6Mtr*8Mtr"	1.14	1.21	2.35
5	Defective service cable replacement	8.00	7.50	15.50
6	Gravel Filling and S-Yard development in PSS	2.65	2.32	4.97
	Sub Total- Statutory & Safety	**47.08**	**38.91**	**85.99**

B. Loss Reduction:

The following activities are considered under this head:

a) Conversion of LT Bare conductor to AB Cable:

The LT network's reliance on bare overhead conductors causes frequent faults and allows for electricity theft, leading to disruptions and revenue losses. To address this, replacing bare conductors with aerial bundled cables (ABC) is suggested. This change aims to enhance safety, reduce theft, and improve reliability for consumers. The conversion process involves replacing conductors, installing support poles, grounding poles, and organizing cables. Benefits include increased reliability, safety, simplified installation, and reduced maintenance. This initiative aims to strengthen the network, providing a more reliable power supply and minimizing theft, benefiting consumers and the distribution system. In the view of the above, TPNODL has proposed 4x95+1x95+1x16 mm2 LT AB Cable (180 kms. in FY 2024-25 & 152 kms. in FY 2025-26) and 4x50+1x50+1x16 mm2 LT AB Cable (153 kms. in FY 2024-25 & 139 kms. in FY 2025-26) to replace LT bare conductor. Accordingly, TPNODL has proposed an investment of Rs 39.91 Cr. for FY 2024-25 & Rs. 34.70 Cr. for FY 2025-26 under this activity.

b) Meters and metering equipment for energy audit:

Upgrading to AMR-compatible technology is necessary for group and transformer side metering. To comply with BEE guidelines, achieving 100% feeder metering by the

next financial year is mandatory for accurate energy audits. Therefore, TPNODL proposed to install meters and metering equipment such as Ring Type CTs 200/5A (10000 nos.), DT Smart Meter for 63kVA (20000 nos.), HTTV 3P4W,-/110V,-/1A,0.2s Meters (500 nos.), Equipment for AMR Installation (1000 nos.), LT CT Meter Boxes (200/5, 400/5 A) with Ring Type CT (15500 nos.), etc. In the above context, TPNODL has proposed capital investment of Rs. 13.78 Cr. & Rs. 9.18 Cr. for FY 2024-25 and FY 2025-26 respectively.

c) Equipment for Meter testing, Meter Reading, HT/LT Accucheck etc.:

The need for meter testing equipment arises to comply with statutory guidelines for field meter testing and address consumer requests concerning fast or faulty meters. According to OERC supply code Clause No. 111(iii), periodic meter inspections are mandated, with single-phase meters requiring testing once every five years, LT three-phase meters every three years, and HT/EHT meters annually. To maintain meter quality in bulk supply, TPNODL plans to establish a meter testing lab in Jajpur Circle, ensuring statutory meter testing requirements across TPNODL. As per Clause No. 102(d) of OERC Supply code, licensees must set up accredited testing laboratories or utilize services from accredited labs. Additional testing equipment is needed to be procured to supplement existing facilities. Therefore, TPNODL has proposed Rs. 1.58 Cr. for FY 2024-25 and Rs. 0.51 Cr. for FY 2025-26 under this current head.

Accordingly, under Loss Reduction head, TPNODL has proposed an investment of Rs.55.27 Cr. for FY 2024-25 & Rs.44.39 Cr. for FY 2025-26, totalling Rs. 99.65 Cr. The Summary of CAPEX proposed by TPNODL under the head Loss Reduction is as under:

Table 5: Summary under the head Loss Reduction for FY 2024-25 & FY 2025-26

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total (Rs Cr)
1	Conversion of LT Bare conductor to AB Cable	39.91	34.70	74.60
2	Meters and metering equipment for energy audit	13.78	9.18	22.96
3	Equipment for Meter testing, Meter Reading, HT/LT Accucheck etc.	1.58	0.51	2.09
	Sub Total- Loss Reduction	**55.27**	**44.39**	**99.65**

C. Network Reliability:

The following activities are considered under this head:

a) Addition / Upgradation of network components in 33/11kV Primary Substation (PSS):

The power distribution network's equipment health is crucial for reliable power supply. Despite preventive maintenance, equipment failures occur, leading to prolonged outages, especially during odd hours or low spare inventory. Replacing

faulty equipment is recommended to bolster the network, optimize resource utilization, manage loads, and prevent overloading. Moisture ingress, notably during rainy seasons, affects switchboards and cables, increasing flashover rates, which poses a threat to more than 70 PSS. Aging cable trenches exacerbate water stagnation, weakening cables and risking failures or fires. So, to improve reliability, enhance network control, and expedite supply restoration during interruptions TPNODL proposed measures include replacing faulty equipment (VCB, CT/PT, CRP, Isolator, etc.), adding or replacing AB switches, enhancing earthing, conducting civil works for water ingress prevention, refurbishing support structures, upgrading bus bars, technical inspections, and addressing moisture issues through dehumidifiers and heaters. Accordingly, TPNODL has proposed an investment of Rs 21.95 Cr. for FY 2024-25 & Rs. 21.95 Cr. for FY 2025-26 under this activity.

b) 33 kV & 11 kV Conductor upgradation:

TPNODL has submitted that, 33kV, 11kV, and LV feeders spanning thousands of circuit kilometers, but these lines suffer from severe disrepair. Multiple joint issues, binding wires, and inadequate safety measures pose electrocution risks to humans and animals. Insufficient maintenance, tree interference, frequent tripping, and inconsistent conductor sizes further compromise safety and reliability. Load flow studies have identified the need for new line installations. Urgent refurbishment and upgrades of the 33kV, 11kV, and LV lines are essential, starting with critical areas where public or animal movement is high. The proposed refurbishment scope includes pole straightening, replacing damaged components, earthing poles across roads, adding mid-span poles to reduce sag, restringing conductors for increased vertical clearance, upgrading conductor sections with multiple joints, replacing weak jumpers and binding wire joints, and installing safety measures like danger boards and anti-climbing devices for compliance and enhanced safety.

In the above context, TPNODL has proposed 33 kV Conductor upgradation with 232 mm^2 (94 CKM. in FY 2024-25 & 80 CKM. in FY 2025-26) and 33 kV Conductor Upgradation with 148 mm^2 AAAC (27 CKM. in FY 2024-25 & 20 CKM. in FY 2025-26) with an investment of Rs.30.51 Cr. for FY 2024-25 & Rs.25.25 Cr. for FY 2025-26. Similarly, TPNODL has proposed 11 kV Conductor upgradation for 169 CKM. in FY 2024-25 & 160 CKM. in FY 2025-26 with an investment of Rs.28.56 Cr. for FY 2024-25 & Rs.27.04 Cr. for FY 2025-26.

c) Refurbishment of 11/0.415kV Distribution Substations (DSS):

The existing DSSs are suffering from poor maintenance, particularly regarding high and low-tension (HT & LT) protection equipment. Connections in pole-mounted or

plinth-mounted substations are in a deteriorated state, causing technical losses and frequent interruptions. Inadequate sizing and improper crimping of Aluminium lugs/sockets in Distribution Transformers (DTs) contribute to hotspots and connection failures. Moreover, oversized fuse wires in fuse cut-outs, often installed at low accessible heights, pose safety risks for the public and animals at various locations. Refurbishment/Life Enhancement of DSS will help in addressing the above-mentioned issues, improve the reliability of power system and above all ensures safety. Accordingly, TPNODL has proposed for Refurbishment of 11kV/0.415 kV, 100 KVA DTR (FY 2024-25: 193 nos. & FY 2025-26: 177 nos.), 11kV/0.415 kV, 250 KVA DTR (FY 2024-25: 124 nos. & FY 2025-26: 114 nos.) and 11kV/0.415 kV, 500 KVA DTR (FY 2024-25: 36 nos. & FY 2025-26: 33 nos.) with an investment of Rs.13.03 Cr. for FY 2024-25 & Rs.11.97 Cr. for FY 2025-26.

d) Installation of Auto reclosure /Sectionalizers, RMUs:

TPNODL currently has many long overhead feeders. In some primary substations, multiple 11kV feeders are controlled through a single 11kV breaker or AB switch. This means that if there is a fault in any 11kV feeder or maintenance activity in the 11kV breaker at the primary substation, it affects the supply of consumers connected to all 11kV feeders controlled from that breaker. To improve the reliability of power supply at such substations, TPNODL has proposed for the installation of Auto-reclosers, Sectionalizers, and Ring Main Units (RMU) in a phased manner. In FY 2024-25, a total of 54 Auto-reclosers/Sectionalizers and 21 RMUs have been proposed for installation. In FY 2025-26, a total of 49 Auto-reclosers/Sectionalizers and 13 RMUs have been proposed for installation. Accordingly, the expenditure proposed for Installation of Auto reclosure /Sectionalizers, RMUs is Rs 11.71 Cr & Rs.9.52 Cr. for FY 2024-25 and FY 2025-26 respectively.

e) Supply & Installation of Fault Passage Indicators (FPIs) for overhead (OH) Lines:

Fault Passage Indicators (FPIs) offer several benefits for overhead (OH) lines. They are easy to install, even on a live network, and can detect both short circuit and low current earth faults. FPIs indicate both permanent and transient faults and have a highly visible red flashlight. They can reduce supply restoration time by 1-2 hours, decrease unserved energy, and enhance customer satisfaction by providing easy fault identification. TPNODL has proposed installing 874 sets in FY 2024-25 and 529 sets in FY 2025-26, investing Rs.4.87 Cr. and Rs.2.95 Cr. respectively for this implementation on multiple sections of overhead lines.

f) Installation of Line AB Switch/Isolator:

TPNODL currently has many long overhead feeders. It has been observed that multiple 33kV and 11kV feeders are controlled through a single breaker or AB switch in the primary substation. During a fault in any 33kV or 11kV feeder, or maintenance activity in 33kV or 11kV, an outage needs to be taken from the breaker available at the primary substation, which affects the supply of consumers connected to all 33kV or 11kV feeders. To improve the reliability of power supply at such substations, the installation of Line AB switch or Isolator at different locations has been proposed in a phased manner. Accordingly, TPNODL has proposed to install the AB switch/isolator for 11kV (FY 2024-25:127 sets & FY 2025-26: 104 sets) and AB switch/isolator for 33kV (FY 2024-25:54 sets & FY 2025-26: 48 sets) with a proposed capex of Rs.5.92 Cr. and Rs.5.03 Cr. for FY 2024-25 & FY 2025-26 respectively.

g) Installation of station transformer in PSS:

During a PSS survey, it was discovered that 5 PSS units do not have a Station Transformer installed. To ensure reliable power supply to consumers, TPNODL has proposed to install 5 Station Transformers in the PSS in FY 2024-25, with an investment of Rs. 0.60 Cr.

