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

Present: **Shri S. C. Mahapatra, Chairperson**
Shri G. Mohapatra, Member
Shri S. K. Ray Mohapatra, Member

Case No. 82/2023

M/s. TPSODL …… Petitioner
Vrs.
DoE, GoO & Others …… Respondents

In the matter of: **Application for approval of Capital Investment Plan for Network Strengthening in Berhampur City in the licensed Area of TPSODL.**

For Petitioner: Shri V.Wagle, Head- Regulatory Affairs, TPSODL.

For Respondents: Shri L.K. Mishra, DGM (Fin. R&T), GRIDCO Ltd., Ms. Banishree Pradhan, DGM (Elect.), OPTCL and the Representative of SLDC. Non-appears on behalf of DoE, GoO.

ORDER

Date of Hearing: 17.10.2023 **Date of Order: 15.11.2023**

This petition has been filed by M/s TPSODL seeking approval for Capital Investment Plan for Network Strengthening to improve reliability of power supply in Berhampur City. The Petitioner, M/s. TPSODL has prayed the Commission to approve the Capital Investment Proposal, i.e., for an amount of Rs 69.05 Crores (excluding IDC and Employee Cost Capitalization) for executing schemes envisaged for improvement of reliability of power supply to the consumers in Berhampur City.

2. The petitioner, M/s TPSODL, has proposed for approval of additional Capital Investment of Rs. 69.05 Cr. over and above the CAPEX proposal already approved by the Commission for the FY 2023-24 (Rs.338.34 Cr.) to meet/cater to the unprecedented load growth expected in Berhampur city during summer month of current financial year. Accordingly, Public Notice was issued for disposal of the case through a Public Hearing on 17.10.2023 The proposal includes two broad areas such as 'Reliability' and 'Load Growth' covering construction of new lines & upgradation of existing 33 kV & 11 kV lines, augmentation of PTRs, augmentation & addition of DTRs, augmentation/addition of ABC, installation of AB switches & isolators, improvement of earthing, providing cradle guard and LV protection for DSS etc.

3. The averments of the Petitioner may be concisely stated as hereinafter:

a) There was a sudden load growth observed in summer 2023 which caused frequent interruption of power supply to consumers. Overloading conditions in electrical networks during this summer and expected load growth in summer 2024 can lead to a variety of issues, primarily stemming from increased demand for electricity due to higher temperatures and increased use of cooling systems. During site visits, it has been 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. It is observed that some sections of lines are of undersized conductor of 34 & 55 sq.mm and there are multiple joints in the run of the line. Such de rated old conductor cause conductor snapping. Hence to meet current load and anticipated future load growth, up-gradation of only part of section which has undersized conductor is proposed. The size of the conductor is proposed to be enhanced to 100 and 148 sq.mm for identified sections of the lines. Further, refurbishment of the lines is also proposed.

b) During summer of 2023, few urgent measures were undertaken to address overloading and reliability issues. The works are in progress and these measures required an additional budget of Rs.1.39 Cr. The works included Link line by 148 sq.mm. conductor from Hinjili Feeder with Nimakhandi feeder, refurbishment by 100 sq mm. conductor-NK nagar PSS to Goshani Nuagaon, Ambapua 70 m Link Line and 2 nos. of Cutpoint, 11 kV line AB switch at Courtpeta feeder, Busbar Extension with isolator at medical PSS, Link line by 100 sq mm Ankuli PSS structure to Delhi Public School, 4-way RMU at Ankuli PSS and 11 kV Link line in Halidiapadar to Randha feeder. This also includes 100 mtr. NH crossing using HDD method.

c) Employee Cost associated with the projects or CAPEX schemes would also form a part of the CAPEX and would be eventually capitalized with the capital expenditure scheme. The above cost submitted for approval does not include such Employee Costs capitalized or Interest During Construction.

d) The estimation of capital costs for large number of items have been made on the basis of Cost Data Book (CDB) published by the Government of Odisha for various items. The CDB has been published by the Government of Odisha for the FY 2018-19. Subsequently, in the meeting dated 23rd November 2021, it was decided that 6% p.a towards escalation may be considered till the rates are revised. For items, which are not covered by the CDB, the rates discovered by

TPSODL through the last competitive bidding conducted has been considered. The rates so discovered have been escalated suitably to reflect the present market conditions. The expenditure of items which do not have the reference of the discovered rates since the same are being placed for the first time, budgetary quotes have been used. For a few items where the above references are not available, engineering estimates have been made by TPSODL to arrive at the capital expenditure.

