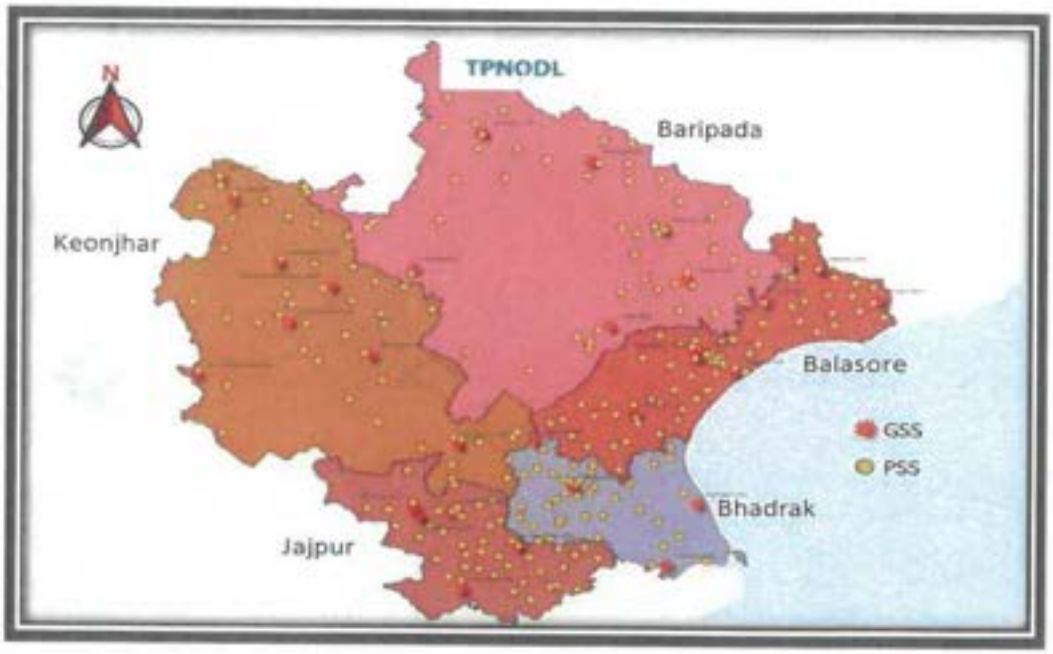
TPNODL

Business Plan



For 1st Control Period

From FY 2024-25 to FY 2027-28

TP NORTHERN ODISHA DISTRIBUTION LIMITED

(A Tata Power & Odisha Government Joint Venture)

Corporate Office : Januganj, Balasore, Odisha-756019

BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION
PLOT NO.4, CHUNUKOLI, SAILASHREE VIHAR,
CHANDRASEKHARPUR, BHUBANESWAR

IN THE MATTER OF: Application for approval of Business Plan for the period FY 2024-25 to FY 2027-28 under the provisions of OERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 and OERC (Conduct of Business) Regulation 2004.

And

IN THE MATTER OF: TP Northern Odisha Distribution Limited.,
Registered & Corporate Office: Januganj, Balasore, Odisha-756019, Represented by its Chief Executive Officer

---------Applicant

And

IN THE MATTER OF All Stake Holders

The Humble applicant, above named, most respectfully showeth:

In compliance to the provisions of OERC (Terms and Conditions for determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022, the present application is being filed by TP Northern Odisha Distribution Limited (TPNODL) before the Hon'ble Commission for approval of Business Plan for the period FY 2024-25 to FY 27-28. The submissions of TPNODL are enclosed herewith.

BHASKAR SARKAR
CHIEF EXECUTIVE OFFICER
TP Northern Odisha Distribution Ltd

The deponent being identified by Sri- Advocate Balasore solemnly affirm and state that the facts stated above are true to his/her knowledge and belief and put his/her signature / Thumb this 31st day of May 2023

Notary Public, Balasore

BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION
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Registered & Corporate Office: Januganj, Balasore, Odisha-756019, Represented by its Chief Executive Officer

---------**Applicant**

And

IN THE MATTER OF: All Stake Holders

Affidavit verifying the application of the licensee for approval of Business Plan for the period FY 2024-25 to FY 27-28

I, Bhaskar Sarkar, aged about 55 years, son of Late Arup Kumar Sarkar, residing at Balasore, do hereby solemnly affirm and state as follows:

I am the Chief Executive Officer of TP Northern Odisha Distribution Limited-the applicant in the above matter and duly authorised to swear this affidavit on its behalf.