Accordingly, under Network Reliability head, TPNODL has proposed an investment of Rs.117.15 Cr. for FY 2024-25 & Rs.103.71 Cr. for FY 2025-26, totalling Rs. 220.86 Cr. The Summary of CAPEX proposed by TPNODL under the head Network Reliability is as under:

Table 6: Summary under the head Network Reliability for FY 2024-25 & FY 2025-26

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total (Rs Cr)
1	Addition/ Upgradation of network component in 33/11 kV Primary Substation	21.95	21.95	43.90
2	33 kV Conductor upgradation	30.51	25.25	55.76
3	11 kV Conductor upgradation	28.56	27.04	55.60
4	Refurbishment of 11 kV/0.415 kV Distribution Substation (DSS)	13.03	11.97	25.00
5	Installation of Auto reclosure /Sectionalizers, RMUs	11.71	9.52	21.23
6	Installation of FPIs for O/H Lines	4.87	2.95	7.82
7	Installation of Line AB Switch/Isolator	5.92	5.03	10.95
8	Installation of Station Transformers in PSS	0.60	0.00	0.60
	Sub Total- Network Reliability	**117.15**	**103.71**	**220.86**

D. Load Growth:

a) Augmentation/ addition of Power Transformers:

To mitigate potential overloading issues, particularly in urban zones experiencing substantial load growth, it is imperative to augment certain power transformers in city areas that are currently overloaded or at risk of overload due to anticipated load escalation over the next two years. This augmentation will yield the following consumer benefits:

- Reliable power supply by ensuring N-1 reliability at PTR level.
- Reduce over-burdening of existing PTRs thereby reducing power cuts.

Accordingly, TPNODL has proposed the augmentation of 2 nos. of PTR from 8 MVA to 12.5 MVA and 8 units of PTR from 5 MVA to 8 MVA with a capital expenditure of Rs. 9.90 Cr. and Rs. 5.60 Cr. for FY 2024-25 and FY 2025-26 respectively.

b) Augmentation/ Addition of Distribution transformer:

To accommodate rising load demands and prevent transformer overloading, it's crucial to augment and add new Distribution Transformers (DTs). Overloaded DTs risk failure and power disruptions, impacting consumer supply reliability. Maintaining optimal loading limits is essential to avoid mechanical stress on transformers. In view of the above, TPNODL has Proposed DT augmentation in FY 2024-25 (122 nos.) and FY 2025-26 (130 nos.) from 25/63 kVA to 100 KVA, augmentation from 100 KVA to 250 KVA (70 nos. & 75 nos. respectively) and augmentation from 200/250 KVA to 500 KVA (14 nos. & 15 nos. respectively) with capex investment of Rs. 23.32 Cr. & Rs. 25.02 Cr. for FY 2024-25 & FY 2025-26 respectively to ensure adherence to safe loading limits and maintain consistent power supply.

c) Conversion of 1Ph DTR to 3Ph DTR along with lines:

TPNODL has proposed to enhance the efficiency of power distribution by converting 117 and 157 single-phase Transformers into Three Phase Transformers accompanied by the necessary upgrading of associated HT/LT lines, involves a planned capital expenditure of Rs. 32.35 Cr. in FY 2024-25 and Rs. 43.13 Cr. in FY 2025-26.

The primary objective behind this initiative is to effectively manage the escalating load demand, ensuring the prevention of overloading in transformers. Overloading poses a significant risk of transformer failure and subsequent power interruptions, which this conversion aims to circumvent.

d) Addition of LT for New connection & mitigation of over load LT feeder:

Based on the data from the past two years, it is predicted that there will be approximately 65,000 to 75,000 new connection applications in the FY 2024-25 and

2025-26. Out of these, around 1,500 to 2,000 connections per year are expected to be applied for in areas where there is no existing low tension (LT) line or where the existing LT line is overloaded. Further, TPNODL has informed that when they extend power supply to single-phase consumers, their expenses are much higher than the amount paid by the consumer for the extension of the supply, as approved by the Commission (Service line charges). To keep the provision for this differential amount and to facilitate new connections while mitigating load growth, TPNODL has proposed the addition of new LT lines to the current DPR.

In the view of the above, TPNODL has proposed 4x95+1x95+1x16 mm2 LT AB Cable (35 kms. in FY 2024-25 & 24.50 kms. in FY 2025-26) and 4x50+1x50+1x16 mm2 LT AB Cable (46 kms. in FY 2024-25 & 36 kms. in FY 2025-26). Accordingly, TPNODL has proposed an investment of Rs 12.04 Cr. for FY 2024-25 & Rs. 08.97 Cr. for FY 2025-26 under this activity.

e) Addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS:

It is also observed that HT consumers on 33kV and 11kV are being fed through tapping point instead of a dedicated feeder. There are multiple HT consumers source also mixed with incoming source of 33/11kV PSS. In case of technical fault at one of the HT consumers leads to tripping of incoming source and another connected HT consumer. To overcome this issue, it is proposed to study to establish link line from alternative available source. Further, 11kV feeders are radial and do not have ring connectivity with another 11kV feeder as per N-1 philosophy. It is proposed to study ring connectivity between nearest 11kV feeder in the vicinity and adjacent PSS 11kV feeders like Hospitals, town, commercial and key government establishments.

To prevent this, TPNODL has proposed adding 166 kms. of 11 kV O/H lines (89 kms. for FY 2024-25 and 77 kms. for FY 2025-26), 22 kms. of 11 kV U/G lines (10 kms for FY 2024-25 and 12 kms. for FY 2025-26), and 29 nos. 11kV Bay at PSS (18 nos. for FY 2024-25 and 11 nos. for FY 2025-26), with a capex investment of Rs. 31.44 Cr. for FY 2024-25 & Rs. 29.99 Cr. for FY 2025-26.

f) Addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS:

Based on the CYME dist. study reports, it is observed that in some of the feeders, conductor sizes are different resulting in compromising the circuit capacity which is limited to the lowest size of the conductor available. Further, a network study was carried out for five circle areas considering the 5 Yrs. load growth and found that some interventions are required to be taken under Capex to provide alternate sources to the existing feeders, load balancing on the feeders, and reduce the length of the lengthy feeders. Site surveys revealed that most 33/11kV PSS have a single incoming 33kV

source which, if it fails, causes a shutdown to all the downstream 11kV & LT network consumers. To prevent this, TPNODL has proposed adding 88kms of 33kV O/H lines (50kms for FY 2024-25 and 38kms for FY 2025-26), 16kms of 33kV U/G lines (8 kms for each FY 2024-25 and FY 2025-26), and 19 nos. 33kV Bay at PSS (10 nos. for FY 2024-25 and 9 nos. for FY 2025-26), with a capex investment of Rs. 29.70 Cr. for FY 2024-25 & Rs. 25.30 Cr. for FY 2025-26.

g) Addition of new DTRs along with Associated HT/LT lines:

To cater the increasing load demand, TPNODL has proposed to add 222 (123 nos. for FY 2024-25 and 99 nos. for FY 2025-26) nos. DTRs (along with associated HT/LT lines with a capital expenditure of Rs. 22.89 Cr. for FY 2024-25 and Rs. 18.31 Cr. for FY 2025-26.

Accordingly, under Network Optimization & Load Growth head, TPNODL has proposed an investment of Rs.161.65 Cr. for FY 2024-25 & Rs.156.32 Cr. for FY 2025-26, totalling Rs. 317.97 Cr. The Summary of CAPEX proposed by TPNODL under the head Network Optimization & Load Growth is as under:

Table 7: Summary under the head Network Optimization & Load Growth for FY 2024-25 & FY 2025-26

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total (Rs Cr)
1	Augmentation of Power Transformer	9.90	5.60	15.50
2	Augmentation of Distribution Transformer	23.32	25.02	48.34
3	Conversion of 1Ph DTR to 3Ph DTR along with lines	32.35	43.13	75.48
4	Addition of LT for New connection & mitigation of over load LT feeders.	12.04	8.97	21.02
5	Addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS	31.44	29.99	61.42
6	Addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS	29.70	25.30	55.00
7	Addition New DTRs along with Associated HT/LT lines	22.89	18.31	41.20
	Sub Total- Network Optimization & Load Growth	**161.65**	**156.32**	**317.97**

E. Technology:

The following activities are considered under this head:

a) Automation of Conventional PSS:

TPNODL has submitted that they will be adopting Rural Digital Sub-station (RDS) approach to implement the Substation Automation System (SAS) in rural PSS. The

goal is to monitor and control the network in order to achieve the best restoration time for its consumers. By deploying RDS for PSS, it helps in the modernization of grids at almost 50% less cost than the conventional approach with minimal outages. The pilot project is set to be implemented at City PSS in Balasore, TPNODL. Accordingly, TPNODL has proposed Rs. 12.23 Cr. for each FY of 2024-25 and 2025-26 towards the automation of conventional PSS and Rural Digital Substation (RDS).

b) Disaster Recovery (DR) Centre-Hardware and Software:

TPNODL Data Center (DC) has been commissioned successfully in OPTCL Data Center at Bhubaneswar in FY 2021-22. This DC hosts IT enterprise applications, customer centric applications, GIS, and AMI applications. In line with the best practices followed up by IT and to maintain business continuity due to any failure of Infra at one site and also to mitigate the risk of cyber security, it is of utmost importance to have a Data Recovery (DR) site for all Business Applications. So, the Commission has already approved CAPEX for the DR site at Sambalpur in FY 2023-24. This budget was put up for approx. 70% of complete DR requirements. To serve DR for all applications, the balance amount has been proposed by TPNODL in the next two-year CAPEX i.e. Rs.3.40 Cr. for FY 2024-25 & Rs.1.75 Cr. for FY 2025-26 towards DR Center hardware & software such as Server, Windows OS, Linux and Antivirus.

c) Data Center Hardware and Software:

TPNODL Data Center (DC) that commissioned in OPTCL Data Center hosts IT enterprise applications, Customer Centric applications, GIS, and AMI applications. Due to increase in data size and user base and for implementing digital platform and application as well as enhancement in existing applications, it is required to have additional and augmenting IT infra such as MDM Development/Licences, HES Licences, Server, Windows OS (Data Center Edition), Linux, Antivirus (Server Edition) and MS SQL 2 Core Enterprise license. In view of the above, TPNODL has proposed Rs. 9.58 Cr. for FY 2024-25 & Rs. 7.78 Cr. for FY 2025-26 towards DC hardware & software.

d) End user IT Infrastructure:

Till date, TPNODL has procured and distributed around 2050 laptops and 300 desktops for its officers (OCSR and CTC employees). TPNODL has also installed around 400 printers and 300 scanners across all offices of TPNODL. Laptop is very convenient in this large geography as need to travel by the officers. With the addition of new manpower and establishments as well as the rollout of more and more IT

applications, in both FY 2024-25 and FY 2025-26, it is imperative that the end users need to be equipped with the necessary IT infrastructure for smoothly performing day-to-day works. Additionally, for FY 2025-26, a portion of laptops procured in the year 2021 will reach their end of life as the laptop comes with a warranty of 4 years and hence the replacement of such laptops shall also be required along with new joinees. Given the above, TPNODL has proposed Rs.2.77 Cr. for FY 2024-25 & Rs.7.24 Cr. FY 2025-26 towards end-user IT infrastructure such as Laptops with OS, MS Office, Antivirus, Printer, etc.

e) Strengthen Network Connectivity:

To create its reliable network, TPNODL has proposed to lay 20 kms. and 30 kms. Optical Fibre Cable (OFC) respectively in FY 2024-25 and FY 2025-26 for connecting 15 PSS (7 numbers in FY 25 and 8 numbers in FY 26) using the OPGW backbone of OPTCL or that of telecom service providers. For all new office buildings/extensions of office buildings coming up in FY 25 and FY 26, necessary extension of LAN connectivity and new MPLS connectivity, if required, shall also be planned. Accordingly, for Strengthen Network Connectivity TPNODL has proposed, Rs. 6.14 Cr. for FY 2024-25 and Rs.3.51 Cr. for FY 2025-26 towards OFC network, Aggregator Router, etc.

f) Balance GIS mapping of two Circle (Baripada & Keonjhar):

TPNODL has submitted that, 100% GIS mapping in the system will strengthen various other business processes viz. energy audit process, technical feasibility, dues verification, and network planning. GIS will become the backbone for the Electrical linear and nonlinear asset repository as well as its connectivity topology. In FY 2021-22, TPNODL successfully implemented GIS software, conducting a comprehensive survey of land base, network, asset, and consumer indexing for one division. The initiative has now expanded to cover the remaining 15 divisions, focusing on base map survey, network, and consumer indexing. Capex for GIS in the last three years has been approved where TPNODL has considered approximately 80% of the areas of Baripada and Keonjhar. to complete the base map, network asset, and pole numbering in these two circles, TPNODL has proposed Rs. 2.45 Cr. for FY 2024-25 & Rs. 1.58 Cr. for FY 2025-26.

Accordingly, under the Technology head, TPNODL has proposed an investment of Rs.36.57 Cr. for FY 2024-25 & Rs.34.09 Cr. for FY 2025-26, totalling Rs.70.66 Cr. The Summary of CAPEX proposed by TPNODL under the head of Technology is as under:

Table 8: Summary under the head Technology for FY 2024-25 & FY 2025-26

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total (Rs Cr)
1	Automation of conventional PSS	12.23	12.23	24.47
2	Disaster Recovery Centre-Hardware and Software	3.40	1.75	5.14
3	Data Center - Hardware and Software	9.58	7.78	17.36
4	End user IT Infrastructure	2.77	7.24	10.01
5	Strengthen Network Connectivity	6.14	3.51	9.65
6	Balance GIS mapping of 2 Circle (Baripada & Keonjhar)	2.45	1.58	4.02
	Subtotal- Technology	**36.57**	**34.09**	**70.66**

F. Civil Infrastructure and Administration:

a) Civil Infrastructure:

TPNODL currently has offices in all five circles and subdivisions. Some of them are owned and about 40% of offices are on rented property. TPNODL is facing challenges while accommodating additional new employees in current office buildings and infrastructure. The current existing infrastructure is old and needs modernization to provide a hygienic, well-ventilated, and spacious work environment. These office locations are touch base points between end consumers and utility. Hence, aesthetics along with the safety of each stakeholder needs to be focused. To ensure the above TPNODL has proposed to carry out the civil infrastructure of designated offices such as upgradation of road and offices, renovation of various office buildings, remodeling & creation of additional workspaces in various office buildings, record rooms & cafeteria canteen. Accordingly, TPNODL has proposed a capex investment of Rs. 18.50 Cr for FY 2024-25 & Rs.27.22 Cr, for FY 2023-24 towards civil infrastructure.

b) Office Administration:

At TPNODL, the office space is currently overcrowded and poorly planned for seating arrangements. Additionally, most of the circulation area is occupied with files and documents, making it difficult to move around. The challenges faced by TPNODL with the current building and infrastructure are to accommodate more employees and provide them with a hygienic, well-ventilated, and spacious working environment. In order to provide excellent services to consumers, maintain a clean and safe working environment, and improve satisfaction among stakeholders, certain infrastructure is required in the workplace, such as office air conditioning systems, water coolers and purifiers, ergonomic office chairs and tables, photocopier machines, and projectors and display screens. Based on these requirements, TPNODL has proposed capex

investment of Rs. 2.60 Cr. each for FY 2024-25 and FY 2025-26 towards office administration.

c) Security cameras, heavy-duty Racking System/ Storage solution at Jajpur Store:

TPNODL has submitted that their store material worth crores are available for mitigation of the maintenance and capex activity. However, there is always a possibility of theft or pilferage of the material. Therefore, to better monitor and record activities around the clock, security cameras are required at the TPNODL store. Additionally, many important items from different categories are stored in this space-limited area, making it difficult to accommodate more material in an easily accessible manner. To address this issue, a heavy-duty storage racking system has been proposed. Given the above, TPNODL has proposed Rs. 8.48 Cr. for FY 2024-25 & Rs. 8.42 Cr. for FY 2025-26 towards security cameras and heavy-duty storage racking system (Jajpur store).

Accordingly, under the Civil Infrastructure and Administration head, TPNODL has proposed an investment of Rs.29.58 Cr. for FY 2024-25 & Rs.38.24 Cr. for FY 2025-26, totalling Rs.67.82 Cr. The Summary of CAPEX proposed by TPNODL under the head of Civil Infrastructure and Administration is as under:

Table 9: Summary under the head Civil Infrastructure and Administration for FY 2024-25 & FY 2025-26.

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total (Rs Cr)
1	Civil Infrastructure (Office Buildings, New GRF and Customer care BED, Approach Roads, Cafeteria Canteen, STS office, and others)	18.50	27.22	45.72
2	Office Administration	2.60	2.60	5.20
3	Security cameras, heavy-duty Racking system / Storage solutions for Balasore, Jajpur & Betnoti Store	8.48	8.42	16.90
	Subtotal- Civil Infrastructure and Administration	**29.58**	**38.24**	**67.82**

14. On the whole, in the instant petition, TPNODL has proposed to approve Rs.447.29 Cr. & Rs. 415.65 Cr. towards capital expenditure for the FY 2024-25 & FY 2025-26 respectively. The major category-wise and activity-wise details are mentioned in the table below:

Table 10: TPNODL CAPEX Proposal for FY 2024-25 & FY 2025-26

(Rs. Crore)

Sl. No.	Major Category	Activity	For FY 24-25 amount in Cr.	For FY 25-26 amount in Cr.
1	Statutory & Safety	Safety HOTT & LOTO deployment	9.60	8.00
		Fencing of Distribution Substations	13.10	13.10
		Boundary wall work at Primary Substations	12.59	6.78
		Fire wall for PTR between the PTRs **"6Mtr*8Mtr"**	1.14	1.21
		Defective service cable replacement	8.00	7.50
		Graval Filling and S-Yard Development in PSS	2.65	2.32
Total (1)			**47.08**	**38.91**
2	Loss Reduction	Conversion of LT Bare conductor to AB Cable	39.91	34.70
		Meters and metering equipment for energy audit	13.78	9.18
		Equipment for Meter testing, Meter Reading, HT/LT Accucheck etc.	1.58	0.51
Total (2)			**55.27**	**44.39**
3	Reliability	Addition/ Upgradation of network component in 33/11kV Primary Substation	21.95	21.95
		33 KV Conductor upgradation	30.51	25.25
		11 KV Conductor upgradation	28.56	27.04
		Refurbishment of 11KV/0.415 KV Distribution Substation (DSS)	13.03	11.97
		Installation of Auto reclosure /Sectionalizers, RMUs	11.71	9.52
		Installation of FPIs for O/H Lines	4.87	2.95
		Installation of Line AB Switch/Isolator	5.92	5.03
		Installation of Station Transformers in PSS	0.60	0.00
Total (3)			**117.15**	**103.71**
4	Network Optimisation & Load Growth	Augmentation of Power Transformer	9.90	5.60
		Augmentation of Distribution Transformer	23.32	25.02
		Conversion of 1Ph DTR to 3Ph DTR along with lines	32.35	43.13
		Addition of LT for New connection & mitigation of over load LT feeders.	12.04	8.97
		Addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS	31.44	29.99
		Addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS	29.70	25.30
		Addition New DTRs along with Associated HT/LT lines	22.89	18.31
Total (4)			**161.65**	**156.32**

5	Technology	Automation of conventional PSS	12.23	12.23
		Disaster Recovery Centre-Hardware and Software	3.40	1.75
		Data Center - Hardware and Software	9.58	7.78
		End user IT Infrastructure	2.77	7.24
		Strengthen Network Connectivity	6.14	3.51
		Balance GIS mapping of 2 Circle (Baripada & Keonjhar)	2.45	1.58
Total (5)			**36.57**	**34.09**
6	Civil Infrastructure and Administration	Civil Infrastructure (Office Buildings, New GRF and Customer care BED, Approach Roads, Cafeteria Canteen, STS office, and others)	18.50	27.22
		Office Administration	2.60	2.60
		Security cameras, heavy-duty Racking system / Storage solutions for Balasore, Jajpur & Betnoti Store	8.48	8.42
Total (5)			**29.58**	**38.24**
Grand Total = 1+2+3+4+5+6			**447.29**	**415.65**

15. The public notice was issued on 02.11.2023 inviting suggestions/ objections to the Capex Plan for the FY 2024-25 & FY 2025-26 of the DISCOMs which were to be filed on or before 31.10.2023. The public hearing on the matter was held on 28.11.2023. The Commission during hearing heard the Petitioner and Respondents, who participated in the hearing. OPTCL and GRIDCO had participated in the hearing and submitted their response. The oral submissions of Government of Odisha during hearing were taken on record.