e) The Commission in their letter No OERC/Engg-09/2022/893 dated 3rd July 2023 had clarified that 6% supervision charges cannot levied for schemes which are executed by the Discoms for themselves (i.e., not on behalf of consumers). Accordingly, TPSODL has not considered such charges while preparation of the scheme value.

f) The Capital Expenditure is proposed to be funded through a Debt to Equity mix in the ratio of 70:30. The Debt raised for this Capital Expenditure would be long term debt and the Equity would be subscribed by Tata Power and GRIDCO in the ratio of 51% and 49% respectively. GRIDCO make equity contribution in kind. Since cash resources need to be raised additionally for compensating the GRIDCO's Equity in kind, equivalent GRIDCO's share has been added to CAPEX for funding of capital expenditure.

g) The details of Capital expenditure proposed under two major Heads (load growth & Network reliability) and corresponding sub-heads/activities are as under:

Load Growth

i. **Augmentation of Power Transformers:**

To carry out the detailed Study of the power transformer loadings, 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 Power Transformers with peak load more than 80% capacity have been identified for planning of mitigation strategies. In some of the PSS, the percentage loading on Power Transformers is not uniform. Though one transformer is overloaded, another transformer is partly loaded. In such cases, it is planned to shift load from overloaded transformer to other transformer with lower load. Augmentation of Power Transformer is planned where spare capacity is not available with other Transformers in the same PSS. This will further help consumers through reduced forced outages, reduction in technical loss & PTR failure, improved operational efficiency, and ensuring N-1 capacity at PSS

level. Accordingly, a cost of Rs. 9.22 Cr. has been proposed for this activity. The details of the PTRs, their existing loading percentage and location has been provided by TPSODL in their additional submission. The summary of the work under this activity is as follows:

Activity	Location	Quantity in nos	Cost- Rs.Lakh /Transformer	Estimated cost in Rs.Cr.
Augmentation of PTR to 12.5 MVA (from 8 MVA)	1) N.K.Nagar PSS-01 nos Augmentation of LT ABC line(35 to 50 sqmm)	1	184.37	1.84
	2) Nimakhandi PSS-01 Nos	1	184.37	1.84
	3)Goodshed PSS-01 Nos	1	184.37	1.84
	4) Medical Old PSS-01 Nos	1	184.37	1.84
	5) Corporation Road-01 Nos	1	184.37	1.84
	Total	**5**		**9.22**

ii. Augmentation/Addition of Distribution Transformers:

In this proposal, it is intended to carry out DTR augmentation and introduce new DSS for those DTRs where LT network lengths are high resulting into under voltages at customer end. In addition to new DTRs new 11 kV Line Extension for New DTRs is also required along with LT Cable. A total of 32 nos. of DTRs are proposed for augmentation and 69 nos. of new DTRs are proposed to be added at a total cost of Rs.13.36 Cr. This includes the cost for 11 kV line extension of 20.82 CKm for new DTRs. This will help in improving voltage profile at consumer end, reduction of technical loss and improvement of operational efficiency. TPSODL has submitted the list of the DTRs to be augmented as well as the list of new addition of DTRs including the existing percentage loading of such DTRs and their locations in their additional submission. The summary of the work under this activity is as follows:

Sl. No.	Activity	Quantity in nos	11 kV line Extension for New DTRs (CKM)	Cost of Transformer	Cost (Rs./Km) for 11 kV	Estimated cost in Rs.Cr.
1	Augmentation of DTR to 100 kVA	11		5.31	16.95	0.58
2	Augmentation of DTR to 250 kVA	2		9.07	16.95	0.18
3	Augmentation of DTR to 500 kVA	19		15.99	16.95	3.04

4	Addition of New DTR – 100 kVA	31	10.7	6.60	16.95	3.86
5	Addition of New DTR – 250 kVA	34	9.45	9.68	16.95	4.89
6	Addition of New DTR – 500 kVA	4	0.67	17.23	16.95	0.80
	Total		**20.82**			**13.36**

iii. Augmentation and addition of LT AB lines:

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. The proposal under this activity includes Augmentation of LT ABC line of 90.61 km and addition of LT ABC of 116.55 km. This will help in improvement of voltage profile and reliability. Accordingly, augmentation and addition of LT AB lines of 207.17 Km has been proposed at an estimated cost of Rs.23.28 Cr. The summary of the work under this activity is as follows:

Sl.No.	Activity	Unit Cost (Rs.lakhs)	Total Qty (Km)	Estimated cost (Rs.Cr.)
1	Augmentation of LT ABC line(35 to 50 sqmm)	5.76	0.70	0.04
2	Augmentation of LT ABC line (50 to 95 sqmm)	8.19	89.91	7.36
3	Addition of LT ABC (95 sqmm)	13.70	112.51	15.42
4	Addition of LT ABC (50 sqmm)	11.28	4.05	0.46
	Total		**207.17**	**23.28**

Network Reliability

i. 33 kV New Line proposal

33 kV network is lengthy and radial in nature at most of the places. 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. Further while considering the proposal for 33 kV new line, RLP pole is considered for providing cyclone resilient infrastructure within 0-60 km of the coastal belt. This will help in improving network reliability, minimize breakdown and reducing technical losses. Accordingly, two 33 kV new lines have been proposed at an estimated cost of Rs.0.36 cr. in city circle.

ii. Upgradation of 33 kV lines

During site visits, it has been observed that conductor of multiple sizes is existing in different sections of the lines which restricts the circuit capacity. This also leads to conductor heating and high losses. Hence it is required to upgrade the conductor size for the identified lines to carry the present as well as anticipated loading considering load growth for future. This will help in improving network reliability, minimize breakdown and reducing technical losses. Accordingly, upgradation of 33 kV lines has been proposed at an estimated cost of Rs.4.27 cr. in City circle.

iii. New 11 kV lines

As per the site survey it is found that the 11 kV network is lengthy as well as radial in nature. Due to lack of availability of alternate 11kV feeder connectivity, 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 the above, 11 kV new link line is to be planned in phased manner to provide N-1 arrangement for critical 11 kV feeder in Urban areas. This will also help in diversion of load of overloaded feeders for optimal use of the network. One Number Ring Main Units (RMU) is planned for ease of operation and faster restoration. This will further help in improving network reliability, minimize breakdown and reducing technical losses. Accordingly, 13 nos. of new 11 kV lines (8.17 ckms.) are proposed under BED-I & BED-II divisions at an estimated cost of Rs.3.22 Cr.

iv. Upgradation of 11 kV lines

It is observed that many 11 kV feeder lines are having some sections with 34 Sq mm conductor. These sections restrict the loading capacities of these feeders and also results in frequent conductor snapping due to ageing and multiple joints. There are also issues observed such as tilted pole, low clearance due to high span, damaged insulators, etc. This will help in improving network reliability, minimize breakdown and reducing technical losses. Hence network refurbishment and upgradation of 40 nos. of lines (49.6 ckms) to 100 sq mm conductor is planned at an estimated cost of Rs.4.58 Cr.

v. LV Protection at DSS and Isolator & Line AB Switch (33 kV & 11 kV)

During site visit, it was observed that there are no LT Protection at DTR secondary side for majority of DTRs. Therefore, any fault occurred in LT

shifts to 11kV System tripping 11 kV feeders which impacts reliability indices SAIFI and SAIDI affecting all connected consumers due to shut down. LT protection is being provided since last two years in Berhampur urban area and the same is proposed under this CAPEX proposal for few balance DTRs to improve reliability of respective 11 kV feeders. This will help in improving the reliability and faster restoration of supply to associated consumers. Accordingly, LV protection for DTRs or in DSS and associated AB switches, LAs, HG fuse and feeder pillars have been proposed at an estimated cost of Rs.4.26 Crs. The details on the proposed LV protection at DSS is as under:

Sl. No.	**Particulars**	**Unit Rate (Rs. lakhs)**	**No**	**Amount (Rs.Cr.)**
1	DSS Refurbishment	3.67	12	0.44
2	11 kV AB switch	0.38	148	0.56
3	11 kV LA	0.26	163	0.43
4	11 kV HG fuse	0.36	122	0.44
5	LT Feeder Pillar	1.00	9	0.09
5	LV protection for 100 kVA Distribution Sub-station	0.71	50	0.36
6	LV protection for 250 kVA Distribution Sub-station	1.57	40	0.63
7	LV protection for 500 kVA Distribution Sub-station	2.66	50	1.33
	Total			**4.26**