The statements made in the application along with the annexures annexed to this application are based on information provided to me and I believe them to be true.

Date: 31.05.2023
Place: Balasore

DEPONENT

Solemnly affirmed and state that the facts stated above are true to his/her knowledge and belief and put his/her signature / LTI on this 31 day of May 2023 at A.M./P.M.

J. N. BEHERA
Notary Public Balasore

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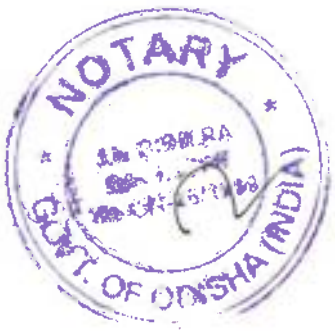

1. Executive Summary

TP Northern Odisha Distribution Limited (TPNODL) has been incorporated as a joint venture of the Tata Power Company Limited (51%) and Odisha Government (49%) on the Public-Private Partnership (PPP) model. TPNODL took over the license to distribute electricity in the five districts Balasore, Mayurbhanj, Bhadrak, Keonjhar and Jajpur districts of northern Odisha, which were earlier served by erstwhile NESCO Utility, through a competitive bidding process. The business of TPNODL shall be governed by the provisions of license issued by Hon'ble Odisha Electricity Regulatory Commission (OERC) vide Order No-OERC/Engg/06/2021/718 dated 29.06.2021 for distribution and retail supply of electricity in North Odisha.

The licensee had submitted Business Plan for the FY 2023-24 on 27.1.23 before Hon'ble Commission for approval. The Business Plan application was taken up by the Hon'ble Commission for analogous hearing with the ARR and RST applications for the FY 23-24 and Hon'ble Commission passed a common order of the Business plan and the Retail Supply Tariff according approval for the expenses and revenue projected by the licensee for the FY 2023-24 vide order dated 23.3.2023. Under the present application, TPNODL is filing before Hon'ble Commission, Business Plan for the balance four years, that is from FY 2024-25 to FY 2027-28 for kind approval.

1.1. Background

Hon'ble OERC vide its order dated 31.03.1999 passed in Case No.24/98 under the provisions of the Orissa Electricity Reform Act, 1995, had issued Licence to North Eastern Electricity Supply Company of Orissa Ltd (the "**NESCO**"), Januganj, Balasore- 756019, Orissa to carry out the business of Distribution & Retail Supply in the areas of supply as mentioned in their licence No 3/99. Under the said Licence, NESCO carried out the Distribution and Retail Supply business as the Licensed Activities in its Area of Supply.

The Electricity Act, 2003 (the "**Act**") came into force from 10th June 2003. Under Section 14 of the Act, any person engaged in the business of supply of electricity under the provisions of repealed laws or any Act specified in the Schedule on or before the appointed date shall be deemed to be a licensee under the Act. By virtue of this provision, NESCO became a Deemed Distribution Licensee for carrying out the Licensed Activity in its Area of Supply.

Thereafter, Hon'ble OERC prepared another draft Licence conditions for NESCO and decided to finalize the same through a consultative public hearing. For this purpose, Hon'ble Commission initiated a suo-moto proceeding and a case was registered as Case No.21/2006. Hon'ble Commission, vide Order dated 27.10.2006, finalized the Licence conditions for NESCO which became applicable with effect from 01.11.2006.

Under Section 19 of the Electricity Act, 2003 (the "Act"), Hon'ble Commission revoked license of NESCO with effect from Mar 2015 and appointed CMD, GRIDCO as the administrator under Section 20(d) of Act and vested the management and control of NESCO Utility along with their assets, interests and rights with the CMD, GRIDCO Limited. The order on revocation of licenses by the Commission was upheld by the Hon'ble APTEL in Appeal No. 64 of 2015 and has also been confirmed by the Hon'ble Apex Court vide their Order dated 24.11.2017 in Civil Appeal No.18500 of 2017.

In terms of Section 20 of Act, Hon'ble Commission initiated a transparent and competitive bidding process for selection of an investor for sale of utility of NESCO ("NESCO Utility") and had issued the updated Request for Proposal (the **"RFP"**) on 31.07.2020. In response to the said RFP, one bid was received by the bid due date. After detailed evaluation by independent bid evaluation committee setup by Hon'ble OERC, The Tata Power Company Limited (the **"TPCL"**) was recommended as the successful bidder and Hon'ble OERC accepted the same under Section 20(1)(a) of the Act.