16. The Commission had raised various queries relating to the Capex proposal of TPNODL. The response of TPNODL to specific queries are as under:

i. Regarding the Board approval of the proposed Capex, the petitioner has submitted that they are yet to receive the minutes of the Board meeting. They will submit the same at the earliest upon receipt.

ii. As regards to Fixed Asset Register showing year-wise, scheme-wise (i.e., Government, Consumer Contribution, Commission's Capex approval, etc.), location-wise, and component-wise up to FY 2023-24, the petitioner has replied that the Fixed Asset Register is available with them showing year wise/source wise (i.e., Government, Consumer Contribution, Commission's Capex approval, etc), location wise and component-wise up to FY 2023-24.

iii. Regarding name and location (along with corresponding division/ circle) of the proposed activities (DTRs, PTRs, DSS, PSS, 11 kV & 33 kV lines, new addition/

augmentation/ refurbishment, etc.) and assets to be created during the proposed financial year, in replied the petitioner has submitted the same.

iv. As regards to Percentage loading of the DTRs & PTRs proposed for augmentation, the petitioner has submitted the same.

v. As regards the information such as capitalization schedule, load flow study, financing plan, cost-benefit analysis and all such items under Regulation 3.2 which have not been provided in the current DPR, TPNODL has only submitted about financial structure i.e. 70% of the Capex shall be funded by long term loan from Banks/financial institutions. Balance 30% shall be funded by an infusion of Equity from Sponsors.

vi. Regarding a detailed statement on swapping of lower capacity DTRs/ PTRs along with the location, the petitioner has submitted the List of swapping of PTR & augmented DTRs/PTRs.

vii. As regards to details on accounting treatment and movement of decapitalized assets, TPNODL has replied as follows:

The Financial Statements of the Company is being prepared in accordance with Indian Accounting Standards (Ind AS) as notified under the Companies (Indian Accounting Standards) Rules, 2015 (as amended) read with section 133 of the Companies Act, 2013. The accounting treatment for decapitalization of assets is done in accordance with Ind-AS 16 (Indian Accounting Standards 16) - Property, Plant, and Equipment, which is briefly explained hereunder:

Before considering decapitalization, Company assesses whether the carrying amount of the asset needs to be impaired. This can arise generally in below cases:

a) Theft or loss of the assets;
b) Obsolesce of assets; and
c) Complete breakdown beyond repair.

Decapitalization accounting treatment:

- Decapitalization note is being prepared and approved by the user department, designated signatory as per the internal approval matrix.
- The carrying amount of the assets, which is gross value, less accumulated depreciation is charged to Profit & Loss statement. It is typically presented within the Other Expenses or as a separate line item, depending on the nature and materiality of the decapitalization.

- Subsequent accounting for the asset: After decapitalization, the asset is removed from the balance sheet and its accumulated depreciation is eliminated. Any remaining value of the asset is fully written off, and no further depreciation or impairment testing is required.

Treatment at the time of disposal/insurance claim of decapitalized assets:

- In case of disposal of the assets, the net realized value is recognized as income from sale of the assets.
- In case of the insurance claim received on the decapitalized assets, the amount received from insurance company is considered as an income.

viii. As regards the declaration that there is no duplication of work between the activities to be carried out in the proposed Capex and the assets created through Government schemes/ support, TPNODL has declared that no duplication of work between the activities will be carried out in the proposed Capex and the assets created through Government schemes/ support.

ix. As regards the reason for consideration of items which are not Capex in nature such as hiring of vehicles, civil repair works, R&M of boundary walls, etc. TPNODL has submitted as follows:

Hiring of Electrical Vehicles:

Since the sites are spread across an area of 27857 sq. Km for effective monitoring of various ongoing projects it is required to visit the sites frequently. To meet the mobility requirement of various project works hired vehicles are considered under the capex.

Civil Repair and R&M to Boundary Wall:

Most of the structures were in a very dilapidated condition with no hygiene and leaking roof and no drainage, also the height of boundary walls was very low thus vulnerable to theft of materials. The buildings where rehabilitated to enhance their respective usable lifespan and boundary walls were extended in height by providing brickwork Barbed wire and concertina coil. Hence considered in capex.

x. With regards to investment of all four DISCOMs in development of a Common Disaster Recovery (DR) center at TPWODL and Data Centre (DC) in TPCODL area and details of item-wise contribution made by each DISCOM and the DPR for development of DR center & DC. TPNODL has submitted as follows:

For the proposed common Disaster Recovery (DR) Center at Sambalpur for

TPCODL, TPSODL, TPNODL and TPWODL, all the concerned utilities have considered replication of compute, network and storage capacity of their respective Data Centers (DC) in the proposed DR. Individual DISCOMs had accordingly proposed necessary IT equipment needed for replicating its Data Center capacity at the DR (in the approved CAPEX DPR for FY 2023-24) which will be exclusively used by them. Common DR components like Civil infrastructure, Building Management System, Cooling System etc. have been included in the FY 2023-24 CAPEX Proposal by TPWODL only and these infra and facilities are not part of any other DISCOM's proposal.

xi. As regards the reason for claiming supervision charges in cost estimates. TPNODL has replied that the other overheads (including supervision Charges) in the estimates have been considered in the estimates as per para 4 (Calculation of capital cost) on page no 91 of the supply code of the OERC. However, during the capitalization, we are not considering the supervision charges separately.

xii. Regarding Financial Year-wise procurement status of Laptops, Desktops and Tablets (approved vis-a-vis procured), TPNODL has submitted the following information.

Table 11:

Items	FY 2021-22		FY 2022-23		FY 2023-24	
	As per DPR	Procured	As per DPR	Procured	As per DPR	Procured (Till Date)
Laptops	900	900	700	700	500	450
Desktops	300	300	0	0	0	0

xiii. Regarding the list of fencing of DSS/ DTR & repairing/ construction of boundary wall of PSS along with location that are already completed, proposed and remaining numbers of DTRs & PSS that require fencing, TPNODL has submitted the list of fencing of DSS/DTR & repairing/ construction of boundary wall of PSS.

xiv. Regarding the justification for price variation (unit rate) of various equipment/ activities (e.g., Transformers, SCADA, IT equipment, etc.) in the current proposal despite procurement being carried out through Centralized Procurement Group on behalf of all 4 DISCOMs, TPNODL has replied that the CCG group was formed in June'2023 and before that, all tenders were being handled by Individual DISOCMs. So, the cost of the Product may be different earlier. Also, the rate may be different due to the geographic difference of the area and the time difference of the floating and concluding the tender. As there may be a variation of the raw material price.

xv. As regards the reason for claiming miscellaneous costs under certain activities, TPNODL has replied that the miscellaneous costs have claimed only under annexure 8.27, at sr. no 8 (page no. 189), which pertains to the very small items related to the transducer. The total cost of the complete (Transducer + Misc. Items) activity is only Rs. 9 Lakh.

xvi. As regards justification for the necessity of some proposals under Civil and Admin expenses of CAPEX like a good number of Refrigerators, Inverters, Induction heaters, RO purifiers, provisions of cafeteria & canteen, water dispensers, etc. TPNODL has submitted that the aforementioned proposals have been considered to provide best-in-class services to consumers, earn consumer delight, and improve satisfaction among other stakeholders, and maintain a clean & safe working environment.

xvii. Regarding justification for proposing Emergency lights under the estimate of safety HOTT & LOTO deployment and under office administration also with different per unit costs, TPNODL has replied that the estimated price of both types of the emergency light mentioned in the BOQ of Safety, HOTT, Gadgets & LOTO deployment (page 89) and Office administration (page 194) are different as type & specification of both the emergency lights are different. The emergency light mentioned on page no 89 is the Aska-type emergency light that is used in open areas whereas the emergency light mentioned on page 194 is the normal domestic light used inside the building and the cost of these lights is Rs. 2 lakhs considered as lump sum for approximately 200 nos. light.

xviii. Regarding the Justification for the proposal of Rs. 2.60 Cr. again for FY 2024- 25 under civil infrastructure for the safety training center despite the Rs. 3.05 Cr. has already been approved in FY 2022-23 for the development of training infrastructure. TPNODL has submitted that a total of Rs. 3.05 Cr. has been taken in FY2022-23 for the development of a safety practice yard and a classroom for handhold training of basic safety L-1, L-2 critical safety procedure and L-3 supervisor training across all divisions.

xix. Now they have proposed to develop infrastructure for Hands hold technical with safety training while doing operation, maintenance, and construction at 5 circles. All HOTT centers will have a model of RMU, Transformer, breaker, cables, different types of conductors, insulators, LA, metering unit, metering cubicle, auto recloser and

sectionaiser, voltage regulator, FPI, Meters, CT, PT, AB switch, isolator, HG fuse, earthing item, safety gadgets and other hardwires.

xx. Regarding the detailed justification of the proposed cost and the necessity of the proposals such as construction of auditorium (Rs. 4.00 Cr.), 1100 nos. of cafeteria & canteen (Rs. 2.2 Cr.), new GRF & customer care (Rs. 2.00 Cr.), extension of Opecenex Block B (Rs. 3.5 Cr.), 4 nos. of STS Office (Rs. 2.6 Cr.), etc., TPNODL has submitted as follows:

An auditorium is required at the HO location for conducting gatherings for employees and other company-related functions. Cafeterias / Canteens are required at various Circle offices for the use of employees. This will enable them to have meals during work and discharge their duties more efficiently. GRF and Customer Care Office at Balasore is in dilapidated condition and needs reconstruction. The upper floor of the building shall be utilized to accommodate part offices presently being operated from rented places (NOCCI). Extension of OpCenEx Block-B is required to accommodate the Staff related to Operations, Engineering, Quality, etc. presently being accommodated at Udyog Bhavan (Rented Premises). The STS team requires various testing facilities and storage of various expensive equipment; hence it is required to create one STS office premise at every division.

xxi. Regarding justification on the variation of per unit cost of the server, TPNODL has submitted as follows.