With regards to installation of Isolators and AB switches in 33 kV and 11 kV feeders, the major advantage is that field engineers would have flexibility to isolate the section locally instead of switching off entire feeder. In case of any tripping, maintenance engineer can isolate the faulty section and restore the supply of remaining consumers thereby improving the reliability. A total of 66 nos. of AB switches & 20 nos. of isolators has been proposed at an estimated cost of Rs.2.53 Cr. The details of the proposed AB switches and isolators are as under:

Sl.No.	**Particulars**	**No**	**Unit Rate (Rs. lakhs)**	**Amount (in Cr.)**
1	33 kV AB switches	5	3.69	0.18
2	11 kV AB switches	61	2.67	1.63
3	33 kV Isolators	10	4.41	0.44
4	11 kV Isolators	10	2.80	0.28
	Total			2.53

vi. **Network refurbishment for safety improvement in the city**

Cradle Guard (At Major Road crossings, in Populated areas, School areas, etc.)

At present, most of the network is overhead and there is no provision of guard/ cradle wire installed beneath the overhead conductors for most of the feeders. This poses serious safety threat to general public and possibility of conductor parting cannot be ruled out. In such scenario, cradle guard will help in avoiding accidents caused by snapping of conductors of overhead MV feeders.

Intermediate poles for unsafe location

There have been several irregularities in the span length of present networks where the span length is also found to be more 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)], and accidents due to sagging & low ground clearances. To overcome such scenarios, where the span length is on the higher side, it is of utmost importance to provide intermediate poles in between the spans. This will help in reduced number of accidents and ensure safe and reliable power supply.

Accordingly, cradle guard, intermediate poles, earthing & coupling have been proposed at an estimated, a total cost of Rs.2.58 Cr., the details of which are as under:

Sl.No.	Particulars	No	Unit Rate (Rs. lakhs)	Amount (in Cr.)
1	Cradle Guard	46	0.97	0.45
2	33 kV Intermediate Pole	25	0.74	0.19
3	11 kV Intermediate Pole	306	0.60	1.84
4	11 kV Earthing	695	0.99	0.03
5	11 kV Coupling	751	0.01	0.08
	Total			2.58

4. The Summary of the proposed Capital Investment for improvement of reliability in Berhampur City is as under:

Sl. No	CAPEX Head	Activity	UoM	Quantity	Total Proposed Cost (Rs.Cr.)
1	Network	33 kV new lines for reliable power supply	Ckm	0.65	0.36

	Reliability	Up-gradation of 33 kV line	Ckm	22.8	4.27
		11 kV new lines for reliable power supply	Ckm	8.17	3.22
		Up-gradation of 11 kV line	Ckm	49.6	4.58
		AB switch for 33 kV & 11 kV lines, PSS Refurbishment(isolator) & DSS Refurbishment (AB switch, HG fuse LA) & Installation of LV protection at DSS			6.80
		Network Refurbishment for safety enhancement (intermediate poles for vulnerable location, provision for earthing & cradle guard at major road crossings, populated area, school area			2.58
		Sub –total Network Reliability (1)			21.81
2	Load Growth	Augmentation of power Transformer	Nos	5	9.22
		Augmentation/addition of distribution transformer and 11 kV line extension for new DTRs	Nos	101	13.36
		Augmentation and addition of LT ABC line	km	207.17	23.28
		Sub –total Load Growth (2)			45.85
3		Emergency CAPEX (3)			1.39
		Total (1+2+3)			**69.05**

5. The Board of Directors has passed the capital expenditure of Rs.69.05 (excluding IDC & employee cost) through the resolution in the meeting held on 20.10.2023.

6. The averments of the Respondent- Ms. GRIDCO Ltd. in response to the supplementary CAPEX plan for the FY 2023-24 are mentioned hereinafter:

   a) Regulation 3.2.12 of the OERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 states that the inclusion of extra or supplementary capital expenses is authorized exclusively for the purpose of mitigating the impact of natural calamities which is not the reason submitted by the Petitioner in the present petition.

   b) More than fifty percent of time period in the current fiscal year has already elapsed, thus, allowing the inclusion of supplementary CAPEX during the 3rd quarter of the ongoing fiscal year may have the impact on the already approved ARR for FY 2023-24. It is pertinent to highlight that any upward adjustment in the ARR could give rise to a discernible revenue gap for FY 2023-24. Moreover, the revenue gap for the inclusion of the Capital expenditure due to capitalization, when combined with accruing carrying costs due to depreciation, interest costs, RoE could experience a tariff impact during the true-up.

