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. 104/2023

M/s. TPSODL ……... Petitioner
Vrs.
DoE, GoO & 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 Southern Odisha Distribution Ltd.**

For Petitioner: Shri Amit Kumar Garg, CEO, TPSODL.

For Respondents: Ms. Sonali Patnaik, Manager (Legal), DoE, GoO; Shri B.C. Padihary, GM (Finance), GRIDCO Ltd and Shri Subhasis Samantaray, DGM (Elect.) OPTCL. Non-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 Southern Odisha Distribution Limited (TPSODL), has filed an application for approval of Capital Expenditure (CAPEX) for FY 2024-25 & FY 2025-26 to carry out various system improvement and for taking up safety related activities in its area of operation. In its application dated 31.10.2023, TPSODL has submitted capital investment plan to the tune of Rs.670.10 Cr (i.e., Rs 378.60 Cr for FY 2024-25 & Rs 291.50 Cr for FY 2025-26) before this Commission and has prayed for approval of the same. This application has been filed pursuant to the direction of the Commission at para 43 in the vesting order in Case No.83/2020.

2. TPSODL's licensed area is spread over a geographical area of 48,751 sq. Km. and it serves a registered consumer base of around 22.65 lakhs. TPSODL 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 31-Mar-23)
1.	Area	Sq. km	48,751
2.	Consumers	No.	22,64,991
3.	Circles	No.	6
4.	Divisions	No.	19
5.	Sub-divisions	No.	51
6.	Sections	No.	134

3. In tune with the Vesting Order, TPSODL in compliance 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. The extracts from the Vesting Order are as follows:

"43. Capital investment plan

.....

(b) In its Bid submitted in response to the RFP, TPCL committed capital expenditure of Rs. 1,166 Crs (Indian Rupee One thousand one hundred and sixty six Crs) only for period FY 2021-22 to FY 2025-26 as follows:

Table 1: Capital Expenditure Commitment by TPCL

Capex Commitment (INR Cr)					
FY 2021-22	***FY 2022-23***	***FY 24***	***FY 25***	***FY 26***	***Total***
227	*316*	*241*	*233*	*150*	*1,166*

"(c) To allow flexibility in the capital expenditure planning, the Commission stipulates that, in the capital expenditure plan to be submitted by TPSODL 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 TPSODL 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***
227	*543*	*783*	*1,016*	*1,166*

(d) TPSODL would be required to seek the Commission's approval on the detailed capital expenditure plan in line with the regulations. TPSODL 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 OERC (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 the licensed area. The relevant extracts of the 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.

3.2.4 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.

3.2.8 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 No. 11 and 32, the 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. The relevant extracts of the Licence Conditions 11 & 32 are 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. For new schemes formulated by the GoO, if TPSODL wishes to avail funding under such scheme, an agreement shall be signed between GoO/ GRIDCO/ OPTCL and TPSODL for utilization of such grants. 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 (Indian Rupee Five 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 and approval of the BoD, TPSODL has submitted Capex plan of Rs.670.10 Cr for the FY 2024-25 & FY 2025-26 (i.e., Rs 378.60 Cr for FY 2024-25 & Rs 291.50 Cr for FY 2025-26). The Petitioner has also requested for approval of the Commission to permit to carry forward the works under execution/pending works for which Capex approved for the FY 2021-22 till FY 2023-24 to the FY 2024-25 & FY 2025-26. The Petitioner has further requested to allow the Employee Cost and Interest During Construction (IDC) based on actuals to be capitalized over and above the amount of Costs proposed.

7. The Petitioner, TPSODL had earlier filed the proposal for Capex of Rs 408.47 Cr for FY 2021-22 and the Commission had approved Rs 184.65 Cr. Similarly, TPSODL had proposed Capex of Rs.378.37 Cr. for FY 2022-23 and the Commission had approved Rs 294.82 Cr. Subsequently, TPSODL had proposed Capex of Rs.338.34 Cr. for FY 2023-24 and the Commission had approved Rs 338.33 Cr. Further, an additional Capex of Rs 69.05 Cr has been proposed for FY 2023-24 which has also been approved by the Commission. The status of the Capex approved for FY 2021-22, FY 2022-23 and FY 2023-24 including the cumulative capitalization till 30.09.2023 vis-a-vis the committed Capex as per vesting order is presented below:

Table 2

Sl. No.	Capex Head	Vesting Order	Capex Approved by Commission	Actual Capex till 30-09-2023	Assets capitalised till 30-09-2023
For FY 2021-22					
1	Statutory & Safety	227	31.43	28.93	28.86
2	Loss Reduction		15.69	7.29	7.26
3	Network Reliability		37.47	38.82	38.82
4	Load Growth		8.74	10.70	10.70
5	Technology & Infrastructure		91.32	98.42	97.80
	Total		**184.65**	**184.16**	**183.44**
For FY 2022-23					
1	Statutory & Safety	316	39.33	37.34	37.01
2	Loss Reduction		60.72	48.40	44.19
3	Network Reliability		123.75	122.41	112.38
4	Load Growth		18.72	22.68	22.19
5	Technology Infrastructure		33.27	36.23	36.22
6	Civil Infrastructure & Administration		19.04	17.25	16.54
7	Emergency Capex			1.88	1.88
	Total		**294.83**	**286.19**	**270.41**
For FY 2023-24					
1	Statutory & Safety	260	26.13	4.37	2.11
2	Loss Reduction		84.29	3.45	0.40
3	Network Reliability		146.35	29.06	4.40
4	Load Growth		67.88	6.29	2.08
5	Infrastructure - Technology		41.26	0.69	0.01
6	Infrastructure- Civil & Admin		35.08	1.19	0.89
7	Differential Capex for new connection		5.00	0.00	0.00
	Total		**407.38**	**45.04**	**9.88**

Cumulative till 30.09.2023					
1	Statutory & Safety	783	96.89	70.64	67.98
2	Loss Reduction		160.70	59.14	51.85
3	Reliability		307.57	190.29	155.60
4	Load Growth		95.34	39.67	34.97
5	Technology Infrastructure		219.97	153.78	151.46
6	Civil Infrastructure & Administration				
7	Others		5.00	1.88	1.88
	Total		**886.85**	**515.39**	**463.73**

8. The Petitioner has submitted that the legacy network handed over to TPSODL was in a poor state, lacked compliance with respect to maintaining safe clearances, especially the ground clearances of the 33 KV & 11 KV network as required by the statutory guidelines. While the long spans of the network, at road crossings, public places and near schools etc. are unsafe for the employees, general public, children and animals, these pose the challenges in maintaining the reliable power supply to customers. Further, underrated/ undersized/ worn out conductors with extremely long spans, having damaged/ bent/ tilted poles, poor joints, compromised safety clearances and non-availability of guard wires in overhead feeders, overloaded PSS, no secondary protection of DTRs, etc. are existing in its distribution system. In addition to such operational, commercial, and safety related challenges, there are also challenges relating to Metering infrastructure including feeder metering, Customer Services and Technology usage. TPSODL has therefore, come up with this Capital Investment Plan with the objective of meeting its service obligation, ensuring safe reliable power supply and maintaining higher service standards and better customer service to its end consumers. TPSODL has categorised the various activities of the Capital Investment Plan under 6 major subheads, i.e., (i) statutory and safety, (ii) loss reduction, (iii) network reliability, (iv) load growth, (v) technology infrastructure, (vi) civil infrastructure and administration. Further, TPSODL have proposed capex for differential amount incurred for extending power supply to new consumers separately.

9. The petitioner has submitted that TPSODL is catering about 22,64,991 consumers. TPSODL receives power at 33 kV level from 37 nos. of 220/33 kV or 132/33kV or 220/132/33 kV substation of OPTCL. HT consumers are connected at 33 kV or 11 kV level and LT consumers are connected at 0.415kV/0.230 kV either as three phase or single-phase consumer. The snapshot of distribution infrastructure in its area of operation is given in Table below:

Table 3

Sl. No.	Particulars	Unit	Details (as on 30 Sept 2023)
1.	33/11 kV sub-stations	No.	251
2.	33 kV feeders	No.	335
3.	11 kV feeders	No.	927
4.	33/11 kV PTR	No.	554
5.	33/11kV PTR capacity	MVA	2619
6.	33/0.415 or 11/0.415 kV DTR	No.	59817
7.	11/0.415 kV DTR Capacity	MVA	2642
8.	33 kV OH Line	Ckt. km.	4118
9.	33 kV UG cable	Ckt. km.	19
10.	11 kV OH Line	Ckt. km.	45458
11.	11 kV UG cable	Ckt. km.	126
12.	LT Bare Line	Ckt. km.	8414
13.	LT ABC Line	Ckt. km.	32334

10. The petitioner has submitted that TPSODL has a significant network asset spread across vast geographical area and therefore it requires a huge investment to meet the desired expectation of the various stakeholders. In this regard, the existing infrastructure needs to be strengthened. The petitioner has proposed for enhancing Safety of equipment, addressing and increasing reliability, replacement of faulty equipment, uprating of lines, improvement of protection at substation and setting up of new lines and substations. The petitioner has also proposed for creation of river crossing infrastructure, feeder & DT metering, augmentation of Disaster Recovery Centre and emission reduction through rooftop solar and EVs.

11. The petitioner has further submitted that most of the 33 kV and 11 kV feeders are of long lengths (some of them are more than 100 Ckt. Km long) and are radially connected; most of the feeders do not have guard wire beneath conductors for the purpose of safety; poles are also not provided at appropriate distance; some of the existing 33/ 11 kV PSS are already overloaded or approaching the overload limit; boundary walls of some of the PSS are to be repaired; some PSS are facing issues due to damaged line isolators, AB switches and LAs; HT fuse and AB switches are bypassed in many DTRs in place of LT fuse box/ MCCB box; earthing not done at appropriate depth; many PSS still does not have network connectivity; and many office buildings are old and need renovation. Further, many feeders pass through dense forest and attending the fault is only possible during day time. Such deficiency leads to the high network downtime and affects SAIDI. Hence, TPSODL has proposed to put up fencing/ boundary wall; to replace old/ damaged conductors, insulators; to have PTR to

meet N-1 contingency for PSS; to provide LT protection in the secondary side of DTRs; metering of 33 kV & 11 kV outgoing feeders as well as DTRs with relevant metering system; SCADA integration of non-ODSSP PSS and strengthening of office buildings with major civil works.