TPNODL procured different types of servers on three separate occasions: the 6th of August 2021, the 26th of October 2022, and the 22nd of February 2023, to meet different business requirements. Due to differences in make, model, and specifications, there was a price variation. Additionally, the global market conditions, along with the shortage of chips, led to price escalation over time. Accordingly, different types of Servers for FY 2024-25 & FY 2025-26 have been proposed in the current CAPEX.

xxii. Regarding justification for replacement of laptops for employees after 4 years (without residual life assessment), TPNODL has submitted as follows.

The laptop budget has been proposed for FY 2025-26 which is the 5th Financial Year. With experience, it was observed that the laptop starts showing malfunctioning symptoms after 4th year which reduces the efficiency of the laptop and this will reduce the productivity of the employee. Looking into this laptop budget was proposed.

17. The Respondent, Energy Department, Government of Odisha has not submitted any substantial protest in respect of various activities covered under Capex proposal for FY 2024-25 & FY 2025-26. However, the representative of Government of Odisha has orally submitted the following during the hearing:

a) It needs to be ensured that there is no duplication of work under the proposed Capex and the work already approved/ executed under the Government funded schemes.

b) Proper scrutiny of the Capex proposal may be carried out by the Commission to identify genuine investments and its associated costs while approving the Capex amount in order to avoid unnecessary burden on the consumers.

18. The averments submitted by the Respondent OPTCL are stated hereinafter:

a) Regulation 3.2.8. of the OERC (Terms and Determination of wheeling charges and retail supply) Regulations-2022 specify that the Capital Investment Plan shall be accompanied by information showing the need for the proposed investments, alternatives considered, cost/benefit analysis, and other aspects that may have a bearing on the wheeling charges of the Wheeling Business. The information on cost-benefit analysis is not provided in the DPR.

b) Clause 7.11 of IS1646 (Code of Practice for Fire Safety of Buildings & Electrical Installations) states that "Transformers and equipment installed outdoors, having an individual or aggregate oil content of 2,000 liters or more shall be located in a suitably fenced and locked enclosure separated on all sides by at least 6 meters from any building including substation. Separating walls are necessary between transformers having an individual or aggregate oil content of 2000 liters". If the transformers are within 6 m of doors and window openings of surrounding buildings then they shall be protected by single fireproof doors and 6 mm thick wired glass in steel frames respectively. Separating walls shall not be necessary in case of transformers having an aggregate oil capacity exceeding 2000 liters but individual oil capacity of fewer than 5000 liters, if the distance between transformers and other apparatus is more than 6 meters or if the transformers are protected by an approved high-velocity water spray system. This is not applicable if the transformer is filled with non-combustible insulant liquid.

c) That, for FY 2023-24 Commission has approved Rs 1.14 Cr. towards the fire wall between the transformers in 30 locations as proposed by TPNODL. Again TPNODL has proposed Rs 2.35 Cr for FY 2024-25 & FY 2025-26 for 60 locations. Therefore, the details of PSS in compliance with the IS1646 may be furnished.

d) That, TPNODL in its capex plan for FY 2024-25 & 2025-26 has proposed Rs 4.97 Cr. for Gravel filling and S-yard development of 150 nos. of PSS. The same may be allowed after a prudent check.

e) That, TPNODL in Chief Minister's Power Development Program (CMPDP/Phase -V) State Govt. has allowed Rs.64.23 Cr. towards the conversion of LT bare to AB conductor at different locations with CKM length of 612.31 CKM. Further, TPNODL has proposed Rs.74.61 Cr. towards conversion of LT bare to AB conductor (Rs 39.91 Cr in FY 2024-25 for 333 ckm. and Rs.34.70 Cr. in FY 2025-26 for 291 CKM). Given the above, TPNODL should ensure that there will be no overlapping.

f) The Commission has approved Rs.2.83 Cr. for FY 2023-24 for the installation of 500 nos. energy meters. As intimated in the DPR, till date out of the 835 nos. 11kV feeders, 737 nos. and out of 239 nos. of 33kV feeders 111 nos. of meters have been installed. However, they are projecting for replacement of 500 energy meters in the present capex with an estimated cost of Rs 22.96 Cr. Hon'ble Commission may approve the same after a prudence check.

g) The Government of Odisha, Department of Energy, vide Resolution dt 12.07.2023 has approved the upgradation of 33kV lines (97.10 ckm. with Rs 20.89 Cr.), and up gradation of 11 kV lines (118.12 ckm. with Rs.38.43 Cr.) in Phase-V. TPNODL in its capex plan again proposed Rs 55.76 Cr. for FY 2024-25 & Rs 52.29 Cr for FY 2025-26 for upgradation. The Commission in present capex may allow the investment for aforesaid work with due diligence.

h) TPNODL has proposed Rs 42.90 Cr. for FY 2024-25 & 2025-26 for the addition/upgradation of network components in 33/11 kV PSS which is too high. Replacements can be done in a phased manner when particular equipment is required. So, the Hon'ble Commission may take a prudence check while allowing capex under such heads.

i) OPTCL has constructed many 33/11kV substations under ODSSP, DDUGJY, and IPDS schemes which are not made operational by TPNODL. Hon'ble Commission may kindly consider the above submission and allow necessary Capex in this regard.

j) The Commission had approved Rs 1.50 Cr. for the installation of security cameras, a heavy-duty racking system/storage solution in Jajpur for FY 2023-24. TPNODL has again proposed the same work in Jajpur.

k) That in view of the above submissions, the commission may direct the following:

- To make immediate plans for grid connectivity by construction of new 33kV lines.

- To make all new 33/11KV substations constructed by OPTCL under different Govt. funded schemes operational for mitigation of low voltage issue.

19. Shri Ananda Mohapatra has submitted the averments which are concisely stated as hereinafter:

a) The Vesting Orders issued by OERC for sale of erstwhile utilities CESU, NESCO, SOUTHCO & WESCO stipulates filling of CAPEX and Business Plan by Tata DISCOMs for five years period ending with FY 25 for TPCODL and FY 26 for other Tata DISCOMs. The above order of OERC is in line with the National Tariff Policy and the relevant OERC regulations in force because five years control period is specified therein for review of the annual tariff & performances of DISCOMs. Moreover, the mechanism in respect to transformation of MYT principles into business plan is well specified in the national tariff policy and that is a span of five years whereas at the beginning time of the MYT, three years period is allowed. Therefore, filing of Capex & Business Plan for one or two years by the petitioners and consideration of same by OERC violates not only the vesting order of the Commission but also the National tariff policy and the spirit of the Electricity Act, 2003. Therefore, it is necessary to address the issue in the interest of justice.

b) The relevant OERC Regulations, 2022 has been notified by OERC after the issuance of vesting orders in which the 4^{th} control period ends with FY 23 & the span of 5th control period is specified as FY 24 to FY 28 whereas the control period for filing of five years Capex and Business Plan as per vesting orders ends with FY 25 for TPCODL and FY 26 for other Tata DISCOMs. It is evident from above that the timeline of vesting orders is mismatched with the relevant OERC Regulations.

c) The goal of Capex under the MYT principle is to improve the capacity of the distribution infrastructure (assets), reduces losses and enables the DISCOMs to supply reliable & quality power to the esteemed consumers at reasonable tariff. Therefore, it is necessary to verify the existing capacity (assets) of the DISCOMs and without which adding more capacity to the existing capacity through Capex becomes meaningless.

d) While considering the Capex proposal, OERC may determine the value addition in terms of assets and reliability indices for each year of the control period so that the consumers could know the reliability quality and tariff of power supply effected by DISCOMs for the aforesaid period.

e) The compatibility of the distribution networks with transmission networks needs to be ensured. Therefore, it is urged upon OERC to address the issues raised by OPTCL regarding the unutilized network for creating a robust grid system.

20. In response to the queries raised by the Respondent Shri Ananda Mohapatra, TPNODL in its rejoinder has submitted the following:

a) With regards to the timelines of filing of CAPEX proposal and business Plan with respect to the control period as per Tariff Regulation, 2022, TPNODL submits that the provisions of the Tariff Regulations. 2022 stipulates for submission of detailed Capital Expenditure Plan, financing plan, and physical target for each year of the control period for strengthening and augmentation of the distribution network, meeting the requirement of load growth, reduction in distribution loss, improvement in quality of supply, reliability, metering, etc. to the Commission for approval as a part of Business Plan for the entire control period and annual proposal for each year of the control period.

b) In compliance to the provisions of Tariff Regulation, 2022 the licensee has submitted five years Business Plan for the first control period. As the Tariff Regulation, 2022 was notified on 20th December, 2022, due to shortage of time, with approval of Commission, the licensee has submitted Business Plan for the 1st year of 1st control period on 27th January, 2023 and subsequently Business Plan for the balance four years of the control period on 31st May, 2023. The Commission passed order on the Business Plan filed by the licensee on 14th September, 2023 after hearing all stakeholders in a public hearing conducted on 11th July, 2023.

c) Further, in compliance to the provision of 3.2.2 of the Tariff Regulations, 2022, the licensee is supposed to file separate annual Capital Investment Plan within 10th September of every financial year. Accordingly, the licensee was supposed to file annual CAPEX plan for FY 2024-25 by 30th September, 2023. However, the Commission directed the licensee to file annual Capital Investment plan for FY 2024-25 and FY 2025-26 that is for the 4th and 5th year of operation together, which will complete the Capital Investment Plan of initial five years of operation as assigned in the Vesting Order of TPNODL.

d) With regard to mismatch in control period & CAPEX filing as per Vesting Order, TPNODL submits that the Vesting Order stipulated a target of Rs.1270.00 Cr. Capital Investment in first five years of licensed operation to ensure investment commitment from the bidders which was nowhere defined as control period. The Tariff Regulations, 2022 stipulated filing of Business Plan for the control period from FY

2023-24 to FY 2027-28 and the licensee has filed for the entire control period, keeping the capital investment for first two years of the control period in line with the assigned target of Capital Investment in the Vesting Order. Therefore, there is no such mismatch as apprehended by the Ld. Objector.

e) With regard to the existing asset base & reliability indices, TPNODL submits that the existing asset base of the licensee is being reviewed by the Commission from time to time. Further, the licensee has mapped the entire network on GIS and the Capital Investments are planned after thorough load flow analysis of the network.

f) With regards to asset base funded by Government of Odisha & Government of India, TPNODL submitted that after takeover, TPNODL has carried out physical verification of all assets (except line and cables) and earmarked the assets which are funded by various Govt. agencies and existing in our system where the ownership has not been transferred to the licensee.

g) With regard to the status of investment, TPNODL submitted that the investment made and the outcome in terms of loss reduction and improvement in reliability and quality of power supply is being monitored by the Commission from time to time.

h) With regards to the query on compatibility of DISCOMs & transmission networks, TPNODL submitted that in line with the provisions stipulated under section 39(2)(b) of the Electricity Act, STU carried out the planning for the intra-state transmission system in coordination with all stakeholders. Coordination meeting is held between OPTCL and all the DISCOMs to sort out such issues in regular intervals.