   c) Regulation 2.1.1(4) of the OERC Retail Tariff Regulations, 2022 stipulates that the planning of the distribution network, predicated on a load flow study, is

mandated to be carried out over a minimum timeframe of five years which shall serve as the foundation for capital investments. The petitioner has not submitted the details of load growth including the increased number of consumers, increase in energy consumption and peak demand, change/ addition of consumers under various categories as being occurred during the preceding summer months and other periods with comparison to the existing load pattern justifying the balance transformation required for lines and substations.

d) The petitioner's proposal seems to be oriented towards devising a short-term plan spanning only two years period. It may not be prudent for devising the CAPEX plan for such a small time span of 2 to 3 years. Investment in distribution assets to meet the short-term load requirements may require further augmentation and transformation of the existing capacities to meet additional load growth at a later period thereby requiring early replacement much prior to attainment of useful life period of the newly added assets. Thus, there is an absolute necessity of the load growth study and the adequate CAPEX plan be implemented which would normally meet the load growth for a period of next 5 to 10 years, justifying the optimal utilization and moreover with marginal impact on the tariff.

e) During hearing, the petitioner placed before the Commission that the proposal is for Berhampur City area which limits to 2 divisions under the City Circle, i.e., BED-I & BED-II divisions, however, some of the activities proposed for emergency CAPEX of Rs 1.39 Cr. pertains to BED-III which is not a part of Berhampur City area. Further, some of the proposal regarding upgradation of 33 kV lines belongs to BED-III division & GSED Division which may not be part of Berhampur city area.

f) Under Corporation Road PSS (1X5 MVA+1X8MVA), the proposal is for up-gradation of the installed capacity of 8 MVA to 12.5 MVA. However, proposal was submitted in the CAPEX application for FY 2023-24 for upgradation of 5 MVA to 8 MVA in the same PSS. Thus, the existing 8 MVA can be utilized in place of 5 MVA in the Annual CAPEX Plan already approved by the Commission in order to avoid duplicity of the proposal.

g) N-1 connectivity at 33 kV level can be more beneficial if they are connected from different GSS/ PSS. However, the proposal given for 33 kV new line at para 32 seems to be for interconnection between two 33 kV feeders with 148 sq mm conductor. Alternative sources of supply may be explored and accordingly, new lines may be proposed for network reliability.

h) The details of utilization along with the swapping plan of the present DTRs that would be replaced/upgraded may be furnished towards optimal utilization of the asset within the usable life span schedule.

i) Proper justification supported with load flow study, cost benefit analysis along with SLD for all the proposed work needs to be submitted.

j) As per Vesting Order, the cumulative CAPEX commitment by the petitioner upto FY 2023-24 is Rs.784 Cr. against which, the Commission has already approved Rs.817.8 Cr. It is expected that the petitioner needs to have achieved all the targets specified in the Vesting Order using the approved CAPEX. The proposed supplementary CAPEX of Rs.69.05 Cr. is over and above the CAPEX commitment as per the Vesting Order. The petitioner needs to provide the improvement in quality of services from pre-vesting period and that attained after CAPEX done for each year. Therefore, the present CAPEX proposal needs to have a prudent check as any additional CAPEX approval may lead to further delay in execution of the already approved CAPEX plans and the impact on tariff due to deprecation, RoE, R&M etc.

k) The CAPEX plan needs to ensure optimum utilization of the existing assets considering the balance residual life of the existing assets, alternative utilization of the equipment/assets being replaced through CAPEX expenditure with adequate Repair & Maintenance in order to make the equipment operational and enhance its tenure.

7. Heard the Petitioner and Respondents through Hybrid mode (both physical and virtual) and considered their written submissions. The Commission does observe the following aspects:

(a) The Commission, vide Order dated 19.06.2023 in Case No.05/2023, had earlier approved total CAPEX for Rs.338.33 Cr. for the FY 2023-24. The petitioner, TPSODL has submitted that the additional CAPEX proposal of Rs.69.05 Cr. (over and above the CAPEX already approved for the financial year) is required to cater to the unprecedented load growth expected during summer months of 2024 in the Berhampur City area primarily due to increase in cooling system load. The petitioner has stated that investment proposal will alleviate the issues of over loading of lines & transformers and address low voltage problems. The work proposed under additional CAPEX work will strengthen the distribution network by way of replacement of conductors with higher size, construction of new lines (11 kV and 33 kV),

augmentation/addition of transformation capacity (DTRs, PTRs), augmentation/addition of ABC, installation of AB switches & isolators and providing cradle guard & LV protection for DSS etc. Petitioner, TPSODL has further submitted that few urgent measures undertaken during FY 2022-23 to address overloading (of transformers and lines) and other reliability issues are in progress and require additional expenditure of Rs.1.39 Cr. All these works will improve reliability of power supply to Berhampur city by minimizing interruptions and improving voltage profile.