12. TPSODL has submitted the Detailed Project Report (DPR) for Capex plan of Rs.670.10 Cr (i.e., Rs 378.60 Cr for FY 2024-25 & Rs 291.50 Cr for FY 2025-26) under 6 major heads. The detailed submission made by the petitioner under each head is as under:

A. Statutory & Safety:

The following activities are considered under this head:

a) Safety & Electrical Testing Equipment:

i. For creating a safe zone for employees, modern tools such as Arc Flash suit, emergency & fire detection alarm system, neon tester & discharge rod for high voltage testing & discharging, Fiber Reinforced Polymer (FRP) ladders, Hands on Technical Training (HoTT) centre, public safety gadgets and remote monitoring systems are proposed for electrical safety equipment. The expenditure proposed for safety equipment is Rs 9.75 Cr for FY 2024-25 and Rs 3.21 Cr for FY 2025-26.

ii. TPSODL does periodic maintenance of Lines and equipment to ensure its compliance at all levels for meeting Performance Standards. Testing of transformers, switchgear, and protective equipment in the Distribution System is being carried out at intervals for ensuring their serviceability, safety and efficiency. Such Testing Equipment are needed by field staff during preventive maintenance as well as attending breakdown due to fault in the system. The various electrical testing equipment proposed are DT workshop equipment (LT&HT winding machines, air drying oven, oil filter machine, air compressor, welding shearing and weighing machines, oil storage tank, etc.), and meter testing equipment (3ph portable generator set, lineman toolkit bag, TRMS value measuring clamp, 1ph & 3ph LT & HT Accucheck, CMRI for smart meters, etc.). The expenditure proposed for electrical testing equipment is Rs 3.08 Cr for FY 2024-25.

Accordingly, TPSODL has proposed a sum of Rs 12.83 Cr for FY 2024-25 and Rs 3.21 Cr for FY 2025-26 under this activity.

b) Cradle Guard at major road crossings, populated area, School area:

At present, most of the network is overhead and there is no provision of guard or cradle wire installed beneath the overhead conductors for most of the feeders. In such a scenario, cradle guard will help in avoiding accidents caused by snapping of conductors of overhead MV/HV/LV feeders. TPSODL proposes to put in place the cradle wire/guard wire at the vulnerable loading of the initial stage particularly in public places, road crossings, school area, etc. Total 150 nos. of Cradle Guard with a cost estimate of Rs 1.68 Cr is proposed for FY 2024-25; and 150 nos. of Cradle Guard with a cost estimate of Rs 1.78 Cr is proposed for FY 2025-26.

c) Fencing of Distribution substations (DSS), Switchyard & Boundary Wall at PSS:

During the survey, it was observed that fencing is either damaged or do not exist for many DSS thus posing a safety threat to stray animals and public at large. Fencing is one of the most important requirements which ensures overall first-hand protection of the transformer. Therefore, installation of fencing to safeguard the DSS equipment and to maintain safety clearances is one of the major needs. Total 15200 rm of fencing of DSS, 1818 rm of boundary wall and 35 nos. of switchyard with a cost estimate of Rs 14.50 Cr is proposed for FY 2024-25; and 15730 rm of fencing of DSS, 1818 rm of boundary wall and 35 nos. of switchyard with a cost estimate of Rs 14.50 Cr is proposed for FY 2025-26.

d) Intermediate poles for vulnerable location:

There have been several irregularities in the span length of these networks where the span length also found more than 70 m at some places. These large span lengths have resulted in sagging of conductors, low ground clearances - vertical clearance of conductor from ground is lower than the permissible limits of 5.5 m (for LT Lines) and 5.8 m (for HT Lines) resulting in accidents. The addition of intermediate poles will address the issue of sagging, low ground clearances & accidents caused due to this. Total 2231 nos. of intermediate poles for 33 kV, 11 kV and LT lines have been proposed at a cost estimate of Rs 7.65 Cr for FY 2024-25; and 2184 nos. of intermediate poles for 33 kV, 11 kV and LT lines have been proposed at a cost estimate of Rs 7.92 Cr for FY 2025-26.

e) 4-Pole Arrangement for unsafe N-1:

At present there are many 11kV feeders which can be interlinked with one another to enable N-1 arrangement through temporary arrangement by connecting Jumper

in case of interruption occurs in any one of the feeders. But it takes long time as the field staff use to connect the jumpering to both the feeders by taking shutdown and safety zone creation for both the feeders. As a result, the consumers of both feeders are affected for long time. Four pole arrangement with AB switches will enable efficient and safe operation and also help in quick restoration of supply by providing N-1 arrangement. 10 nos. of 11 mtr. WPB 4-pole arrangement is proposed each for FY 2024-25 and FY 2025-26 at an estimated cost of Rs 0.46 Cr and Rs 0.49 Cr respectively.

Accordingly, TPSODL has proposed an investment of Rs 65.03 Cr towards Network Refurbishment for Safety (Rs 37.13 Cr for FY 2024-25 & Rs 27.90 Cr for FY 2025-26). The Summary of CAPEX proposed by TPSODL under the head Statutory and Safety is as under:

Table 4: Summary of investment 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
1	Safety & Electrical Testing Equipment	12.83	3.21	16.05
2	Cradle Guard at major road crossings, populated area, School area	1.68	1.78	3.46
3	Fencing of Distribution substations (DSS), Switchyard & Boundary Wall at PSS	14.50	14.50	29.00
4	Intermediate poles for vulnerable location	7.65	7.92	15.56
5	4-Pole Arrangement for unsafe N-1	0.46	0.49	0.96
	Sub Total- Statutory & Safety	**37.13**	**27.90**	**65.03**

B. Loss Reduction:

The following activities are considered under this head:

a) LT Bare Line to ABC Conversion:

Bare conductor lines are more subject to electricity theft through direct hooking and thus causing revenue leakage in the system. Hence LT bare to ABC conversion has been proposed for about 105 Ckt. Km (54 Ckt. Km in FY 2024-25 & 51 Ckt. Km in FY 2025-26) in theft prone areas to reduce thefts. This will also help in preventing transient fault in LT network and improve safety. TPSODL has proposed an investment of Rs 4.22 Cr for FY 2024-25 & Rs 4.26 Cr for FY 2025-26 under this activity.

b) Feeder & DT Metering for Energy Audit:

As per the latest Gazette Notification of Bureau of Energy Efficiency, Ministry of Power, Government of India issued for Conduct of Energy Audit in Electricity Distribution Companies under Energy Conservation Act, 2001, TPSODL has to install meters on all feeders; DTs (above 25 kVA) and provide broad framework for conduct of Annual Energy Audit and Quarterly Periodic Energy Accounting with necessary Pre-requisites and reporting requirements to be met. This would allow TPSODL to have a very comprehensive and effective energy audit system which would help in taking corrective actions to minimize technical and financial losses. TPSODL in this proposal for FY 2024-25 has considered smart metering of 170 nos. of 33 kV feeders outgoing from PSS, and has considered smart metering for 3340 nos. of DTRs above 25KVA. Similarly, TPSODL in this proposal for FY 2025-26 has considered smart metering of 140 nos. of 33 kV consumer metering at T-off, and has considered smart metering for 7885 nos. of DTRs above 25KVA. In addition to the above, TPSODL has proposed for ring type CTs & control cables for smart metering in DTRs. Accordingly, TPSODL has proposed Road Map of Energy Audit Programme for FY 2024-25 & FY 2025-26 with an investment of Rs 9.70 Cr and Rs 18.36 Cr respectively. This will help to develop comprehensive energy accounting system to quantify and determine actual losses in the power distribution system, segregated across technical and commercial loss. Further, it will help to identify areas of leakage, theft, wastage or inefficient use.

c) GIS Integration:

GIS has been implemented for 3 circles (i.e City, Aska and Berhampur) and GIS system is also live for users of these circles. Presently Implementation of GIS in rest of 3 circles (Bhanjanagar, Rayagada and Jeypore) is in progress and will be completed in FY 2023-24. The petitioner has proposed software application development, network survey, asset mapping, migration of new assets and GIS-SAP integration in the latest proposal. This would lead to better resolution of complaints, improve reliability and reduction in commercial losses. TPSODL has proposed an investment of Rs 4 Cr each for FY 2024-25 & FY 2025-26 under this activity.

Accordingly, TPSODL has proposed an investment of Rs 44.53 Cr under the Loss Reduction head (Rs 17.92 Cr for FY 2024-25 & Rs 26.62 Cr for FY 2025-26). Summary of such investment is mentioned as under:

Table 5: Summary of investment 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
1	LT Bare to ABC Conversion	4.22	4.26	8.48
2	Feeder & DT Metering for Energy Audit	9.70	18.36	28.06
3	GIS Integration	4.00	4.00	8.00
	Sub Total- Loss Reduction	**17.92**	**26.62**	**44.54**

C. Network Reliability:

The following activities are considered under this head:

a) PSS Refurbishment & SCADA Implementation:

TPSODL has planned to automate all Primary Substations (PSS) and monitor them remotely through a SCADA center in a phased manner. PSS constructed recently under ODSSP scheme are compatible for integration with SCADA however old PSS (Non ODSSP) are not compatible for SCADA integration. To make these PSS ready for SCADA integration, additional upgradation activities such as upgradation of old Control Relay Panels (CRP) with state-of-the-art CRP panels, replacement of defective/obsolete equipment, installation of transformer monitoring units, RMUs, isolators, FPI, FRTUs and RTUs for remote monitoring and control are required. A total of 59 nos. of PSS have been considered for revamping/ retrofitting and these shall be remotely monitored by SCADA. A total estimated cost of Rs 63.32 Cr has been proposed for FY 2024-25 & Rs 1.02 Cr for FY 2025-26 for PSS refurbishment.

At many 33/11 kV PSS, the buildings are in bad condition and need immediate attention with major repairs to existing PSS structures or new structure where existing PSS are beyond repairs. Further considering terrain, TPSODL is prone to natural disaster, water logging at switch yard & its periphery is one of the reasons for degradation of outdoor panels & costly Substation equipment. In view of this, civil works have been planned at 16 nos. of non-ODSSP PSS in FY 2024-25. The work includes Control Room Building renovation, drainage System to eliminate water logging in switchyard and other areas, Switchyard development and spreading of gravels and Cable Trench for Cable laying from switchyard to control room. An estimated cost of Rs 16.23 Cr has been proposed for such work in FY 2024-25.

TPSODL has brought 115 nos. of PSS till date on SCADA which enables operators to monitor & control the PSS and network from Power System Control Centre (PSCC). TPSODL plans to bring 150 nos. of PSS (out of about 254) on SCADA by the end of FY 24, out of which 55 nos. of PSS will be conventional PSS and 95 are

ODSSP PSS. It is planned to Automate balance 59 nos. of conventional PSS and integrate these PSS with centralized SCADA for remote monitoring, control and real time operations from PSCC. TPSODL has proposed an investment of Rs 9.99 Cr for FY 2024-25 & Rs 5.52 Cr for SCADA & Automation.