As per the terms of the RFP, upon completion of sale, NESCO Utility shall vest in a special purpose vehicle (the **"Project SPV"** or **"Operating Company"**) in which TPCL shall hold 51% (fifty one percent) equity shares and Government of Odisha ("GoO") shall hold 49% (forty nine percent) equity shares through GRIDCO Limited (the "**GRIDCO**").

Hon'ble OERC vide letter no. OERC/RA/SALE OF NESCO-26/2019(Vol.II)/162 dated 29.01.2021 then directed GRIDCO to incorporate the said SPV to which the utility of NESCO shall be vested and License of NESCO Utility shall be transferred. TPNODL shall be the SPV in which TPCL and GRIDCO shall hold 51% and 49% equity shares respectively after the completion of sale.

Hon'ble OERC initiated a suo-motu proceeding in Case No. 9/2021 to issue suitable directions with respect to sale of utility of NESCO under Section 20 of the Act and for vesting of utility of NESCO to the intending purchaser under Section 21 of the Act. Hon'ble

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OERC decided to dispose of the petition through a hearing of the concerned parties namely NESCO Utility, TPCL,
GRIDCO, OPTCL and the Government of Odisha. After hearing the parties including public interveners, Hon'ble OERC issued an Order (the **"Vesting Order"**) on 25.03.2021 to the best interest of all the stakeholders.

The Vesting Order specified that the date of vesting of utility of NESCO to TPNODL would be 01.04.2021 (the **"Effective Date"**). In the said order, Hon'ble OERC directed the parties to undertake the transaction in such a manner that all the activities proposed for execution of this transaction in their submissions filed in response to suo-moto petition must be completed on or before 01.04.2021. The sale process would then be considered to be complete.

The Vesting Order also stated that upon completion of sale, the rights, powers, authorities, duties and obligations of the NESCO Utility under its licence shall stand transferred to TPNODL as per Section 21(b) of the Act. Upon delivery of utility of NESCO to TPNODL with effect from 01.04.2021, TPNODL shall be deemed to be the Licensee. Hon'ble OERC shall then issue an order amending Licence Conditions within 90 (ninety) days of the Effective Date. Till the time amended Licence is granted, the provisions of the Vesting Order and the rights, powers, authorities, duties and obligations specified in the Licence issued to NESCO vide order dated 27.10.2006 and subsequently transferred to NESCO Utility shall apply to TPNODL.

TP Northern Odisha Distribution Limited ("**TPNODL**") was incorporated on 20.03.2021 as wholly owned subsidiary of GRIDCO with an authorized share capital of ₹ 1000 crores (Indian Rupee One Thousand Crores only) and paid-up capital of ₹ 5 lakhs (Indian Rupee Five lakhs only). As per the directions contained in the Vesting Order and in fulfillment of requirement under Section 20(3) of the Act, the Administrator of NESCO Utility has delivered the utility to TPNODL with effect from 01.04.2021 after completing all the modalities of the transaction.

With the delivery of utility of NESCO to TPNODL, the Licence of NESCO Utility stood transferred to TPNODL with effect from 01.04.2021 as per the Vesting Order.

In exercise of powers conferred under the OERC (Conduct of Business Regulations), 2004 and the Vesting Order, Hon'ble OERC issued Licence Conditions vide order no. OERC/Engg./06/2021/718 dated 29.06.2021 to TPNODL.

1.2 Basis of Preparation of Business Plan

Provisions of National Tariff Policy 2016 with respect to MYT

Ministry of Power, in compliance with section 3 of the Electricity Act, 2003 has notified the revised Tariff Policy on 28th January, 2016. The National Tariff Policy vide para 5.11(h) has specified about the Multi Year Tariff framework as follows:

"Section 61 of the Act states that the Appropriate Commission, for determining the terms and conditions for the determination of tariff, shall be guided inter-alia, by multi-year tariff principles. The MYT framework is to be adopted for any tariffs to be determined from April 1, 2006. The framework should feature a five-year control period……"

OERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 came into effect on 23rd December, 2022 on its publication in the Odisha Gazette No-3538. The above regulation, hereinafter called the Tariff Regulation defines the "Control Period" as a multiyear –period comprising of five years from FY 2023-24 to FY 2027-28. The tariff regulation mandates filing of Business Plan by the licensee not less than 120 days before commencement of the first year of the Control Period or such other date as directed by the Hon'ble Commission.