21. Heard the Petitioner and Respondents at length through Hybrid mode and considered their written and oral submission during hearing. As per Section 42 of the Electricity Act, 2003 read with Condition 7 of the Licence Conditions and Regulation 4 of the General Conditions of Distribution Licence, and the OERC (Conduct of Business) Regulations, 2004, it shall be the duty of the Distribution Licensee to develop and maintain an efficient, coordinated, economic distribution system in its area of supply and to supply electricity in accordance with the provisions in the Act, Rules, Regulations and the directions of the Commission. The Commission is guided by Section 61(c) of the Electricity Act, 2003, to take into account by the factors, which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments while determining the tariff.

22. As per the provisions of the OERC Wheeling & Retail Supply Tariff Regulations 2022, TPNODL has submitted the specific details of works i.e., location at which the works have been proposed.

23. The Commission at this stage has considered and analysed the CAPEX plan for FY 2024-25 & FY 2025-26 based on the submissions made by TPNODL. In the present case as per para 39(b) of the Vesting Order, the petitioner's minimum committed capital expenditure is Rs.1270 Cr. for the FY 2021-22 to FY 2025-26. The Commission had approved Rs.1018.42 Cr. till FY 2023-24. Further, TPNODL has proposed a Capex of Rs.447.29 Cr. for FY 2024-25 & Rs.415.65 Cr. for FY 2025-26 under different activities.

24. The Commission has examined the investments proposed by the petitioner and has considered the submissions by stakeholders. In TPNODL, TPCL is having 51% (fifty one percent) equity shares and Government of Odisha ("GoO") through GRIDCO is having 49% (forty nine percent) equity shares. Any Capital Investment Plan should have approval of TPNODL's Board of Directors before it approaches the Commission for grant of approval. During the analysis, the Commission observes that the DPR proposed by TPNODL is in line with Capex Plan approved by their Board for FY 2024-25 & FY 2025-26.

25. The proposed Capex plan covers the following six (6) major heads:

Table 12: Major heads under proposed Capex plan

(Rs. in Crore)

Sr. No.	Major Category	Capex Proposed for FY 2024-25	Capex Proposed for FY 2025-26
1	Statutory & Safety	47.08	38.91
2	Loss Reduction	55.27	44.39
3	Reliability	117.15	103.71
4	Network Optimization & Load Growth	161.65	156.32
5	Technology	36.57	34.09
6	Civil and Administration	29.58	38.24
	Total	**447.29**	**415.65**

26. The Commission has analyzed the Detailed Project Report (DPR) for above Capex plan of Rs. 447.29 Cr. for the FY 2024-25 and Rs.415.65 Cr. for FY 2025-26 under the following six major categories i.e. (i) Statutory and safety, (ii) Loss reduction, (iii) Reliability, (iv) Network optimization and load growth (v) Technology and (vi) Civil and Administration in the submission of TPNODL's Capex DPR.

(I) Statutory & Safety: -

The Commission has examined activity wise capex proposed by the petitioner under statutory & safety head. We observe that fencing of DSS and boundary walls for PSS is very essential for keeping stray animals and public at large away from the electrical hazards arising out of contact with live equipment. In this year TPNODL has proposed to install fencing around 800 DSS (with 3 phase DT>100KVA) in FY 2024-25 and 800 more in FY 2025-26. Additionally,

proposed boundary walls of around 7482 meters and 4028 meters at various PSS during FY 2024-25 and FY 2025-26, respectively. TPNODL has also proposed capex investment for 5 nos. Hands On Technical Training center (HOTT) at 5 circles (Balasore, Baripada, Keonjhar, Jajpur and Bhadrak) along with discharge lamp, pole climber, full body harness, emergency light, safety mirror & Lock Out & Tag Out (LOTO) for safety practice and prevention of any accidents. Further, it has proposed 60 nos. of Fire walls for PTRs "6Mtrx8Mtr", replacement of defective cables, Gravel filling & switchyard development in PSS (for safety, soil stabilization, corrosion protection & easy maintenance).

After scrutiny, it is discovered that the Commission has already approves Rs.10.00 Cr. for the FY 2023-24 for the replacement of defective cables, which has not yet commenced. Based on this information, the Commission approves Rs.5.00 Cr. for each year in FY 2024-25 & FY 2025-26. However, since there is no detailed breakdown of the Capex requirement for Betnoti and Keonjhar store fire preparedness, the Commission is not willing to approve the same. Also, considering the average cost of Rs.1.10 Lakhs per fencing of a Distribution Substation, the Commission approves Rs.8.8 Cr. for each FY 2024-25 & FY 2025-26 towards the fencing of Distribution Substations.

Accordingly, the Commission after analysis of the proposal allows the following Capex under the Statutory & Safety head in the table below:

Table 13: Capex approved under the head Statutory & Safety for FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Activity	Capex Proposed		Commission's Approval	
		FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Safety HOTT & LOTO deployment	9.60	8.00	7.80	6.20
2	Fencing of Distribution Substations	13.10	13.10	8.80	8.80
3	Boundary wall work at Primary Substations	12.59	6.78	12.59	6.78
4	Fire wall for PTR between the PTRs "6Mtr*8Mtr"	1.14	1.21	1.14	1.21
5	Defective service cable replacement	8.00	7.50	5.00	5.00
6	Graval Filling and S-Yard Development in PSS	2.65	2.32	2.65	2.32
	Sub Total- Statutory & Safety	**47.08**	**38.91**	**37.98**	**30.31**

(II) Loss Reduction: -

The petitioner has stated that, during site inspections, energy meters were not found at the consumer's premises which were energized under the Soubhagya scheme, an initiative of GoI. Further, meters are not functioning properly in many

places. The absence of correct consumer meters leads to a reduction in billing efficiency, high AT&C losses, an increase in provisional billing, issuance of defective bills, and an increase in consumer complaints leading to customer dissatisfaction. Considering the above, TPNODL has proposed for procurement of Meters and metering equipment for energy audit, testing equipment of meters, conversion of LT Bare conductor to AB Cable, equipment for AMR enablement of 3phase consumer meters, and HT/LT Accucheck & other associated equipment/materials. For the above capex works, TPNODL has proposed Rs. 55.27 Cr. for FY 2024-25 & Rs. 44.39 Cr. for FY 2025-26 under this head. The Commission after analysis of the proposal allows the following Capex under the Loss Reduction head in the table below:

Table 14: Capex approved under the head Loss Reduction for FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Activity	Capex Proposed		Commission's Approval	
		FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Conversion of LT Bare conductor to AB Cable	39.91	34.70	39.91	34.70
2	Meters and metering equipment for energy audit	13.78	9.18	13.78	9.18
3	Equipment for Meter testing, Meter Reading, HT/LT Accucheck etc.	1.58	0.51	1.58	0.51
	Sub Total- Loss Reduction	**55.27**	**44.39**	**55.27**	**44.39**

(III) Reliability: -

The petitioner has submitted that it has many long overhead feeders. Most faults that occur on overhead lines are transient faults caused by lightning and tree branches touching the live line conductor. The transient fault caused by lightning results in damage to insulators in case of non-availability/non-functioning of lightning arresters. Further, consumers are not getting reliable and quality power supply due to the poor condition of the present distribution network and frequent tripping. TPNODL, to address the aforesaid issues, intends to implement the following actions to improve the reliability of power supply:

- Identification and replacement of faulty/sick equipment causing frequent tripping.
- Introduction of technology to ensure faster restoration of supply in case of any tripping.

Therefore, the petitioner has proposed the following initiatives to improve the reliability of power supply in its area operation.

a. Addition/Upgradation of network components in 33/11kV Primary Substation.

b. 33kV & 11kV Conductor up gradation.

c. Refurbishment of 11KV/0.415 KV Distribution Substation (DSS).

d. Installation of Auto reclosure / sectionalizers & RMUs.

e. Installation of FPIs for O/H Lines.

f. Installation of Line AB Switch/Isolator.

g. Installation of Station Transformers in PSS.

For the above capex works under the reliability of power supply, the petitioner has proposed Rs.117.15 Cr. & Rs.103.71 Cr. for FY 2024-25 & FY 2025-26 respectively. The Commission after analysis of the proposal observed that out of the total Capex amount approved for 33 kV conductor upgradation in FY 2022-23, less than 50% of Capitalization has been done till 30.09.2023. Moreover, as observed, TPNODL has capitalized less than 75% of the Capex approved for 11 kV conductor upgradation for FY 2021-22 & FY 2022-23 till 30.09.2023. Further, sufficient justification is required regarding the addition/ upgradation of network component in 33/11kV Primary Substation (PSS) since some of the network components seems to be repetition of work and therefore it needs to be ensured that the same network components are not sought under different heads in the instant Case. In view of the above, the Commission approves a lumpsum Capex against Sl. No. 1, 2 & 3 and allows the following Capex under the Reliability head in the table below:

Table 15: Capex approved under the head Reliability for FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Activity	Capex Proposed		Approved by Commission	
		FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Addition/ Upgradation of network component in 33/11kV Primary Substation (PSS)	21.95	21.95	15.00	15.00
2	33 kV Conductor upgradation	30.51	25.25	25.00	20.00
3	11 kV Conductor upgradation	28.56	27.04	25.00	20.00
4	Refurbishment of 11/0.415kV Distribution Substation (DSS)	13.03	11.97	13.03	11.97
5	Installation of Auto reclosure /Sectionalizers, RMUs	11.71	9.52	11.71	9.52

6	Installation of FPIs for O/H Lines	4.87	2.95	4.87	2.95
7	Installation of Line AB Switch /Isolator	5.92	5.03	5.92	5.03
8	Installation of Station Transformers in PSS	0.60	0.00	0.60	0.00
	Sub Total- Reliability	**117.15**	**103.71**	**101.13**	**84.47**

TPNODL may approach the Commission at a later stage for approval of any additional investment, if required (for items at Sl. No. 1, 2, 3 above), under CAPEX with adequate justification.