Accordingly, a total expenditure of Rs 76.54 Cr for FY 2024-25 & Rs 6.54 Cr for FY 2025-26 have been proposed under this activity.

b) Bus coupler arrangement in PSS:

Presently most of the PSS have individual PTR supplying respective feeders without bus couplers. in case of any PTR failure or long outage, supply is extended to affected 11KV lines from other available PTR by way of temporary jumper arrangement. Bus coupler arrangements at PSS provide additional flexibility, continuity of supply and permits periodic maintenance without total shut-down. In the event of fault/ outage of one PTR, its load can be fed from closing bus coupler without taking outage of other PTR. A total of 22 nos. of bus coupler arrangements have been proposed for 13 nos. of PSS at an expenditure of Rs 1.61 Cr for FY 2024-25 & Rs 1.70 Cr for FY 2025-26.

c) 33 kV & 11 kV New Line for N-1 Connectivity:

Most of the 33kV & 11 kV networks are lengthy and radial in nature. Due to lack of alternate source, it is not possible for the field teams to transfer the load during shutdown of radial feeder and thus all consumers connected to the affected feeders remain out of service till the field team locate and repair the fault. In view of this, 16 new 33 kV lines and 73 new 11 kV lines have been proposed. An expenditure of Rs 24.27 Cr has been proposed for this activity for FY 2024-25 & Rs 30.08 Cr for FY 2025-26.

d) Refurbishment of 33 kV & 11 kV line:

During site visits, it was observed that conductor of multiple sizes is used in different section which restricts the circuit capacity. This also leads to conductor heating and high losses. Hence, it is required to increase the conductor size for such lines to meet loading as well as load growth for next 5-10 years. The load flow study has been carried out and 121 nos. of lines (25 nos of 33kV and 96 nos of 11kV) have been identified for conductor upgradation. Some other issues such as tilted poles, damage insulators are observed in identified lines and strengthening measures are also planned for these lines. An expenditure of Rs 27.06 Cr has been proposed for this activity for FY 2024-25 & Rs 36.90 Cr for FY 2025-26.

e) Conversion of 33 kV & 11 kV Bare O/H to Covered Conductor:

Few lines have been identified where there is a requirement of convert Overhead bare conductor to Covered Conductor to improve reliability of power distribution lines. It also provides safety against accidental contacts and reduce outages significantly. A total of 16.3 Ckt. Km has been proposed for conversion to covered conductor in FY 2024-25 at the estimated cost of Rs 3.68 Cr. and 17 Ckt. Km has been proposed for FY 2025-26 at an estimated cost of Rs 4.12 Cr.

f) 33 kV & 11 kV UG Cable:

33 KV UG cable of 6 Ckt Km has been proposed out of which 4 Ckt Km is proposed for Banja Vihar Gopalpur feeder and 2 Ckt Km for Railway Crossing to address the RoW issue. Futher, 3 Ckt Km of 11 KV UG cable is planned in cases of PTR augmentation and to facilitate swapping of 11KV feeder inside of the PSS. An expenditure of Rs 7.05 Cr is proposed for FY 2024-25 & Rs 1.98 Cr for FY 2025-26.

g) Installation of 33 kV & 11 kV Line AB Switch:

AB switch is an essential element of any overhead power line, used to connect or disconnect the power system when tripped, for maintenance, to isolate the faulty section, and to restore the supply to healthy section to improve reliability. 33 kV & 11 kV AB switches are proposed at an estimated cost of Rs 9.37 Cr for FY 2024-25 & Rs 9.93 Cr for FY 2025-26.

h) 33 kV & 11 kV Auto Recloser & Sectionalizer:

TPSODL currently has a large number of very long overhead feeders. Moreover, it is observed that multiple 11 kV feeders are controlled through single 11 kV breaker or AB switch in some primary substation. Fault in any 11 kV feeder or maintenance activity in 11 kV breaker at primary substation affects the supply of consumers connected on all 11kV feeders controlled from that breaker. In order to improve reliability of power supply at such substations, installation of auto-recloser, sectionalizers is being proposed in phased manner. 5 nos. of 33 kV & 13 nos. of 11 kV Auto Reclosers; 10 nos. of 33 kV and 26 nos. of 11 kV Sectionalizers are proposed at the estimated cost of Rs 7.52 Cr for FY 2024-25. Similarly, 5 nos. of 33 kV & 12 nos. of 11 kV Auto Reclosers; 10 nos. of 33 kV and 24 nos. of 11 kV Sectionalizers are proposed at the estimated cost of Rs 7.63 Cr for FY 2025-26.

i) 33 kV & 11 kV RMUs:

RMUs are being planned to install by TPSODL for improving reliability of the network. The space occupied by RMUs are less, it allows remote operation and provide safety to operators. 5 nos. of 33 kV 4-way RMUs and 10 nos. of 11 kV 4-way RMUs are proposed each for FY 2024-25 and FY 2025-26 at an expenditure of Rs 4.38 Cr and Rs 4.64 Cr respectively.

j) 33 kV & 11 kV FPI:

Installation of overhead Fault Passage Indicators (O/H FPIs) is proposed for faster identification and restoration of faults on long 33 kV and 11kV feeders with multiple sections. There is expected reduction in supply restoration time by 1-2 hrs. 10 nos. of 33 kV & 40 nos. of 11 kV communicable FPIs have been proposed each for FY 2024-25 & FY 2025-26. Similarly, 100 nos. of 33 kV & 350 nos. of 11 kV non-communicable FPIs have been proposed each for FY 2024-25 & FY 2025-26. Accordingly, an expenditure of Rs 3.52 Cr & Rs 3.74 Cr is proposed for FY 2024-25 & FY 2025-26 respectively for this activity.

k) DSS Refurbishment- (AB Switch, HG Fuse, LA, Earthing, Plinth & DP Structure):

TPSODL during the preliminary site visits has observed that many of the existing DSS are in poor condition with damaged or ill-maintained HT & LT protection equipment. Many connections at pole mounted or plinth mounted substations are in very bad condition which not only cause high technical loss but also give rise to undue interruptions. The Aluminium lug / sockets used in DTRs and other equipment in the substations are observed to be of inadequate size and proper crimping of lugs with the help of crimping tools found missing at almost all places. This is resulting into generation of hotspots and failure of connections. Refurbishment/Life Enhancement of DSS is required to address the above-mentioned issues. TPSODL has proposed an amount of Rs 11.12 Cr. for FY 2024-25 & Rs 12.41 Cr for FY 2025-26 for the aforesaid activity.

l) Installation of LV protection at DSS-MCCB (All Required Ratings):

Further, analysis of DTR failure data for the last few years suggest that effective HV & LV protection might have reduced the transformer failure. There are no LT Protection at DTR secondary side so any fault occurred during in LT shifts to 11kV System and tripping 11kV feeder. The Tripping of 11kV feeders impacts reliability indices SAIFI and SAIDI and all connected consumers are also affected due to shut

down. In order to reduce the effect of LT fault on 11kV System, TPSODL recommended for installation MCCB on these Distribution Substations. TPSODL has proposed an amount of Rs 9.74 Cr. for FY 2024-25 & Rs 10.22 Cr for FY 2025-26 for LV protection at DSS.

m) River Crossing Infrastructure:

TPSODL area is prone to frequent natural disasters such as cyclone, flooding, etc. During site visits, it was observed that some of the 33 kV & 11 kV lines are crossing river through poles/ DP/ old tower with more sag which is below permissible level. Upgradation for river crossing infrastructure is proposed to be done by double Pole/ Four Pole at 100 – 200 mtr river crossing and PC+6 Tower at 200-400 mtr river crossing for improving reliability and safety. TPSODL has proposed an amount of Rs 1.87 Cr. for FY 2024-25 & Rs 3.18 Cr for FY 2025-26 for this activity.

Accordingly, TPSODL has proposed an investment of Rs 320.78 Cr under the Network Reliability head (Rs 187.72 Cr for FY 2024-25 & Rs 133.06 Cr for FY 2025-26). Summary of such investment is mentioned as under:

Table 6: Summary of investment 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
1	PSS Refurbishment & SCADA Implementation	76.54	6.54	83.08
2	Bus coupler arrangement in PSS	1.61	1.70	3.31
3	33 kV & 11 kV New Line for N-1 Connectivity	24.27	30.08	54.35
4	Refurbishment of 33 kV & 11 kV line	27.06	36.90	63.96
5	Conversion of 33 kV & 11 kV Bare O/H to Covered Conductor	3.68	4.12	7.80
6	33 kV & 11 kV UG Cable	7.05	1.98	9.03
7	Installation of 33 kV & 11 kV Line AB Switch	9.37	9.93	19.30
8	33 kV & 11 kV Auto Recloser & Sectionalizer	7.52	7.63	15.14
9	33 kV & 11 kV RMUs	4.38	4.64	9.01
10	33 kV & 11 kV FPI	3.52	3.74	7.26
11	DSS Refurbishment- (AB Switch, HG Fuse, LA, Earthing, Plinth & DP Structure)	11.12	12.40	23.52
12	Installation of LV protection at DSS-MCCB (All Required Ratings)	9.74	10.22	19.96
13	River Crossing Infrastructure	1.87	3.18	5.05
	Sub Total- Network Reliability	**187.72**	**133.06**	**320.78**

D. Load Growth:

The following activities are considered under this head:

a) 33/ 11 kV New PSS 2X12.5 MVA & associated Lines (Om Bihar):

In recent years, Gosaninuagaon & Om Vihar & Haldiapadar area have witnessed substantial increase in actual load demand due to addition of new residential as well commercial loads. The loading of existing feeders is above 80% and the space constraint at existing 33/11 kV N.K Nagar PSS also limits the augmentation of PTR to higher rating. Recently frequent breakdowns also occurred due to overloading in existing system. The new proposed PSS is expected to improve the reliability of the city. Construction of new 33/ 11 kV Primary Substation with 2X12.5 MVA power transformer is proposed with construction of 33 kV incoming line from 33/11 kV N.K Nagar PSS. This shall also include LILO arrangement of 33 kV Kanisi feeder emanating from 132/33 kV Ambagada GSS along with construction of 5 nos. of 11 kV feeders and one spare 11 kV Bay. An expenditure of Rs 31.24 Cr for the said activity is planned for FY 2024-25.

b) 33/ 11 kV New PSS 2X10 MVA PSS & associated Lines (Khalikote College):

In recent years, the areas served by Medical PSS have witnessed substantial increase in load demand due to addition of new residential as well commercial loads. The Medical PSS is already housing 5 nos. of PTRs & space constraint also limits the augmentation/ addition of PTR to higher rating. Space constraint at 33/11 kV Goodshed PSS also restricts the augmentation/ addition of PTR to higher rating. Recently frequent breakdowns also occurred due to overloading in existing system. The new PSS is expected to improve the reliability of the city area. The 33 kV of new 33/11 kV Khalikote College PSS is proposed to be connected to 33 kV Medical feeder emanating from 220/132/33 kV Narendrapur GSS and to 33/11 kV NK Nagar PSS by laying UG cables. 4 nos. 11 kV new feeders will be created by laying link line of UG Cables to shift the load from existing 11 kV feeders. An expenditure of Rs 33.21 Cr for the said activity is planned for FY 2025-26.

c) PTR Augmentation:

Detailed Study of the PTR loadings were carried out, inputs were collected from each of the 33/11 kV substations and loading pattern of PTR were analyzed. Future load growth has also been considered and PTRs with peak load more than 80% capacity have been identified for planning of mitigation strategies. In some of the PSS, % loading on PTRs is not uniform. In such cases, it is planned to shift load

from overloaded transformer to other transformer with lower % load. Augmentation of PTRs is planned where spare capacity is not available with other Transformers in the same PSS. An expenditure of Rs 11.61 Cr has been proposed for FY 2024-25 and Rs 7.41 Cr for FY 2025-26 for PTR augmentation at 13 nos. of locations (Ambagada-2 nos., Nabarangpur, Aska, Sunabeda, Autonagar, Kanisi, Koraput Old, Malkangiri, Muniguda, Buguda, Baunsuni and Korukunda PSS). Further, the existing PTRs removed after augmentation will be reused at other location of PSS for mitigation of overloaded/ old PTR after necessary testing & minor life-enhancement measures as per requirement. 8 nos. of released PTR are planned in FY 2024-25 & 7 nos. in FY 2025-26 for reuse at other PSS. An estimated cost of Rs. 2.68 Cr. (Unit cost of Rs. 17.38 lacs/PTR) is proposed for shifting, Civil works & installation cost of relocated PTR.

d) Augmentation/ addition of Distribution Transformer and 11 kV Line Extension for New DTRs:

   TPSODL has proposed to carry out DTR augmentation for overloaded DTRs (above 80% loading) at various locations. This will help in mitigation of overloading of DTRs, improve voltage profile at consumer's end, reduce technical loss and improve operational efficiency. TPSODL has planned for augmentation of 129 nos. DTRs & addition of 68 nos. of DTRs at different locations with an investment of Rs 16.73 Cr for FY 2024-25. Similarly, augmentation of 128 nos. DTRs & addition of 65 nos. of DTRs at different locations have been proposed with an investment of Rs 17.48 Cr for FY 2025-26. Further, an expenditure of Rs 5.22 Cr and Rs 5.49 Cr for FY 2024-25 & FY 2025-26 respectively have been proposed for 11 kV line extension for new DTRs and for 11 kV 2ph – 3ph conversion.

e) Augmentation and addition of LT ABC line:

   The LT AB cable has been proposed for augmentation to address addition of LT feeders due to DTR augmentation or new addition. The augmentation of DTR requires augmentation of associated LT AB cable to cater the additional load to be served to consumers seamlessly. A total of 105 Ckt. Km for FY 2024-25 & 105.75 Ckt. Km for FY 2025-26 has been proposed to be taken up at an investment of Rs.12.03 Cr and Rs 12.86 Cr respectively under this activity.

Accordingly, TPSODL has proposed an investment of Rs 155.95 Cr under the Load Growth head (Rs 78.22 Cr for FY 2024-25 & Rs 77.73 Cr for FY 2025-26). Summary of such investment is mentioned as under:

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

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total
1	33/ 11 kV New PSS 2X12.5 MVA & associated Lines (Om Bihar)	31.24	0.00	31.24
2	33/ 11 kV New PSS 2X10 MVA PSS & associated Lines (Khalikote College)	0.00	33.21	33.21
3	PTR Augmentation	13.00	8.70	21.70
4	Augmentation/ addition of Distribution Transformer and 11 kV Line Extension for New DTRs	21.95	22.96	44.91
5	Augmentation and addition of LT ABC line	12.03	12.86	24.89
	Sub Total- Load Growth	**78.22**	**77.73**	**155.95**

E. Technology Infrastructure:

The following activities are considered under this head:

a) End user IT Infrastructure:

TPSODL has submitted that, till now they have procured and distributed around 1,600 laptops and 700 desktops to its officers. TPSODL is also installing around 300 heavy duty Multi-Functional Devices (MFD) across all offices of TPSODL. With the addition of new manpower and establishments as well as roll out of more and more IT applications, the end users need to be equipped with necessary IT infrastructure for performing day to day works in an effective manner. Hence, there is a need for procurement of Laptops with MS Licence and Anti-Virus. 250 nos. of laptops and 10 nos. of MFD printers are proposed to be procured in FY 2024-25 amounting to Rs 2.46 Cr. Similarly, 500 nos. of laptops are proposed to be procured at an expenditure of Rs 4.75 Cr for FY 2025-26.

b) Strengthen Network Connectivity:

In order to strengthen the network connectivity of PSS which would help in building a reliable SCADA system, TPSODL has proposed to connect 60 nos. of PSS in FY 2024-25 and 20 nos. of PSS in FY 2025-26 over IP MPLS/VSAT connectivity taking the total number of PSS to around 280 nos which could then be brought on to SCADA. In this connection, TPSODL has proposed to lay 30 Km OFC for connecting 7 nos. of PSS in FY 2024-25 and 20 Km OFC for connecting 5 nos. of

PSS in FY 2025-26 using the OPGW backbone of OPTCL or that of telecom service providers. The investment proposed by TPSODL under this activity is Rs 2.46 Cr for FY 2024-25 & Rs 1.65 Cr for FY 2025-26.

c) Augmentation of Data Centre- additional Hardware and Software:

TPSODL submitted that they have commissioned Data Center (DC) successfully at Berhampur in FY 2021-22. This DC hosts SCADA, GIS and AMI applications. For catering to additional AMI implementation, the DC infra shall have to be suitably augmented by procuring additional servers for catering to incremental load of Head End System (HES), Meter Data Management System (MDMS) and Smart Prepaid Module (SPM). Along with the servers, necessary operating system licenses (both Windows and Linux) shall be needed for functioning of the servers. Also, for security of the additional servers, necessary antivirus shall have to be procured. Additional DB licenses for both Oracle and SQL Server shall be required for handling incremental smart meter count. Additional licenses, for associated systems viz. Meter Data Management (MDM) and Head End System (HES) shall have to be procured. Accordingly, TPSODL has proposed Rs 8.47 Cr for FY 2024-25 and Rs 5.30 Cr for FY 2025-26 under this activity.

d) Augmentation of Disaster Recovery Centre– Hardware and Software:

In line with the best practices followed up by critical DCs globally, TPSODL is in the process of procuring and installing necessary IT infrastructure for the Disaster Recovery (DR) Center for this DC at Sambalpur, Odisha as approved by the Commission in Capex approval for FY 2023-24. The DR Centre will ensure business continuity in the aftermath of any breakdown of the Data Centre (DC) owing to a natural calamity or other unforeseeable disaster. The DR Centre will operate at 100% capacity of the DC and the same will be equipped with latest cyber security measures. DR Centre will also ensure 100% data protection for all data stored at DC. Considering the planned augmentation of TPSODL Data Centre in FY 2024-25 and FY 2025-26 with implementation of AMI, it will be imperative to augment the infrastructure capacity of the DR proportionately to ensure business continuity. 2 nos. of servers, 32 nos. of Windows OS, 32 nos. of Linux and 10 nos. of antivirus each for FY 2024-25 & FY 2025-26 have been proposed for an investment amount of Rs 2.18 Cr for each year.

Accordingly, TPSODL has proposed an investment of Rs 29.48 Cr under the Technology Infrastructure head (Rs 15.59 Cr for FY 2024-25 & Rs 13.88 Cr for FY 2025-26). Summary of such investment is mentioned as under:

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

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total
1	End user IT Infrastructure	2.46	4.75	7.21
2	Strengthen Network Connectivity	2.47	1.66	4.13
3	Augmentation of Data Centre- additional Hardware and Software	8.48	5.29	13.77
4	Augmentation of Disaster Recovery Centre– Hardware and Software	2.18	2.18	4.37
	Sub Total- Technology Infrastructure	**15.59**	**13.88**	**29.48**

F. Civil & Administration Infrastructure:

The following activities are considered under this head:

a) Restructuring/ refurbishment of Infrastructures at offices & Stores:

TPSODL has submitted that immediate strengthening, refurbishment and reconstruction works are required in large number of office establishments across all circles since they are very old (about 40-45 years). In all there are 245 office establishments that are important from operational perspective out of which about 135 structures are refurbished as part of civil works since FY 2021-22. Now in FY 2024-25 a total of 60 nos. of offices are planned to be taken up for refurbishment work at an expense of Rs 17 Cr for FY 2024-25 & Rs 1 Cr for FY 2025-26 for providing safe, hygienic & reasonably good working environment with appropriate ventilation to staff. Infrastructure of the offices also need revamping to provide conducive work environment for Employees and consumers visiting the offices. TPSODL operates his distribution business inventory management through Five stores located at - Berhampur, Bhanjanagar, Jeypore, Rayagada and Phulbani. The boundary walls and drainage system at stores is not adequate. Further, considering increasing material storage & its handling, with growing requirement for Government projects and overall system sufficiency improvement works, TPSODL has proposed an investment of Rs 4 Cr each for FY 2024-25 & FY 2025-26 for store related activities. Accordingly, TPSODL has proposed Rs 21 Cr for FY 2024-25 Rs 5 Cr for FY 2025-26 under this activity.

Development of Hostel building for Trainees:

TPSODL submitted that they are in the process of hiring of 100 nos. of management trainees each year to fulfill manpower requirements and these trainees would require permanent accommodation during their training period. Therefore, there is need for establishment of trainee hostel to cater to the above requirement on a long-term basis. Also, since trainees are hired at a minimum salary band, it is difficult for them to afford self-arranged housing. Moreover, this will also ensure seamless campus to business transition with a conducive and a nurturing environment. The cost of the project after considering escalation is estimated to be Rs. 23 Cr against an amount of Rs 20 Cr indicated in the DPR submitted for FY 2023-24 to the Commission. In FY 2023-24 Rs. 12 Cr. was approved by the Commission for this scheme. Accordingly, the balance amount of Rs. 11 Cr is proposed by TPSODL for the FY 2024-25.

b) Development of New Customer Relationship Centres:

   At present TPSODL has 6 CRCs in operation across its Licensed Area and one is under construction. It is now proposed to have 5 more CRCs in different divisions at Malkangiri, Nabarangapur, Phulbani, Boudh and Aska. An expenditure of Rs 1.5 Cr is proposed for construction of such CRCs in FY 2024-25.

c) Admin Infrastructure:

   TPSODL has submitted that the Security Surveillance System will help in surveillance in sensitive area to keep check upon theft and monitor unauthorized access. This will avoid chances of vandalism and enable to keep camera footage for evidence which can be helpful in claiming insurance in case of any theft or damage. Further, potable water availability for the staff is essential to meet the requirements of basic amenities for which Water Coolers, Dispensers and RO Water filters are to be provided at each of the office locations. TPSODL has also proposed for procurement of inverters, batteries, voltage stabilizers, borewell, office furnitures and Air Conditioners in their offices. An investment of Rs.1.54 Cr for FY 2024-25 & Rs 0.81 Cr for FY 2025-26 is proposed under this activity.