(b) During the proceeding, the Commission had sought the approval of Board of Directors (BoD) of TPSODL in respect of the proposed additional CAPEX plan which will be implemented in the FY 2023-24. Accordingly, the petitioner has submitted the Board's approval for capital expenditure of Rs.69.05 Cr. TPSODL intends to execute the work covered under above CAPEX plan before the commencement of summer months of 2024 so that the expected increase in demand in Berhampur City area can be met and load shedding can be avoided during ensuing summer.

(c) The additional CAPEX (Rs.69.05 Cr.) has been proposed under two major heads namely 'Reliability' and 'Load Growth' which covers construction of new lines [13 nos. of 11 kV lines (about 8.17 ckms) under BED-I & II] and upgradation of lines [5 nos. of 33 kV lines (about 22.8 ckms) & 40 nos. of 11 kV lines (about 49.60 ckms) with 100 sq.mm. conductors], augmentation of PTRs, augmentation of DTRs (32 nos.) & addition of DTRs (69 nos.) and augmentation (90.61 ckms) & addition (116.55 ckms) of LT ABC lines, refurbishment/replacement/addition of AB switches, isolators, providing cradle guard, improving earthing and providing LV protection for DSS, etc. which are required to improve reliability of power supply during summer months of 2024 in Berhampur City area.

8. As per Regulation 2.1.1 (4) of the OERC (Terms & Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022, the planning of Distribution network, based on load flow study, shall be carried out for minimum five (5) year time frame and shall form the basis for capital investment. The proposed work covered under the additional CAPEX should have been covered under the CAPEX plan for the FY 2023-24 as load growth projection is supposed to have been considered in long term load flow study. However, considering the bottlenecks in

strengthening of existing network, overloading of lines (33 kV & 11 kV) & transformers (DTRs, PTRs) and frequent interruptions in Berhampur City area, the Commission approves the additional CAPEX proposal of TPSODL for Rs.69.05 Cr. for the FY 2023-24. TPSODL shall ensure that such works are not covered under any other schemes approved by the Commission or Government grant. The summary of investment proposal is given below:

Sl. No	CAPEX Head	Activity	Total Proposed CAPEX (Rs.Cr.)	Total Approved CAPEX (Rs.Cr.)
1	Network Reliability	33 kV new lines for reliable power supply	0.36	0.36
		Up-gradation of 5 nos. of 33 kV line (about 22.8 ckms)	4.27	4.27
		13 nos. of new 11 kV lines (about 8.17 ckms) for reliable power supply	3.22	3.22
		Up-gradation 40 nos. of 11 kV line (about 49.60 ckms) by 100 sq.mm. conductor	4.58	4.58
		AB switch for 33 kV & 11 kV lines, PSS Refurbishment (isolator) & DSS Refurbishment (AB switch, HG fuse LA) & Installation of LV protection at DSS	6.80	6.80
		Network Refurbishment for safety enhancement (intermediate poles for vulnerable location, provision for earthing & cradle guard at major road crossings, populated area, school area	2.58	2.58
		Total- Network Reliability	21.81	21.81
2	Load Growth	Augmentation of power Transformer	9.22	9.22
		Augmentation (32 nos) / addition (69 nos) of distribution transformer and 11 kV line extension (about 20.82 ckms) for new DTRs	13.36	13.36
		Augmentation (about 90.61 ckms) and addition (about 116.55 km) of LT ABC line	23.28	23.28
		Total- Load Growth	45.85	45.85
3		Emergency CAPEX	1.39	1.39
		Total	**69.05**	**69.05**

9. The gross CAPEX approval for FY 2023-24 including above additional CAPEX in the present Case (Case No. 82/2023)is reproduced hereinafter:

Sl. No.	Particulars	Proposed CAPEX (Rs Cr)	Board Approval (Rs Cr)	Approved CAPEX by OERC (Rs Cr)
A	**Statutory, Safety and Security**	**34.95**	**26.14**	**26.13**
B	**Loss Reduction**	**97.01**	**84.29**	**84.29**
C	Reliability (Earlier Proposal Case No. 05/2023)	212.20	124.54	124.54