(IV) Network optimization and load growth:

The petitioner has requested for expansion, strengthening, or augmentation of distribution network infrastructures. They also require the installation of new energy meters to release new connections due to an increase in consumer growth. Some new connections can be accommodated with the existing network, further release/addition of new connection may require augmentation, addition, or extension of existing network. The increase in consumer base has caused an overload and burning issue with the DTRs and PTRs. Therefore, the petitioner proposes the addition and augmentation of 33kV, 11kV & LT lines, PTRs, and DTRs to mitigate low voltage issues and load growth. The petitioner has proposed a capex expenditure of Rs.161.65 Cr. for FY 2024-25 & Rs.156.32 Cr. for FY 2025-26 under this head.

Upon scrutiny, it is found that the requirement of LT line does not match with the proposed estimate for the conversion of 1Ph DTR to 3Ph DTR along with lines. The LT line requirement stated is 127m, whereas the estimate given is 288 km (122.85km & 164.85km) of 11kV LT AB cable at a cost of Rs. 3.75 Cr. for FY 2024-25 & Rs. 5.03 Cr. for FY 2025-26. Further, it is observed that out of the total Capex amount approved for augmentation of DTR in FY 2022-23, less than 50% of Capitalization has been done till 30.09.2023. Moreover, sufficient justification needs to be provided for network components to be used under various activities related to DTRs such as augmentation, new addition and conversion of 1ph to 3ph along with lines. For the addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS, the justification of 5kms. 11kV UG cable has been given. Therefore, the Commission approves the same instead of 22kms. Accordingly, the Commission approves Rs. 23.42 Cr. for FY 2024-25 Cr. & Rs.19.84 Cr. for FY 2025-26 towards the addition of 11 kV Lines (O/H and U/G) along with Bay

arrangement in PSS. Similarly, the justification of 1.85 km of 33kV UG cable (out of the proposed 16 km) has been given under the category of addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS. So, the Commission approves Rs. 21.26 Cr. for FY 2024-25 & Rs. 16.85 Cr. for FY 2025-26 towards the addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS.

In view of the above, the Commission approves a lumpsum Capex against Sl. No. 2 & 3 and approves the following under the head Network optimization and load growth for FY 2024-25 & 2025-26:

Table 16: Capex approved under the head Network optimization and load growth for FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Activity	Capex Proposed		Approved by Commission	
		FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Augmentation of Power Transformer	9.90	5.60	9.90	5.60
2	Augmentation of Distribution Transformer	23.32	25.02	15.00	15.00
3	Conversion of 1Ph DTR to 3Ph DTR along with lines	32.35	43.13	20.00	20.00
4	Addition of LT for New connection & mitigation of over load LT feeders.	12.04	8.97	5.00	5.00
5	Addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS	31.44	29.99	23.42	19.84
6	Addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS	29.70	25.30	21.26	16.85
7	Addition New DTRs along with Associated HT/LT lines	22.89	18.31	22.89	18.31
	Sub Total- Network Optimization & Load Growth	**161.65**	**156.32**	**117.48**	**100.61**

TPNODL may approach the Commission at a later stage for approval of any additional investment, if required (for items at Sl. No. 2, 3, 4, 5, 6 above), under CAPEX with adequate justification.

(V) Technology:

Under the Technology head, TPNODL has included Automation of conventional PSS, Disaster Recovery Centre - Hardware and Software, Data Center Hardware and Software, End-user IT Infrastructure, strengthen Network Connectivity and balance GIS mapping of two circles (Baripada & Keonjhar) etc. The IT infrastructure of SCADA has already been commissioned at MCC (Master Control Centre), Balasore, and at BCC (Backup Control Centre), Bhubaneswar. The configuration of the SCADA system is currently in progress, and the system is expected to be in place from December'2023 onwards. TPNODL has proposed to automate 85 Nos of conventional PSS in FY 2024-25 and FY 2025-26. TPNODL has successfully commissioned the Data Center (DC) in the OPTCL Data Center at Bhubaneswar in FY 2021-22. This DC hosts IT Enterprise Applications, Customer Centric Applications, GIS, and Advanced Metering Infrastructure (AMI) applications. Due to the increase in data size and user base, TPNODL has proposed additional and augmenting IT Infra in DC for FY 2024-25 & FY 2025-26. A DR site is also necessary to ensure that the best practices are followed by IT and to maintain business continuity in the event of any infrastructure failure or cyber threats. Therefore, the Commission has already approved CAPEX for a DR site in Sambalpur in FY 2023-24. This budget covers approximately 70% of the complete DR requirements. The remaining amount has been proposed for FY 2024-25 & FY 2025-26 to provide DR for all applications. The DR site will operate as a replica of the DC and will be equipped with cyber security measures. It will also ensure data protection for all data stored at the DC. Further, TPNODL has also proposed capex towards 50km. Optical Fiber Cable (OFC) for reliable network, completion of balance GIS mapping of two circles (Baripada & Keonjhar), and end-user infrastructure. The petitioner has proposed an investment of Rs.36.57 Cr. for FY 2024-25 & Rs.34.09 Cr. for FY 2025-26.

After scrutiny, it was found that, in case of the Data Centre (DC), the Commission had approved Rs. 24.20 Cr. till FY 2023-24, and an additional Rs.9.58 Cr. for FY 2024-25 and Rs.7.78 Cr. for FY 2025-26 has been proposed for the same item such as server, Linux, antivirus, etc. In view of the above, Commission provisionally approves Rs. 9.58 Cr. for FY 2024-25 and not inclined to approve any cost for FY 2025-26. However, TPNODL may provide proper justification of the proposed capex for such items in each year.

Accordingly, the activity wise details proposal and the Commission's approval are given in the table below:

Table 17: Capex approved under the head Technology for FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Activity	Capex Proposed		Approved by Commission	
		FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Automation of conventional PSS	12.23	12.23	12.23	12.23
2	Disaster Recovery Centre-Hardware and Software	3.40	1.75	3.40	1.75
3	Data Center - Hardware and Software	9.58	7.78	9.58	0.00
4	End user IT Infrastructure	2.77	7.24	2.77	7.24
5	Strengthen Network Connectivity	6.14	3.51	6.14	3.51
6	Balance GIS mapping of 2 Circle (Baripada & Keonjhar)	2.45	1.58	2.45	1.58
	Subtotal-Technology	**36.57**	**34.09**	**36.57**	**26.31**

(VI) Civil Infrastructure and Administration:

TPNODL currently has offices in all five circles and subdivisions, but many of them are rented properties. Accommodating additional new employees in the current office buildings and infrastructure is proving to be a challenge. The existing infrastructure is old and needs modernization to provide a hygienic, well-ventilated, and spacious work environment. These office locations are significant touchpoints between end consumers and the utility, so it's crucial to focus on aesthetics and the safety of all stakeholders. To achieve this, it is proposed to carry out civil infrastructure work such as renovating various office buildings, remodeling and creating additional workspaces in various office buildings, upgrading record rooms, cafeteria canteens, and roads and offices in phases. Further, to provide best-in-class services to consumers, earn consumer delight, and improve satisfaction among other stakeholders, and maintain a clean & safe working environment, there are requirements for some infrastructures like office air conditioning systems, water coolers & purifiers, tables, and ergonomic office chairs, photocopier machines & projector and display screen etc. Considering the above, the petitioner has proposed an investment of Rs.29.58 Cr. for FY 2024-25 and Rs.38.24 Cr. for FY 2025-26 under this head.

After scrutinizing the proposal, the Commission found that the proposed capex against the Civil infrastructure and Administration is necessary for providing better

services to customers, earning their delight, improving satisfaction among other stakeholders, and maintaining a clean and safe working environment. Therefore, the commission approves the capex towards the same. However, in the absence of proper justification, the commission is not inclined to approve Rs. 0.20 Cr. towards Various (Misc) & Rs. 0.28 Cr. towards EV hiring.

Accordingly, the activity-wise details proposal and the Commission's approval are given in the table below:

Table 18: Capex approved under the head Civil Infrastructure and Administration for FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Activity	Capex Proposed		Approved by Commission	
		FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Civil Infrastructure (Office Buildings, New GRF and Customer care BED, Approach Roads, Cafeteria Canteen, STS office, and others)	18.50	27.22	18.50	27.22
2	Office Administration	2.60	2.60	2.12	2.12
3	Security cameras, heavy-duty Racking system / Storage solutions for Balasore, Jajpur & Betnoti Store	8.48	8.42	8.48	8.42
	Subtotal- Civil Infrastructure and Administration	**29.58**	**38.24**	**29.10**	**37.76**

27. The Commission has deducted certain proposed expenditure under various heads which has already been explained in the previous paras. TPNODL may approach the Commission on a later stage for approval with sufficient justification for such proposals if they desire so. The activities under Capex proposal of various heads where deduction has been done are as follows:

Table 19: Summary of the proposed activities vis-à-vis deduction by the Commission

(Rs. in Crore)

Sl. No	CAPEX Head	Activity	TPNODL Proposal as per BoD		Commission's approval	
			FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Safety & Statutory	Safety HOTT & LOTO deployment	9.60	8.00	7.80	6.20
		Fencing of Distribution Substations	13.10	13.10	8.80	8.80
		Defective service cable replacement	8.00	7.50	5.00	5.00

2	Reliability	Addition/ Upgradation of network component in 33/11kV Primary Substation	21.95	21.95	15.00	15.00
		33 KV Conductor upgradation	30.51	25.25	25.00	20.00
		11 KV Conductor upgradation	28.56	27.04	25.00	20.00
3	Network Optimisation & Load Growth	Augmentation of Distribution Transformer	23.32	25.02	15	15
		Conversion of 1Ph DTR to 3Ph DTR along with lines	32.35	43.13	20.00	20.00
		Addition of LT for New connection & mitigation of over load LT feeders.	12.04	8.97	5.00	5.00
		Addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS	31.44	29.99	23.42	19.84
		Addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS	29.70	25.30	21.26	16.85
4	Technology	Data Center - Hardware and Software	9.58	7.78	9.58	0.00
5	Civil Infrastructure and Administration	Office Administration	2.60	2.60	2.12	2.12
		Sub-total	**252.76**	**245.63**	**182.99**	**153.82**