After notification of the Tariff Regulation,2022, the licensee filed before Hon'ble Commission Business Plan for the first year of the first control period that is for FY 23-24 on dated 27.1.23 and prayed before Hon'ble Commission to grant some more time for filing Business Plan for the balance four years of the first control period.

The Business Plan application was taken up by the Hon'ble Commission for analogous hearing with the ARR and RST applications for the FY 23-24 and Hon'ble Commission passed a common order of the Business plan and the Retail Supply Tariff according approval for the expenses and revenue projected by the licensee for the FY 2023-24 vide order dated 23.3.2023. Considering the prayer made by the licensee, Hon'ble Commission has been kind enough to allow time upto 30th April, 2022 for filing the Business Plan for the balance four years of the first control period under para 79 of the RST order. Relevant extracts from para 78 and 79 of RST Order dated 23.3.23 are reproduced hereunder:

78. *Due to time constraint, the DISCOMs have submitted the Business Plan for the FY 2023-24 only through their petitions which are registered as Case No. 11 of 2023 (TPCODL), Case No. 10 of 2023 (TPNODL), Case No. 12 of 2023 (TPSODL) and Case No. 13 of 2023 (TPWODL). The licensees have requested the Commission to grant some more time for filing of Business Plan for the balance period of the present control period i.e. FY 2024-25 to 2027-28.*

79. *The Commission has reviewed the application of Business Plan of licensees and found it appropriate to approve the ARR for FY 2023-24 (i.e. first year of the present control period). Considering the prayers made by the licensees. The Commission directed them to submit the business plan for the balance control period by 30th April 2023.*

However, due to the requirement of projection of all the business parameters, the completion of Business plan needed more time for which the licensee prayed before Hon'ble Commission for granting one month more time for submission of Business Plan vide letter dated 29.4.23. Hon'ble Commission has been kind enough to allow time upto 31st May for submission of Business Plan for balance four years of the first control period vide letter no-DIR(T)-394/2023/692 dated 16.05.2023 of Secretary, OERC.

OERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 under chapter -2 provides the general approach and guiding principles for filing Business Plan by the distribution licensee.

The provision for filing of Business Plan as envisaged in regulation 2.1 of the Tariff Regulation, 2022 is reproduced hereunder:

" 2.1. Business Plan

2.1.1. The Distribution Licensee shall file for the Commission's approval, not less than 120 days before the commencement of the first year of the Control Period or such other date as may be directed by the Commission, a Long-Term Business Plan prepared in accordance with these regulations for the entire Control Period. The Business Plan shall be filed for the wheeling and retail supply business and shall, inter alia, contain:

1) Sales/Demand Forecast for each consumer category and sub-category;

each year of the Control Period;

2) Distribution loss reduction trajectory and collection efficiency for each year of the Control Period;

3) Power Procurement Plan including details of availability of power from renewable energy source as concurred by GRIDCO for each year of the businessplan period as per the terms of Vesting Orders. [The Distribution Licensee shall project the power purchase requirement based on the Quantum of Renewable Purchase Obligation (RPO), and the target set, if any, for Energy Efficiency (EE) and Demand Side Management (DSM) schemes. GRIDCO shall intimate the DISCOMs of its ability and readiness to procure power to meet the forecasted / projected Demand of electricity and the energy requirement of the State, failing which the DISCOMs shall provide their Plan to the Commissionfor meeting their demand.];

4) The Capital Investment Plan of the Distribution Licensee shall be prepared in accordance with the sales/demand forecast, power procurement plan, distribution loss trajectory, targets for quality of supply etc. The Capital investment plan shall be consistent with the perspective plan developed by the State Transmission Utility (STU) based on the data submitted by the Distribution Licensees and Load Flow studies conducted in line with the requirements of the State Grid Code. 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 investment plan should also include yearly phasing of capital expenditure along with the financing plan and corresponding capitalization schedule with due considerationof capital expenditure as per the Vesting Order. The capital investment plan shall show separately, on-going projects that will spill over into the Control Period, and new projects (along with justification) that will commence in the Control Period but may be completed within or beyond the Control Period. The Commission shall consider and approve the capital investment plan for the Wheeling Business and Retail Supply Business of the Distribution Licensee. The Commission, for its satisfaction, may require the Distribution Licensee to provide relevant technical and commercial details.