Sl. No.	Particulars	Proposed CAPEX (Rs Cr)	Board Approval (Rs Cr)	Approved CAPEX by OERC (Rs Cr)
	Reliability (Additional CAPEX Proposal Case No. 82/2023)	21.81	21.81	21.81
	Reliability (Total)	**234.01**	**146.35**	**146.35**
D	Load Growth (Earlier Proposal Case No. 05/2023)	49.88	22.03	22.03
	Load Growth (Additional CAPEX Proposal Case No. 82/2023)	45.85	45.85	45.85
	Load Growth (Total)	**95.73**	**67.88**	**67.88**
E	**Infrastructure - Technology**	**46.58**	**41.26**	**41.26**
F	**Infrastructure – Civil & Admin**	**34.95**	**35.08**	**35.08**
	Total (Earlier Proposal Case No. 05/2023)	**480.56**	**338.34**	**338.33**
	Total (Additional CAPEX Proposal Case No. 82/2023)	**69.05**	**69.05**	**69.05**
Gross CAPEX approval for FY 2023-24				
	Total (Earlier Proposal Case No. 05/2023)	**480.56**	**338.34**	**338.33**
	Total (Additional CAPEX Proposal Case No. 82/2023)	**69.05**	**69.05**	**69.05**
	Total CAPEX for FY 2023-24	**549.61**	**407.39**	**407.38**

10. The year-wise and cumulative CAPEX proposal approved by the Commission upto the FY 2023-24 including the additional CAPEX approved now is as under:

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
Cumulative CAPEX till FY 2023-24	**783.00**	**886.85**

11. Regarding the contention of the Respondent- M/s GRIDCO with respect to the impact on the already approved ARR for FY 2023-24, it is clarified that impact of tariff will be felt when the actual capitalization would take place and the audited account is submitted to the Commission. The approved cost shall be passed in the ARR as per the norms subject to capitalization of new assets or decapitalization of replaced assets by the Petitioner and prudence check by the Commission based on the audited account.

12. In view of the submissions of the petitioner and the observations, the Commission issues the following directions to the Petitioner, TPSODL:

(a) Regulation 2.1.1(4) and Regulation 3.2.12 of the OERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 shall be scrupulously followed in respect of CAPEX and supplementary/ additional CAPEX proposal for a financial year. The CAPEX

proposal submitted for a financial year should cover the works that are likely to be executed, and supplementary CAPEX proposals which is being submitted time and again for the same financial year would not be entertained in future unless it is linked to any unforeseen natural disaster/calamities.

(b) Employee cost & IDC expenses considered under the additional CAPEX proposal should be suitably deducted and submitted by TPSODL while determining ARR of corresponding financial year.

(c) For optimum utilization of assets, swapping of transformers of different rating across the PSS or DSS shall be properly planned while replacing the existing transformation capacity (DTRs/PTRs) with higher capacity. Standardization of few ratings for PTRs (i.e., 8 MVA, 12.5 MVA, 20 MVA etc.) should be considered for a PSS for avoiding spare inventories and for faster delivery.

(d) In future, TPSODL shall submit CAPEX proposal with proper justification for utilization of replaced assets like Power Transformers and Distribution Transformers along with the percentage loading of such PTRs & DTRs. The decapitalization of such replaced assets should be properly recorded in the book of accounts.

(e) Future expansion provision in existing substation needs to be judiciously planned. Emphasis should be given for expansion/upgradation of existing PSS/DSS to avoid creation of new PSS/DSS in nearby area. Rather effort shall be made to improve reliability by providing connectivity with nearby GSS(s), providing (N-1) contingency for 33 kV incomers & PTRs and providing adequate space in new PSS for future expansion, which will optimize the creation of infrastructure and reduce O&M cost leading to reduction in financial/tariff burden on consumers.

(f) Non-uniform loading of Power Transformers (PTRs) shall be avoided by modifying the connection arrangement in PSS so as to allow parallel operation of PTRs leading to proper sharing of loads.

13. With the above observations and directions, the case is accordingly disposed of.

Sd/-	Sd/-	Sd/-
(S.K. Ray Mohapatra)	**(G. Mohapatra)**	**(S.C. Mahapatra)**
Member	**Member**	**Chairperson**