Accordingly, TPSODL has proposed an investment of Rs 40.85 Cr under the Civil & Admin Infrastructure head (Rs 35.04 Cr for FY 2024-25 & Rs 5.81 Cr for FY 2025-26). Summary of such investment is mentioned as under:

Table 9: Summary of investment under the head Civil & Admin Infrastructure for FY 2024-25 & FY 2025-26

Sl. No.	Activity	FY 2024-25 (Rs Cr)	FY 2025-26 (Rs Cr)	Total
1	Restructuring/ refurbishment of Infrastructures at offices & Stores	21.00	5.00	26.00
2	Development of Hostel building for Trainees	11.00	0.00	11.00
3	Development of New Customer Relationship Centres	1.50	0.00	1.50
4	Admin Infrastructures	1.54	0.81	2.35
	Sub Total- Civil & Admin Infrastructure	**35.04**	**5.81**	**40.85**

G. Reduction of Carbon Foot Print:

In line with the company's commitment on reducing carbon footprints, provision of Roof Top Solar plants for auxiliary consumption of the power of the offices are considered along with provision of Electric Vehicles (EVs) on Pilot basis. It is proposed to provide 2 nos. of battery operated 4 wheelers to field staff at a budget of Rs 0.50 Cr for FY 2024-25. Further, an amount of Rs 1.50 Cr each for FY 2024-25 and FY 2025-26 is proposed for installation of Solar Modules at offices in 5 Circles with capacity of about 100 kW per circle.

H. Differential Capex to recover cost of New Connections:

TPSODL has submitted that while extending supply to the single-phase consumers i.e less than 5 KW, the expenditure incurred is much higher than the amount paid by the consumer for extension of supply (Service Line charges). The amount under this head would also cover the differential amount i.e amount incurred minus less amount recovered under this situation. TPSODL has proposed an amount of Rs 5.00 Cr under this head.

13. The Summary of the Capex proposal as per approval of BoD is as under:

Table 10: Capital Expenditure Proposal of TPSODL for FY 2024-25 & FY 2025-26

Sl.No	Capex Head	Activity	FY 25	FY 26	Total
A	Statutory & Safety	Safety & Electrical Testing Equipment	12.83	3.21	16.05
		Cradle Guard at major road crossings, populated area, school area	1.68	1.78	3.46
		Fencing of Distribution Substations (DSS), Switchyard & Boundary Wall at PSS	14.50	14.50	29.00
		Intermediate poles for vulnerable location	7.65	7.92	15.56
		4-poles arrangement for unsafe N-1	0.46	0.49	0.96
		Sub Total-Statutory & Safety	**37.13**	**27.90**	**65.03**
B	Loss Reduction	LT Bare to ABC Conversion	4.22	4.26	8.48
		Feeder & DT Metering for Energy Audit	9.70	18.36	28.06
		GIS Integration	4.00	4.00	8.00
		Sub Total- Loss Reduction	**17.92**	**26.62**	**44.54**

C	Network & Reliability	PSS Refurbishment & SCADA Implementation	76.54	6.54	83.08
		Bus coupler arrangement in PSS	1.61	1.70	3.31
		33 kV & 11 kV new line for N-1 connectivity	24.27	30.08	54.35
		Refurbishment of 33 kV & 11 kV line	27.06	36.90	63.96
		Conversion of 33 kV & 11 kV Bare O/H to Covered Conductor	3.68	4.12	7.80
		33 kV & 11 kV UG cable	7.05	1.98	9.03
		Installation of 33 kV & 11 kV line AB switch	9.37	9.93	19.30
		33 kV & 11 kV Auto Recloser & Sectionalizer	7.52	7.63	15.14
		33 kV & 11 kV RMU's	4.38	4.64	9.01
		33 kV & 11 kV FPI	3.52	3.74	7.26
		DSS Refurbishment –(AB switch, HG Fuse, LA, Earthing, plinth & DP Structure)	11.12	12.40	23.52
		Installation of LV protection at DSS-MCCB (All required ratings)	9.74	10.22	19.96
		River Crossing Infrastructure	1.87	3.18	5.05
		Sub Total- Network & Reliability	**187.72**	**133.06**	**120.78**
D	Load Growth	33 kV & 11 kV New PSS 2X12.5 MVA & associated lines (Om Bihar)	31.24	0.00	31.24
		33 kV & 11 kV new PSS 2X10 MVA & associated lines (Khalikote College)		33.21	33.21
		PTR Augmentation	13.00	8.70	21.70
		Augmentation/addition of Distribution Transformer and 11 kV Line Extension for new DTRs	21.95	22.96	44.91
		Augmentation and addition of LT ABC line	12.03	12.86	24.89
		Sub Total- Load Growth	**78.22**	**77.73**	**155.95**
E	Technology Infrastructure	End User IT Infrastructure	2.46	4.75	7.21
		Strengthen Network Connectivity	2.47	1.66	4.13
		Augmentation of Data-additional Hardware and Software	8.48	5.29	13.77
		Augmentation of Disaster Recovery Centre- Hardware and Software	2.18	2.18	4.37
		Sub Total- Technology Infrastructure	**15.59**	**13.88**	**29.48**
F	Civil & Administration Infrastructure	Restructuring/refurbishment of Infrastructure at offices & stores	21.00	5.00	26.00
		Development of Hostel building for trainees	11.00	0.00	11.00
		Development of New Customer Relationship Centre	1.50	0.00	1.50
		Admin Infrastructure	1.54	0.81	2.35
		Sub Total- Civil & Administration Infrastructure	**35.04**	**5.81**	**40.85**
G	Reduction of carbon footprint	Reduction of carbon footprint –Roof Top Solar and EVs	2.00	1.50	3.50

H	Differential Capex to recover cost of New Connections	Differential CAPEX to recover cost of New Connections	5.00	5.00	10.00
	Total in Rs. Cr.		**378.60**	**291.51**	**670.12**

14. The Commission had raised various queries relating to the Capex proposal of TPSODL. The response of TPSODL on specific queries are as under:

a) As regards Fixed Asset Register:

TPSODL has submitted that the company has maintained proper records showing full particulars including quantitative details and situation of Property, Plant & Equipment and Intangible Assets as per the Companies (Auditors Report) Order, 2020 issued by the Central Govt. of India in terms of sub-section (11) of the Section 143 of The Companies Act, 2013. Accordingly, the FAR is available showing year wise, scheme wise (i.e., Government, Consumer Contribution, Commission's Capex approval, etc.), location wise and component wise from effective date upto FY 2023-24 till date.

b) As regards proposed Capitalization Schedule:

TPSODL has submitted the following capitalization schedule for FY 2024-25 & FY 2025-26:

Table 11: Capitalization Schedule

Sl. No	Category	Proposed Capitalization FY 2024-25	Proposed Capitalization FY 2025-26
1	Statutory & Safety	35.6	32.0
2	Loss Reduction	25.6	31.6
3	Network Reliability	192.7	127.8
4	Load Growth	83.3	66.8
5	Technology Infrastructure	24.8	27.8
6	Civil Infra & Admin & Differential Capex	39.2	31.3
Total		**401.2**	**317.3**

c) With regard to the name and location (along with corresponding division/circle) of the proposed DTRs and DSS augmentation/ addition:

TPSODL submitted the details sought by the Commission however stated that although DTR and DSS refurbishment locations planned are provided, the same may undergo changes during the year based on the ROW issues and constraints at site during execution or any other urgent requirement as per field situation faced by TPSODL. However, TPSODL will not exceed the cost approved by the Commission and will keep the Commission informed about the change of location.

d) In regard to details on accounting treatment and movement of decapitalized assets:

TPSODL submitted that the accounting treatment for decapitalization of assets is done in accordance with Ind-AS 16 (Indian Accounting Standards 16) - Property, Plant and Equipment. Decapitalization note is being prepared and approved by the user department, designated signatory. Any amount realized against the decapitalization of asset is adjusted against the Written Down Value (WDV) of the asset and difference, if any is charged to the Profit and Loss (P&L) account. Post decapitalization, the asset is removed from the Fixed Asset Register (FAR) and its accumulated depreciation is also eliminated. In case of disposal of decapitalized assets, the net realized value is recognized as scrap income and offered as Non-Tariff Income in ARR. In case the insurance claim is received on decapitalized assets, the amount is passed on to the consumer by the way of Non-Tariff Income as per clause 4.3 of the OERC (Terms and Conditions for Determination of Wheeling and Retail Supply Tariff) Regulations 2022.

e) Regarding details for setting up a system at PSCC end for Remote relay parameterization & fetching disturbance records:

TPSODL submitted that server system along with HMI needs to be set up at PSCC, also the clients are to be installed at 3 APSCC at 3 Circles, licensed software for configuration of 5 types of IEDs for parameterization using IEC61850 protocol and licensed software is to be procured for analysis of disturbance records.

f) With regard to detailed break-up for the proposal of Civil works in non-ODSSP PSS:

TPSODL submitted that total 58 nos. of non-ODSSP PSS are considered for refurbishment for SCADA implementation in the Capex proposal for FY 2024-25, out of which 16 nos. are in Urban & 42 nos. are in rural areas. In order to optimize Civil cost for Automation purpose, it is planned to use outdoor Control relay Panel (CRP) in 42 nos. of rural PSS with requirement of minor civil works. The Cost break-up for the same is as under:

Table 12

Urban PSS			Rural PSS	Total Cost in FY 2024-25 (Rs. Cr)
Nos of PSS	Average Unit cost (Rs Lacs)	Total Cost (Rs. Cr)	Total Cost of cable ducts (Rs. Cr)	
16	17.46	2.79	0.44	3.23

g) TPSODL has declared that there is no duplication of work between the activities to be carried out under the proposed CAPEX and the assets created through

Government Schemes/ support.

15. 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.

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

a) That Commission has approved Rs. 31.38 Cr. in FY 2023-24 for meter testing equipment. TPSODL has again proposed for meter testing equipment for FY 2024-25 & 2025-26. Total availability of meter testing equipment including their nos and condition, details of meter testing labs at present and their condition may be furnished.

b) TPSODL in its achievement report didn't inform how many nos of fencing in DSS and boundary wall in PSS were completed in the last financial year. TPSODL should furnish details on how many more nos are required and in which location.

c) TPSODL in Chief Minister's Power Development Program (CMPDP/Phase -V) had proposed conversion of LT bare to AB conductor at different location with CKM length of 187 ckm. However, against aforesaid proposal in Phase-V, Government of Odisha has approved for replacement of damaged/undersize/worn-out LT conductor in low voltage pockets for 792.8 ckm at a cost of Rs 73.8 Cr. TPSODL has again proposed for 54 ckm for FY 2024-25 & 51 ckm for FY2025-26 at a cost Rs 8.48 Cr. Commission may approve after prudence check of pervious work.

d) Commission had approved Rs 39.71 Cr for FY 2023-24 for installation of feeder meter for energy audit. TPSODL may explain in which division, subdivision, section those meters were used and after installation of energy audit meter the benefits achieved in terms of lower tariff. TPSODL should explain details of actual loss, commercial loss data till date for the area they are equipped with audit meter.