5) The purpose of investment shall be strengthening of distribution network, creation of new assets or augmentation / replacement of existing assets, meeting load growth, technical loss reduction, non-technical loss reduction

including improvement in collection efficiency, meeting energy requirement, custom service improvement in terms of quality & reliability of supply including energyaudit, asset mapping and consumer indexing, etc.

6) *The Distribution licensee shall focus on (a) safety of human, animal and equipment including implementation of protection system (b) strengthening of distribution network (c) standardization of equipment & material and standardization of technical specification in line with national regulations & national standards to ensure use of good quality equipment & material, facilitate interchangeability and faster delivery (d) optimum utilization of assets i.e. avoid underutilization of assets (e) adoption of state-of-art technology including SCADA & Automation system, smart metering and use of modern diagnostic tools for monitoring of health of distribution assets etc. with objective to improve reliability, safety, providing uninterrupted (24x7) quality power to all and better customer service*

7) *The appropriate capital structure and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;*

8) *The Operation and Maintenance (O&M) costs estimated for each year of the Business Plan Period based on the proposed efficiency in operating costs, normsfor O&M cost allowance including indexation and other appropriate mechanism,if any;*

9) *Details of depreciation based on useful life of the assets and capitalization schedule for each year of the control period.*

10) *A set of targets proposed for other controllable items such as working capital, quality of supply etc. The targets shall be consistent with the capital investment plan proposed by the Licensee;*

11) *Proposals for other items such as external parameters used for indexation (inflation, etc);*

12) *The Distribution Licensee shall forecast expected revenue from prevailing tariff and charges based on the estimates of quantum of electricity to be supplied to consumers and to be wheeled on behalf of Distribution System Users for ensuing Financial Year within the Control Period as on the date of making the application.*

13) *The Distribution Licensee shall provide voltage wise cost of supply for each year of the control period.*

14) *The filings in addition to the Business Plan period shall also contain the data for the cost and revenue parameters for the previous five years period.*

The Applicant shall provide full details, supporting the forecast, including butnot limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, contractual arrangements and/or secondary research, to enable the Commission to assess the reasonableness of the forecast.

2.1.2. *The variation in revenue/cost on account of uncontrollable factors and controllable factors shall be trued up annually.*

2.1.3. *For all controllable costs, the Commission may set the targets for each year under review in the approved Business Plan. These targets shall be used for computing revenue requirement.*

2.1.4. *All non-controllable costs shall be treated as pass-through by the Commission after due diligence and prudence check.*

2.1.5. *The performance parameters, whose trajectories have been specified as per these Regulations, shall form the basis of projection of these performance parameters in the Business Plan.*

2.1.6. *Annual review of performance shall be conducted based on the actual vis-à-vis the approved forecast and categorization of variations in performance into controllable factors and uncontrollable factors;*

2.1.7. *The Commission shall make periodic reviews of the licensee's performance during the control period to address any practical issues, concerns or unexpected outcomes that may arise either in generally or in specific situations.*

TPNODL, in compliance to the provisions and mandates of the Tariff Regulations, 2022 and in conformity with the licence conditions and Vesting order, has prepared the business plan for the period FY 2024-25 upto FY 2027-28. The sales projection has been done category wise keeping in view the past trend, applications in hand and future prospects of industrial load growth and socio- economical growth of the areas and its impact under the licensed jurisdiction of TPNODL. For projecting all the performance parameters and the cost components, the licensee has taken the approved parameters for the FY 23-24 for the various expenses as the base and done the projection for the balance four years of the first control period. Projection of Capital investment, all the cost components and performance parameters have been done for the Period FY 24-25 to FY 27-28 as the

provisions of Tariff Regulation and the licensee is presenting before Hon'ble Commission for kind perusal and approval of Hon'ble Commission in the following sections:

1. Major Performance Parameters as per Vesting Order
2. Sales Projection
3. Distribution loss reduction trajectory projection vis-à-vis target set by Hon'ble Commission in Vesting Order
4. Projection of various Performance parameters
5. Total power requirement, Power purchase cost and power procurement plan with reference to RPO target
6. Manpower plan
7. Employee Cost
8. R&M Expenses projection
9. A&G Cost
10. Other Cost Projection
11. Revenue projection
12. GAP
13. Performance in 1st two years of operation vis-à-vis Action plan for the 1st control period
14. Allocation of cost towards Wheeling and Retail Supply Business
15. Prayer

That, TPNODL has made certain assumptions while projecting its operations. These projections are based upon the best estimates of the operations and prospective plans of the DISCOM at the time of the filing. The actual parameters and the revenue figures may be different from the above estimates due to several external factors such as variation in power purchase cost and change in consumer mix/ consumption etc.