28. Considering the present dilapidated condition of distribution infrastructure, focus should be on strengthening of existing infrastructure and expansion of distribution network to meet the projected load growth, addressing issues relating to reduction in losses, low voltage, overloading, smart metering, earthing, etc. Priority should be given to works related to above issues over IT and OT infrastructure development. In view of above consideration, the Commission approves an amount of Rs.377.52 Cr. for the FY 2024-25 and Rs.323.85 Cr. for FY 2025-26 against the TPNODL's CAPEX proposal of Rs.447.29 Cr. for FY 2024-25 and Rs. 415.65 Cr. for FY 2025-26. The details are shown in the table below:

Table 20: Summary of the Capex proposed by TPNODL & approved by the Commission for the FY 2024-25 & FY 2025-26

(Rs. in Crore)

Sl. No.	Major Category	Activity	Capex Proposal of TPNODL as per BoD		Commission's approval	
			FY 2024-25	FY 2025-26	FY 2024-25	FY 2025-26
1	Statutory & Safety	Safety HOTT & LOTO deployment	9.60	8.00	7.80	6.20

		Fencing of Distribution Substations	13.10	13.10	8.80	8.80
		Boundary wall work at Primary Substations	12.59	6.78	12.59	6.78
		Fire wall for PTR between the PTRs **"6Mtr*8Mtr"**	1.14	1.21	1.14	1.21
		Defective service cable replacement	8.00	7.50	5.00	5.00
		Graval Filling and S-Yard Development in PSS	2.65	2.32	2.65	2.32
		Sub Total: Statutory & Safety	**47.08**	**38.91**	**37.98**	**30.31**
2	Loss Reduction	Conversion of LT Bare conductor to AB Cable	39.91	34.70	39.91	34.70
		Meters and metering equipment for energy audit	13.78	9.18	13.78	9.18
		Equipment for Meter testing, Meter Reading, HT/LT Accucheck etc.	1.58	0.51	1.58	0.51
		Sub Total: Loss Reduction	**55.27**	**44.39**	**55.27**	**44.39**
3	Reliability	Addition/ Upgradation of network component in 33/11kV Primary Substation	21.95	21.95	15.00	15.00
		33 KV Conductor upgradation	30.51	25.25	25.00	20.00
		11 KV Conductor upgradation	28.56	27.04	25.00	20.00
		Refurbishment of 11KV/0.415 KV Distribution Substation (DSS)	13.03	11.97	13.03	11.97
		Installation of Auto reclosure /Sectionalizers, RMUs	11.71	9.52	11.71	9.52
		Installation of FPIs for O/H Lines	4.87	2.95	4.87	2.95
		Installation of Line AB Switch/Isolator	5.92	5.03	5.92	5.03
		Installation of Station Transformers in PSS	0.60	0.00	0.60	0.00
		Sub Total: Reliability	**117.15**	**103.71**	**101.13**	**84.47**
4	Network Optimization & Load Growth	Augmentation of Power Transformer	9.90	5.60	9.90	5.60
		Augmentation of Distribution Transformer	23.32	25.02	15.00	15.00
		Conversion of 1Ph DTR to 3Ph DTR along with lines	32.35	43.13	20.00	20.00
		Addition of LT for New connection & mitigation of over load LT feeders.	12.04	8.97	5.00	5.00
		Addition of 11 kV Lines (O/H and U/G) along with Bay arrangement in PSS	31.44	29.99	23.42	19.84

		Addition of 33 kV Lines (O/H and U/G) along with Bay arrangement in PSS	29.70	25.30	21.26	16.85
		Addition New DTRs along with Associated HT/LT lines	22.89	18.31	22.89	18.31
		Sub Total: Network Optimization & Load Growth	**161.65**	**156.32**	**117.48**	**100.61**
5	Technology	Automation of conventional PSS	12.23	12.23	12.23	12.23
		Disaster Recovery Centre-Hardware and Software	3.40	1.75	3.40	1.75
		Data Center - Hardware and Software	9.58	7.78	9.58	0.00
		End user IT Infrastructure	2.77	7.24	2.77	7.24
		Strengthen Network Connectivity	6.14	3.51	6.14	3.51
		Balance GIS mapping of 2 Circle (Baripada & Keonjhar)	2.45	1.58	2.45	1.58
		Sub Total: Technology	**36.57**	**34.09**	**36.57**	**26.31**
6	Civil Infrastructure and Administration	Civil Infrastructure (Office Buildings, New GRF and Customer care BED, Approach Roads, Cafeteria Canteen, STS office, and others)	18.50	27.22	18.50	27.22
		Office Administration	2.60	2.60	2.12	2.12
		Security cameras, heavy-duty Racking system / Storage solutions for Balasore, Jajpur & Betnoti Store	8.48	8.42	8.48	8.42
		Sub Total: Civil Infrastructure and Administration	**29.58**	**38.24**	**29.10**	**37.76**
Total			**447.29**	**415.65**	**377.52**	**323.85**

29. The summary of year-wise and cumulative approval of Capex by the Commission against vesting order is as under:

Table 21: Minimum Capex required as per Vesting Order vis-à-vis Capex approved

Financial Year	Minimum Capex required as per Vesting Order (Rs Cr)	Capex Approved by the Commission (Rs Cr)
FY 2021-22	246	258.78
FY 2022-23	376	326.54
FY 2023-24	260	433.10
FY 2024-25	247	377.52
FY 2025-26	141	323.85
Cumulative Capex till FY 2025-26	**1270**	**1719.79**

30. The approved cost shall be passed in the ARR as per the norms subject to rational utilization by the petitioner and prudent check through audit.

31. The investment under Capex is always linked to benefit to consumer in terms of reliability & availability of power supply and other key performance parameters. The licensee has not submitted cost benefit analysis, prioritization of the proposed investment, quantification of physical targets & achievements and works required to be taken up for system improvement. It is observed that the licensee has capitalized only Rs. 457.10 Cr. (45%) as on 30.09.2023 against the approved CAPEX of Rs.1018.42 Cr. till FY 2023-24, which is very poor. TPNODL has capitalized 84% of approved CAPEX for the FY 2021-22 and 64% of approved CAPEX for the FY 2022-23, which is also not a good trend. Hence, it is expected that the total investment as proposed by the licensee for a financial year will not be utilized during respective financial year and is likely to spill over to subsequent financial year(s). Considering the past trend of expenditure done during previous financial years and justification for various works, Rs.701.37 Cr. is approved by the Commission for the FY 2024-25 & FY 2025-26 (Rs.377.52 Cr. for FY 2024-25 & Rs.323.85 Cr. for FY 2025-26). Accordingly, the cumulative investment of Rs 1719.79 Cr. is approved (against minimum cumulative investment of Rs 1270 Cr.) under CAPEX upto the FY 2025-26. However, the licensee may approach the commission with proper justification and analysis for the activities disallowed in this order for due consideration and approval by the commission at a later date.

32. In addition to above observations, the Commission directs the licensee to:

(i) Submit the financing plan for the proposed investment under the CAPEX for the FY 2024-25 & FY 2025-26 as per OERC's Wheeling and Retail Supply Tariff Regulations, 2022.

(ii) Submit quarterly progress report for the works along with the details of materials utilised vis-à-vis various activities shown in the DPR.

(iii) Formulate implementation plan for the approved Capital Investment and take steps for execution accordingly to avoid cost and time overrun.

(iv) Procure the materials/award the contracts only through transparent competitive bidding process. The requirement of materials shall be prepared based on standardisation of distribution elements. The ratings of equipment / material including DTRs & PTRs (limiting the no. of ratings) and capacity of any PSS need

to be standardized across the Discoms and standard specifications need to the adopted across the Discoms.

(v) Ensure that there is no duplication of work covered under the Capex approved for FY 2024-25 & FY 2025-26 and the assets created/ to be created through Government Schemes/support.

(vi) Consider upgradation of existing PSS (instead of creating new PSS in nearby areas) keeping adequate provision for future expansion to avoid unnecessary burden on consumers. Even existing AIS installation can be converted to GIS, if required, which will improve reliability of the distribution system at reduced O&M cost.

(vii) Plan new 33/11 kV substations with (N-1) contingency provision for incomer & Power Transformers (PTRs), double bus switching scheme/main & transfer bus scheme with Bus coupler and adequate space should be available in PSS for future expansion to avoid additional substations in the nearby areas.

(viii) Have regular interaction with the OPTCL to ensure that the requirement of additional Grid Sub-stations (220/33 kV or 132/33 kV or 220/132/33 kV) are planned as per need of TPNODL which will help in resolving low voltage issues and at the same time the available 33 kV outlets from existing Grid Sub-stations of OPTCL should be utilised by TPNODL for their distribution system.

(ix) Submit details of compliances of the direction given in the Capex Orders of previous years.

(x) Provide load flow study report for the next 5 years matching with proposed work covered under the Capex plan.

(xi) Submit the status (on the date of taking over and expected as on 31.03.2026) of existing distribution system for each division indicating the achievement (quantification) and amount of further investment required to be taken up in respect of following areas by March 2026 as justification submitted are general in nature:

- Replacement of existing overhead conductor by higher size based on long term load flow study;
- Reduction in feeder / line / section length (existing at 33kV & 11kV level);
- Reduction in overloading of 33kV & 11kV lines, PTRS, DTRs;
- Reduction in tapping of 33 kV & 11 kV lines;

- Reduction in low voltage pockets;
- Completion of boundary walls for PSSs and fencing of DSSs;
- Providing (N-1) contingency for PTRs and incomer at 33kV level in existing PSS;
- Smart metering of 33kV & 11kV feeders, PTRs, DTRs, Govt & non-Govt. establishments & 3 phase consumers etc.;
- Provision of protection (CB/ AB switch, etc. & associated protection relays) for 33kV & 11kV overhead lines & UG cable, PTRs & DTRs (primary & secondary side);
- Removal of Group Control Breaker operation (at 33 kV & 11 kV level);
- Improvement in earthing in PSS & DSS;
- Provision of RMUs, Auto-reclosers & Sectionalizers to avoid outage of power supply to a large group of consumers;
- Length (in ckt.km.) of overhead line converted and proposed to be converted to ABC in future;
- Completion of asset mapping & consumer indexing, etc.

(xii) Submit the constraints and bottlenecks in capitalization of approved CAPEX of previous years and steps being taken for utilization of such CAPEX.

33. With the directions stated above, the case stands disposed of.

Sd/-

(S. K. Ray Mohapatra)
Member

Sd/-

(G. Mohapatra)
Officiating Chairperson