TPSODL may furnish whether the present proposal will completely cover energy audit programme at different voltage level.

e) OPTCL has constructed many 33/11kV substations under ODSSP, DDUGJY and IPDS schemes which are yet to be made fully operational by TPSODL. Government of Odisha, Energy Department, vide Resolution No 12347/ENG-RR-RR-0004-2019 Bhubaneswar dt 24.12.2021, has approved Rs 1796.73 Cr. for construction of 99 nos. of 33/11 kV PSS & 64 nos. of independent 33 kV lines under ODSSP phase – IV. The Commission may consider the above submission while allowing the proposal of refurbishment of PSS as proposed under Capex for FY 2024-25 & 2025-26.

f) Various new 33 kV and 11 kV lines have been constructed by OPTCL under DDUGJY and IPDS schemes in TPSODL area. Additionally, Government of Odisha, Energy Department, vide Resolution No 12347/EEMG-RR-0004-2019 7274, Bhubaneswar dt 12.07.2023 has approved Rs 1284.49 Cr. for replacement of old/ damaged conductor and a number of existing 33kV and 11kV lines have also been augmented (Renovation & Modernisation works) along with construction of new PSS in needy areas. This infrastructure may be considered while allowing further Capex in this regard to avoid duplication.

g) TPSODL has not given the details of investment in development / augmentation of distribution infrastructure in various division with specific location as per approved capex in last FYs. The detail data of improvement in earthing may be shared division wise.

h) Government of Odisha, Department of Energy, vide Resolution dt 12.07.2023 has approved construction of new 33kV lines (225ckm with Rs 60.8 Cr), and construction of new 11 kV lines (201ckm with 42.77 Cr) in Phase-V. TPSODL in its capex plan again proposed Rs 54.35 Cr for construction of new HT & LT line FY 2024-25 & 2025-26. The Commission in present Capex may allow the investment for aforesaid work with due diligence.

i) TPSODL has not submitted the detail information related to utilisation of 11 kV bays available in 33/11 KV substation. 33 kV outlets from existing Grid substation of OPTCL should be utilised by TPSODL for distribution system.

j) TPSODL has not given any detailed information of augmentation of PTRs & DTRs of last Capex programmes, i.e., in which area they have changed and numbers thereof. Though the Commission has approved Rs 22.03 Cr. for FY 2023-24 for

same work, TPSODL again proposed Rs 155.95 Cr for FY 2024-25 & 2025-26 under augmentation of PTR and DTR which seems to be irrelevant.

k) In the last FY 2023-24, TPSODL has proposed for 1200 laptops and 500 desktops for its officers, with MS licence, Anti-virus to provide better service to consumer. Considering the need of such infrastructure, the Commission had approved Rs 4.03 Cr in FY 2023-24. TPSODL again proposes 1600 laptops and 700 desktops for their officers with a cost of Rs 4.75 Cr for FY 2024-25 & FY 2025-26. So, TPSODL may explain how many nos. of officers are there in TPSODL.

l) As TPSODL had proposed to set up a DR centre for DC at Sambalpur, with proposed hardware and software as per requirement, the Commission has approved Rs 19.58 Cr for FY 2023-24. TPSODL has again proposed Rs 4.36 Cr for augmentation of DR centre, Hardware and software, which are not clear. The commission may have prudent check of previous work for this activity.

m) The Commission had approved Rs. 12 Cr. against the proposal of TPSODL in FY 2023-24 for setting up Trainee Hostel. The present proposal of TPSODL with additional Rs 11 Cr may be allowed by the Commission.

n) As per practice and standards, the end product of any Capex plan is revenue and tariff forecast which has not been done.

o) TPSODL has not given the detail progress works like strengthening of distribution infrastructure, measures for loss reduction, metering, addressing overloading and low voltage issue etc. over the refurbishment of PSS in Non ODSSP for last FYs as approval of last FYs.

p) TPSODL has not submitted cost benefit analysis in terms of AT&C loss reduction which will restrict the tariff hike.

q) The commission may direct TPSODL to make immediate plans for grid connectivity by construction of new 33kV lines and to make all new 33/11KV substations constructed by OPTCL under different Govt. funded schemes operational for mitigation of low voltage issue.

17. 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 4th 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 ad 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.

18. Heard the Petitioner and Respondents at length through hybrid mode. As per Section 42 of the Electricity Act, 2003 read with Clause 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/operation 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, i.e., "by the factors, which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments" while determining the tariff.

19. TPSODL has submitted the specific details of works i.e., location at which the works have been proposed, cost benefit analysis for majority of the schemes and the approval of Board of Directors in line with the provisions in the OERC Wheeling & Retail Supply Tariff Regulations 2022. It is observed that TPSODL has been able to utilise almost 100% of the CAPEX approved by the Commission for the FY 2021-22 and more than 90% of the CAPEX approved by the Commission for the FY 2022-23. The Commission has approved Capex of Rs 407.38 Cr for FY 2023-24 (which includes Rs 69.05 Cr additional Capex approval). In the present case as per para 43(b) of the Vesting Order, the petitioner's minimum committed capital expenditure is Rs.1166 Cr for the FY 2021-22 to FY 2025-26. The Commission had approved Rs. 886.85 Cr till FY 2023-24. Hence, in compliance to the vesting order commitment, TPSODL is required to have minimum CAPEX of Rs. 279.15 Cr. for the FY 2024-25 & FY 2025-26. TPSODL has proposed a Capex of Rs.670.12 Cr. under different activities for the FY 2024-25 & FY 2025-26.

20. The investments proposed by the petitioner has been examined and the submissions of Stakeholders were considered. In TPSODL, 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 TPSODL's Board of Directors before it approaches the Commission for grant of approval. During the analysis, the Commission observes that the DPR proposed by TPSODL is in line with Capex Plan approved by their Board for FY 2024-25 & FY 2025-26.

21. The detailed analysis of the proposed activities and the Commission's Observations for the proposed Capex by TPSODL for FY 2024-25 & FY 2025-26 are stated as hereinafter:

A. Statutory & Safety:

22. As per the Accident Reports of TPSODL, it is observed that fatal accidents relating to humans is more than 50% of the total accidents in TPSODL area. Due to various safety violations and unsafe conditions, a large number of incidents relating to public as well

as animals continue to happen. TPSODL has proposed procurement of tools like Arc Flash suit, emergency & fire detection alarm system, neon tester & discharge rod for high voltage testing & discharging, Fiber Reinforced Polymer (FRP) ladders, Hands on Technical Training (HoTT) centre, public safety gadgets and remote monitoring systems, etc. TPSODL has further proposed DT workshop equipment (LT&HT winding machines, air drying oven, oil filter machine, air compressor, welding shearing and weighing machines, oil storage tank, etc.), and meter testing equipment (3ph portable generator set, lineman toolkit bag, TRMS value measuring clamp, 1ph & 3ph LT & HT Accucheck, CMRI for smart meters, etc.). Provision for Cradle guard at major road crossings; Intermediate poles for vulnerable location & 4-Pole Arrangement for unsafe N-1 have also been proposed.

23. TPSODL has made significant progress under the Statutory & Safety head in FY 2021-22 & FY 2022-23. The actual Capital Expenditure incurred is more than 93% of the approved Capital Expenditure for FY 2021-22 & FY 2022-23. The capitalization for FY 2023-24 is in progress and the outcome will be reviewed at the end of the Financial Year. The Commission is of the view that the proposals submitted by TPSODL under Statutory & Safety are essential to improve safety of human being & animals and reduce accident cases in upcoming years. Accordingly, the Commission allows the following under Statutory and Safety head for FY 2024-25 & FY 2025-26:

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

Sl. No.	Activity	Proposed for FY 2024-25 (Rs Cr)	Commission's Approval (Rs Cr)
1	Safety & Electrical Testing Equipment	12.83	12.83
2	Cradle Guard at major road crossings, populated area, School area	1.68	1.68
3	Fencing of Distribution substations (DSS), Switchyard & Boundary Wall at PSS	14.50	14.50
4	Intermediate poles for vulnerable location	7.65	7.65
5	4-Pole Arrangement for unsafe N-1	0.46	0.46
	Sub Total- Statutory & Safety	**37.13**	**37.13**

Table 14: Capex approved under the head Statutory & Safety for FY 2025-26

Sl. No.	Activity	Proposed for FY 2025-26 (Rs Cr)	Commission's Approval (Rs Cr)
1	Safety & Electrical Testing Equipment	3.21	3.21

2	Cradle Guard at major road crossings, populated area, School area	1.78	1.78
3	Fencing of Distribution substations (DSS), Switchyard & Boundary Wall at PSS	14.50	14.50
4	Intermediate poles for vulnerable location	7.92	7.92
5	4-Pole Arrangement for unsafe N-1	0.49	0.49
	Sub Total- Statutory & Safety	**27.90**	**27.90**

24. Based on the above analysis and considering the importance of Safety enhancement, the Commission allows Capex of Rs. 65.03 Cr (Rs 37.13 Cr for FY 2024-25 & Rs 27.90 Cr for FY 2025-26) under the head Statutory & Safety.

B. Loss Reduction:

25. The submission made by the Petitioner under the Loss Reduction Scheme has been examined and it is observed that TPSODL has not fully utilised the Capex approved for the FY 2021-22 & FY 2022-23 under the Loss Reduction scheme. The progress of work as per submission shows that TPSODL has utilised Rs. 51.45 Cr (as against the approved Capex of Rs. 76.41 Cr) which is about 68% of the Capital Expenditure approved cumulatively for the FY 2021-22 & FY 2022-23.

26. The analysis of the activities covered under loss reduction are as follows:

a) LT Bare Line to ABC Conversion:

It is observed that LT bare to ABC conversion has been proposed for about 105 Ckt. Km (54 Ckt. Km in FY 2024-25 for Rs 4.22 Cr & 51 Ckt. Km in FY 2025-26 for Rs 4.26 Cr) in theft prone areas. Considering the importance of safety as well as reduction in theft of electricity in the theft prone area, the Commission allows Rs 8.48 Cr (i.e., Rs 4.22 Cr for FY 2024-25 & Rs 4.26 Cr for FY 2025-26) for conversion of LT Bare conductor to ABC.

b) Feeder & DT Metering for Energy Audit:

TPSODL has submitted that conduction of Energy Audit in Electricity Distribution Companies is required as per Energy Conservation Act, 2001, which requires TPSODL to install meters on all feeders & DTRs and to provide broad framework for conduct of Annual Energy Audit and Quarterly Periodic Energy Accounting. TPSODL has submitted that for FY 2024-25 it has considered smart metering for 170 nos. of 33 kV feeders PSS, 3340 nos. of DTRs (above 25KVA). Similarly, for FY 2025-26 TPSODL has considered smart metering for 140 nos. of 33 kV consumers at

T-off location and for 7885 nos. of DTRs (above 25KVA). In addition to the above, TPSODL has proposed for ring type CTs & control cables for smart metering in DTRs. The Commission feels that effective energy audit of the system is necessary to access accurate distribution loss levels, identify overloaded feeders, areas of leakage, theft so that corrective action can be taken for reducing technical & commercial loss. This will also enable quantifiable energy accounting system. Hence, the Commission approves a sum of Rs 28.06 Cr (i.e., Rs 9.70 Cr for FY 2024-25 & Rs 18.36 Cr for FY 2025-26) under this Capex activity.

c) GIS Integration:

TPSODL has submitted that out of the 6 circles, GIS has been implemented for 3 circles (i.e City, Aska and Berhampur) and GIS system is also live for users of these circles. At present, the implementation of GIS in rest of 3 circles (Bhanjanagar, Rayagada and Jeypore) is in progress and will be completed in FY 2023-24. The petitioner has proposed software application development, network survey, asset mapping, migration of new assets and GIS-SAP integration in the latest proposal. It is observed that TPSODL has made significant progress in the implementation of GIS and utilised the Capex approved for FY 2021-22 & FY 2022-23. Integration of GIS will enable mapping of all assets and customers which will aid in collection, monitoring and management and is expected to reduce the commercial losses and also improvement in reliability of the network. Hence, the Commission allows Rs 8 Cr (i.e., 4 Cr each for FY 2024-25 & FY 2025-26) for GIS Integration.

27. Accordingly, the Commission allows the following under Statutory and Safety head for FY 2024-25 & FY 2025-26:

Table 15: Capex approved under the head Loss Reduction for FY 2024-25

Sl. No.	Activity	Proposed for FY 2024-25 (Rs Cr)	Commission's Approval (Rs Cr)
1	LT Bare to ABC Conversion	4.22	4.22
2	Feeder & DT Metering for Energy Audit	9.70	9.70
3	GIS Integration	4.00	4.00
	Sub Total- Loss Reduction	**17.92**	**17.92**

Table 16: Capex approved under the head Loss Reduction for FY 2025-26

Sl. No.	Activity	Proposed for FY 2025-26 (Rs Cr)	Commission's Approval (Rs Cr)
1	LT Bare to ABC Conversion	4.26	4.26
2	Feeder & DT Metering for Energy Audit	18.36	18.36
3	GIS Integration	4.00	4.00
	Sub Total- Loss Reduction	**26.62**	**26.62**

28. Based on the above analysis and considering the importance of loss reduction, the Commission allows Capex of Rs. 44.54 Cr (Rs 17.92 Cr for FY 2024-25 & Rs 26.62 Cr for FY 2025-26) under the head Loss Reduction.

C. Network Reliability:

29. TPSODL has carried out the load flow studies considering five-year load growth and action plans have been proposed by the petitioner accordingly. As per the study, there is need for auto-reclosers, sectionalizers and fault passage indicators for improvement of reliability of overhead feeders, AB switches to sectionalize long feeders during any planned/ unplanned shutdown, MCCB on LT feeders for control and protection of feeders, automation of PSS for remote monitoring, quicker detection and restoration of faults, UG cables to address RoW issues, DSS refurbishment for enhancement of life of DSS, and poles for river crossing to address the low ground clearance issue. It may further be noted that TPSODL has utilized almost 100% of the Capex approved by the Commission under the head Network Reliability for FY 2021-22 & FY 2022-23.

30. A total of 59 nos. of PSS considered for revamping/ retrofitting and for monitoring by SCADA, civil works at 16 nos. of non-ODSSP PSS in FY 2024-25, 22 nos. of bus coupler arrangements for 13 nos. of PSS, 16 nos. of new 33 kV lines and 73 nos. of new 11 kV lines, 121 nos. of lines with total length of 616.57 Ckt. Km for conductor upgradation, 33.3 Ckt. Km proposed for conversion to covered conductor, 9 Ckt Km of UG cable, 35 nos. of Auto Reclosers, 70 nos. of Sectionalizers, 30 nos. of 4-way RMUs, 1000 nos. of FPIs have been proposed along with other activities like DSS refurbishment, LV protection at DSS, River crossing infrastructure, etc.

31. Since reliable network is the primary requirement for delivering uninterrupted quality power to the consumers, the Commission is inclined to approve Rs. 320.78 Cr (Rs

187.72 Cr for FY 2024-25 & Rs 133.06 Cr for FY 2025-26) for network reliability. The activity-wise approval of the Commission is as under:

Table 17: Capex approved under the head Network Reliability for FY 2024-25

Sl. No.	Activity	Proposed for FY 2024-25 (Rs Cr)	Commission's Approval (Rs Cr)
1	PSS Refurbishment & SCADA Implementation	76.54	76.54
2	Bus coupler arrangement in PSS	1.61	1.61
3	33 kV & 11 kV New Line for N-1 Connectivity	24.27	24.27
4	Refurbishment of 33 kV & 11 kV line	27.06	27.06
5	Conversion of 33 kV & 11 kV Bare O/H to Covered Conductor	3.68	3.68
6	33 kV & 11 kV UG Cable	7.05	7.05
7	Installation of 33 kV & 11 kV Line AB Switch	9.37	9.37
8	33 kV & 11 kV Auto Recloser & Sectionalizer	7.52	7.52
9	33 kV & 11 kV RMUs	4.38	4.38
10	33 kV & 11 kV FPI	3.52	3.52
11	DSS Refurbishment- (AB Switch, HG Fuse, LA, Earthing, Plinth & DP Structure)	11.12	11.12
12	Installation of LV protection at DSS-MCCB (All Required Ratings)	9.74	9.74
13	River Crossing Infrastructure	1.87	1.87
	Sub Total- Network Reliability	**187.72**	**187.72**

Table 18: Capex approved under the head Network Reliability for FY 2025-26

Sl. No.	Activity	Proposed for FY 2025-26 (Rs Cr)	Commission's Approval (Rs Cr)
1	PSS Refurbishment & SCADA Implementation	6.54	6.54
2	Bus coupler arrangement in PSS	1.70	1.70
3	33 kV & 11 kV New Line for N-1 Connectivity	30.08	30.08
4	Refurbishment of 33 kV & 11 kV line	36.90	36.90
5	Conversion of 33 kV & 11 kV Bare O/H to Covered Conductor	4.12	4.12
6	33 kV & 11 kV UG Cable	1.98	1.98
7	Installation of 33 kV & 11 kV Line AB Switch	9.93	9.93
8	33 kV & 11 kV Auto Recloser & Sectionalizer	7.63	7.63
9	33 kV & 11 kV RMUs	4.64	4.64
10	33 kV & 11 kV FPI	3.74	3.74

11	DSS Refurbishment- (AB Switch, HG Fuse, LA, Earthing, Plinth & DP Structure)	12.40	12.40
12	Installation of LV protection at DSS-MCCB (All Required Ratings)	10.22	10.22
13	River Crossing Infrastructure	3.18	3.18
	Sub Total- Network Reliability	**133.06**	**133.06**

D. Load Growth:

32. TPSODL has submitted that in order to meet the load growth, network infrastructure needs to be extended, strengthened or augmented so that new connections can be released in a timely manner. TPSODL has proposed for construction of 2 new PSS, augmentation of PTR, augmentation & addition of DTR and additional LT AB cable in its distribution system. It is observed that TPSODL has fully utilised the Capex approved by the Commission for the FY 2021-22 & FY 2022-23 under Load growth. The rising trend of load growth in the proposed location justifies the Network expansion & augmentation of PTRs/ DTRs and addition of new DTRs.

33. The load in Berhampur city area has been growing at a rate of 7.03% in the last 3 years. Considering the huge load growth in the nearby PSS which is more than 14% year on year, TPSODL has proposed construction of 2 nos. of new 33/ 11 kV PSS at Om Bihar and Khalikote College area. Further, the Study of the PTR loadings suggests that the peak load is more than 80% capacity in some of the PSS and the percentage loading is also not uniform. Therefore, PTR augmentation at 13 nos. of locations have been proposed and the existing PTRs removed after augmentation will be reused at other location of PSS for mitigation of overloaded/ old PTR. TPSODL has also planned for augmentation of 257 nos. of overloaded DTRs & addition of 133 nos. of new DTRs at different locations including line extension for new DTRs and 2ph – 3ph conversion. Moreover, augmentation and addition of 210.75 Ckt Km of LT ABC line has been proposed for augmentation to address addition of LT feeders due to DTR augmentation or new addition.

34. Based on the above analysis and considering the percentage loading of existing DTRs & PTRs which is above 80%, the Commission allows Capex of Rs. 155.95 Cr (Rs 78.22 Cr for FY 2024-25 & Rs 77.73 Cr for FY 2025-26) under the head Load Growth. The details of the Capex proposed vis-à-vis approved for each activity is as under:

Table 19: Capex approved under the head Load Growth for FY 2024-25

Sl. No.	Activity	Proposed for FY 2024-25 (Rs Cr)	Commission's Approval (Rs Cr)
1	33/ 11 kV New PSS 2X12.5 MVA & associated Lines (Om Bihar)	31.24	31.24
2	PTR Augmentation	13.00	13.00
3	Augmentation/ addition of Distribution Transformer and 11 kV Line Extension for New DTRs	21.95	21.95
4	Augmentation and addition of LT ABC line	12.03	12.03
	Sub Total- Load Growth	**78.22**	**78.22**

Table 20: Capex approved under the head Load Growth for FY 2025-26

Sl. No.	Activity	Proposed for FY 2025-26 (Rs Cr)	Commission's Approval (Rs Cr)
1	33/ 11 kV New PSS 2X10 MVA PSS & associated Lines (Khalikote College)	33.21	33.21
2	PTR Augmentation	8.70	8.70
3	Augmentation/ addition of Distribution Transformer and 11 kV Line Extension for New DTRs	22.96	22.96
4	Augmentation and addition of LT ABC line	12.86	12.86
	Sub Total- Load Growth	**77.73**	**77.73**

E. Technology Infrastructure:

35. TPSODL has submitted that with the addition of new manpower and establishments as well as roll out of more and more IT applications, the end users need to be equipped with necessary IT infrastructure for performing day to day works in an effective manner. Procurement of 750 nos. of laptops and 10 nos. of MFD printers are proposed by TPSODL. Such infrastructure will enhance performance, effectiveness and provide better service to consumer. Further, TPSODL has proposed to connect 80 nos. of PSS (spanning 50 Km for 12 nos. of PSS) over IP MPLS/VSAT connectivity which could be brought on to SCADA. This will help in strengthening the network connectivity of PSS which would help in building a reliable SCADA system. TPSODL has also stated that for catering to additional AMI implementation, the DC infra shall have to be suitably augmented and the DR centre needs to be equipped with necessary IT infrastructure to ensure business continuity in the aftermath of any breakdown of the Data Centre (DC).

36. TPSODL has utilised 100% of the Capex approved under this head for FY 2021-22 & FY 2022-23. However, it may be noted that the Commission had approved 1700 laptops & desktops for FY 2021-22 & FY 2022-23 and has further approved 225 laptops and desktops for FY 2023-24. TPSODL has procured 582 additional laptops beyond the

Commission's approval for the previous financial years. Considering the present number of officers and future number of new recruitments, the proposal for 750 new laptops for FY 2024-25 & FY 2025-26 seems to be high and seeks further justification. Therefore, the Commission does not allow the cost for 750 laptops in this instant proposal. TPSODL may again approach the Commission with sufficient justification in subsequent years if there is a need for further laptops/ desktops.

37. In view of the above, the Commission allows Capex of Rs. 22.26 Cr (13.13 Cr for FY 2024-25 & Rs 9.13 Cr for FY 2025-26) as proposed by TPSODL under the head Technology Infrastructure:

Table 21: Capex approved under the head Technology Infrastructure for FY 2024-25

Sl. No.	Activity	Proposed for FY 2024-25 (Rs Cr)	Commission's Approval (Rs Cr)
1	End user IT Infrastructure	2.46	0.08
2	Strengthen Network Connectivity	2.47	2.47
3	Augmentation of Data Centre- additional Hardware and Software	8.48	8.48
4	Augmentation of Disaster Recovery Centre– Hardware and Software	2.18	2.18
	Sub Total- Technology Infrastructure	**15.59**	**13.13**

Table 22: Capex approved under the head Technology Infrastructure for FY 2025-26

Sl. No.	Activity	Proposed for FY 2025-26 (Rs Cr)	Commission's Approval (Rs Cr)
1	End user IT Infrastructure	4.75	0.00
2	Strengthen Network Connectivity	1.66	1.66
3	Augmentation of Data Centre- additional Hardware and Software	5.29	5.29
4	Augmentation of Disaster Recovery Centre– Hardware and Software	2.18	2.18
	Sub Total- Technology Infrastructure	**13.88**	**9.13**

F. Civil & Administration Infrastructure:

38. The submission of TPSODL under Civil Infrastructure & Admin is examined by the Commission. TPSODL has stated that there are 245 established & operating offices of TPSODL and conditions of almost all existing establishments are in dilapidated condition. TPSODL has proposed for refurbishment/ restructuring of infrastructure at offices & stores, development of 5 nos. of customer relationship centres, remaining work of hostel building for trainees and other admin infrastructures.

39. It is observed that TPSODL has completed more than 90% of the Capex work approved by the Commission under this activity for FY 2021-22 & FY 2022-23. The Commission is of the view that Capex proposal under this head is essential to provide hygienic and conducive work environment for employees.

40. With respect to the proposal of Rs 11 Cr for development of Hostel building for trainees, it is observed that TPSODL has estimated sum of Rs 20 Cr for this activity while submitting the proposal for FY 2023-24. The Commission had approved Rs 12 Cr and the balance amount of Rs 8 Cr was to be approved by the Commission in subsequent year. Accordingly, the Commission approves a sum of Rs 8 Cr under this activity instead of Rs 11 Cr as proposed for FY 2024-25.

41. In view of the above, the Commission approves the Capex of Rs 37.85 Cr (Rs 32.04 Cr for FY 2024-25 & Rs 5.81 Cr for FY 2025-26) under this head. The detailed approval for each activity is as hereunder:

Table 23: Capex approved under the head Infrastructure- Civil & Admin for FY 2024-25

Sl. No.	Activity	Proposed for FY 2024-25 (Rs Cr)	Commission's Approval (Rs Cr)
1	Restructuring/ refurbishment of Infrastructures at offices & Stores	21.00	21.00
2	Development of Hostel building for Trainees	11.00	8.00
3	Development of New Customer Relationship Centres	1.50	1.50
4	Admin Infrastructures	1.54	1.54
	Sub Total- Infrastructure- Civil & Admin	**35.04**	**32.04**

Table 24: Capex approved under the head Infrastructure- Civil & Admin for FY 2025-26

Sl. No.	Activity	Proposed for FY 2025-26 (Rs Cr)	Commission's Approval (Rs Cr)
1	Restructuring/ refurbishment of Infrastructures at offices & Stores	5.00	5.00
2	Admin Infrastructures	0.81	0.81
	Sub Total- Infrastructure- Civil & Admin	**5.81**	**5.81**

G. Reduction of Carbon Foot Print:

42. TPSODL has proposed for 2 nos. of battery operated 4 wheelers and installation of Solar Modules at offices in Circles with capacity of about 100 kW per circle. The Commission supports such initiatives/ steps taken to reduce carbon emissions and dependency on conventional fossil fuels. Therefore, the Commission allows the proposed Capex of Rs 3.50 Cr under this head.

H. Differential Capex to recover cost of New Connections:

43. TPSODL has proposed Rs. 5.00 Cr to meet the differential cost paid for extending supply to the single-phase consumers (with <5 kW connected load). Considering that the differential cost is borne by the DISCOM for extending service line to consumers, the Commission approves Rs 5.00 Cr for recovery of differential cost of new connections.

44. The Commission has deducted certain proposed expenditure under various heads which has already been explained in the previous paras. TPSODL may approach the Commission on a later stage for approval with sufficient justification for such proposals. The activities under various heads where deduction has been done are as follows:

Table 25: Summary of the proposed activities vis-à-vis deduction by the Commission

Sl. No	Capex Head	Activity	TPSODL Proposal as per BoD (Rs Cr)		Commission's approval (Rs Cr)	
			FY 25	FY 26	FY 25	FY 26
1	Technology Infrastructure	End User IT Infrastructure	2.46	4.75	0.08	0.00
2	Civil & Admin Infrastructure	Development of Hostel building for trainees	11.00	0.00	8.00	0.00

45. The Summary of the Capex proposal vis-à-vis the Commission's approval is as under:

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

Sl. No	Capex Head	Activity	TPSODL Proposal as per BoD (Rs Cr)		Commission's approval (Rs Cr)	
			FY 25	FY 26	FY 25	FY 26
A	Statutory & Safety	Safety & Electrical Testing Equipment	12.83	3.21	12.83	3.21
		Cradle Guard at major road crossings, populated area, school area	1.68	1.78	1.68	1.78
		Fencing of Distribution Substations (DSS), Switchyard & Boundary Wall at PSS	14.50	14.50	14.50	14.50
		Intermediate poles for vulnerable location	7.65	7.92	7.65	7.92
		4-poles arrangement for unsafe N-1	0.46	0.49	0.46	0.49
		Sub Total-Statutory & Safety	**37.13**	**27.90**	**37.13**	**27.90**
B	Loss Reduction	LT Bare to ABC Conversion	4.22	4.26	4.22	4.26
		Feeder & DT Metering for Energy Audit	9.70	18.36	9.70	18.36

		GIS Integration	4.00	4.00	4.00	4.00
		Sub Total- Loss Reduction	**17.92**	**26.62**	**17.92**	**26.62**
C	Network & Reliability	PSS Refurbishment & SCADA Implementation	76.54	6.54	76.54	6.54
		Bus coupler arrangement in PSS	1.61	1.70	1.61	1.70
		33 kV & 11 kV new line for N-1 connectivity	24.27	30.08	24.27	30.08
		Refurbishment of 33 kV & 11 kV line	27.06	36.90	27.06	36.90
		Conversion of 33 kV & 11 kV Bare O/H to Covered Conductor	3.68	4.12	3.68	4.12
		33 kV & 11 kV UG cable	7.05	1.98	7.05	1.98
		Installation of 33 kV & 11 kV line AB switch	9.37	9.93	9.37	9.93
		33 kV & 11 kV Auto Recloser & Sectionalizer	7.52	7.63	7.52	7.63
		33 kV & 11 kV RMU's	4.38	4.64	4.38	4.64
		33 kV & 11 kV FPI	3.52	3.74	3.52	3.74
		DSS Refurbishment –(AB switch, HG Fuse, LA, Earthing, plinth & DP Structure)	11.12	12.40	11.12	12.40
		Installation of LV protection at DSS-MCCB (All required ratings)	9.74	10.22	9.74	10.22
		River Crossing Infrastructure	1.87	3.18	1.87	3.18
		Sub Total- Network & Reliability	**187.72**	**133.06**	**187.72**	**133.06**
D	Load Growth	33 kV & 11 kV New PSS 2X12.5 MVA & associated lines (Om Bihar)	31.24	0.00	31.24	0.00
		33 kV & 11 kV new PSS 2X10 MVA & associated lines (Khalikote College)	0.00	33.21	0.00	33.21
		PTR Augmentation	13.00	8.70	13.00	8.70
		Augmentation/addition of Distribution Transformer and 11 kV Line Extension for new DTRs	21.95	22.96	21.95	22.96
		Augmentation and addition of LT ABC line	12.03	12.86	12.03	12.86
		Sub Total- Load Growth	**78.22**	**77.73**	**78.22**	**77.73**
E	Technology Infrastructure	End User IT Infrastructure	2.46	4.75	0.08	0.00
		Strengthen Network Connectivity	2.47	1.66	2.47	1.66
		Augmentation of Data-additional Hardware and Software	8.48	5.29	8.48	5.29
		Augmentation of Disaster Recovery Centre- Hardware and Software	2.18	2.18	2.18	2.18
		Sub Total- Technology Infrastructure	**15.59**	**13.88**	**13.21**	**9.13**
F	Civil & Admin Infrastructure	Restructuring/refurbishment of Infrastructure at offices & stores	21.00	5.00	21.00	5.00
		Development of Hostel building for trainees	11.00	0.00	8.00	0.00
		Development of New Customer	1.50	0.00	1.50	0.00

		Relationship Centre				
		Admin Infrastructure	1.54	0.81	1.54	0.81
		Sub Total- Civil & Administration Infrastructure	**35.04**	**5.81**	**32.04**	**5.81**
G	Reduction of carbon footprint	Reduction of carbon footprint –Roof Top Solar and EVs	2.00	1.50	2.00	1.50
H	Differential Capex to recover cost of New Connections	Differential CAPEX to recover cost of New Connections	5.00	5.00	5.00	5.00
	Total in Rs. Cr.		**378.60**	**291.51**	**373.24**	**286.75**

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

Table 27: 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	227.00	184.65
FY 2022-23	316.00	294.82
FY 2023-24	260.00	407.38
FY 2024-25	233.00	373.24
FY 2025-26	150.00	286.75
Cumulative Capex till FY 2025-26	**1166.00**	**1546.84**

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

48. 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 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 not yet capitalized/ completed all works related to Capex approved under FY 2021-22 & FY 2022-23. 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 expenditure done during previous financial years and justification for various works, Rs 659.99 Cr is approved by the Commission for the FY 2024-25 & FY 2025-26 (Rs 373.24 Cr for FY 2024-25 & Rs 286.75 Cr for FY 2025-26).

However, for any additional requirement over and above the approved amount, the licensee may approach the Commission for approval with proper justification.

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

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

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

(iii) 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.

(iv) 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.

(v) 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.

(vi) 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.

(vii) 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 TPSODL 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 TPSODL for their distribution system.

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

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

(x) 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 RMU, 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.

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

Sd/-
(S. K. Ray Mohapatra)
Member

Sd/-
(G. Mohapatra)
Officiating Chairperson