2. Major Performance Assignments as per Vesting Order

As per section 21(b) of the Act, the rights, powers, authorities, duties and obligations of the licensee under NESCO Utility was transferred to TPNODL on effective date upon delivery of the utility. Starting the journey as a distribution licensee on 1.4.2021, with the vested rights and responsibilities for distribution of electricity in the five northern districts of Odisha, TPNODL started operation with the Vision - **To be the best Utility of choice for reliable, affordable & sustainable power through technology adoption and innovative service delivery.**

Marching ahead with its mission to improve upon customer centric atmosphere, adoption of cutting edge technology, grow with focus on profitability and community, create an empowered workforce driven by passion and purpose and achieve innovative rural service delivery, the licensee has completed first two years of operation.

Hon'ble Commission while vesting the rights and responsibilities of the erstwhile NESCO utility in TPNODL, has assigned some performance targets. The three major performance targets set by Hon'ble Commission in the Vesting Order and the achievement of the licensee against the targets set are elaborated in the following sections:

2.1 AT&C Loss Reduction Targets

Hon'ble Commission in the Vesting order has set target for achieving AT&C loss. As part of the Bid, TPCL has provided AT & C loss reduction trajectory. Extracts from section 40 of the Vesting order reproduced hereunder:

" 40. AT&C loss targets

(a) As per terms of the RFP, the bidders were required to provide AT&C loss trajectory for first 10 years of operations i.e. FY 2021-22 to FY 2030-31 with the condition that the AT&C loss level in FY 2023-24 and FY 2025-26 shallnot be higher than 21.5% and 16.0% respectively. As part of its Bid, TPCL has provided the AT&C loss reduction trajectory shown in the following table:

Table 1: AT&C Loss Trajectory Commitment by TPCL

AT&C Loss Trajectory (%)									
FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
24.32	22.32	20.80	17.80	15.50	12.50	11.50	10.50	9.50	8.50

(b) As stated in the RFP, the Commission shall review the performance of TPNODL at the end of FY 2023-24 and FY 2025-26 to ascertain whether the committed AT&C loss targets have been achieved. In case of failure to achieve the targets, the Commission shall have the right to recover the penalty amount by encashing the Performance Guarantee for any shortfall in meeting the AT&C loss targets committed by TPCL in its Bid and/or revoke the license of TPNODL.....

....."

Further, Hon'ble Commission has fixed AT&C loss Trajectory for tariff determination under para 41 of the Vesting Order which is reproduced hereunder:

"41. AT&C Loss Trajectory for tariff determination

(a) *As part of the RFP, the Commission provided the following 10-year AT&C loss trajectory to be adopted for determination of tariff for period FY 2021-22 to FY 2030-31:*

Table 2: 10-year AT&C Loss Trajectory for Tariff Determination

AT&C Loss Trajectory for Tariff Determination (%)									
FY22	*FY23*	*FY24*	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*FY30*	*FY31*
19.17	*19.17*	*17.09*	*15.00*	*13.83*	*12.76*	*11.77*	*10.85*	*10.00*	*9.50*

That against the above committed AT & C Loss reduction trajectory, the licensee's performance in the first two years of operation are furnished in the following table:

Table 3: AT&C Loss Committed Vs Actual

Particulars	FY 21-22	FY 22-23
AT &C Loss Committed (%)	24.32	22.32
AT&C Loss for Tariff Determination (%)	19.17	19.17
AT& C Loss Achieved (%)	23.13	11.6

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With consistent effort and meticulously planned measures, the licensee has been able to reduce the AT&C loss from 23.13% in FY22 to 11.36% in FY 23.

The various steps taken by the licensee to reduce the AT&C loss are elaborated in the following sections.

After takeover, to reduce the AT&C loss the following thrust areas were primarily focussed:

1. Restructuring the meter reading and billing to cover all the consumers under billing fold
2. Facilitating multiple payment avenues to increase the collection Efficiency
3. Dedicated team for discussion with the high valued disconnected consumers for settlement of issues and their revival
4. Stringent Enforcement activities to arrest pilferage of energy and to incorporate disciplined power consumption culture
5. Complete load flow analysis of the system network and identification of the required renovation/addition.
6. Technical loss reduction by addition /upgradation of the network by planned investment

2.1.1 Steps taken to Reduce AT&C Loss

TPNODL has engaged various new experienced agencies through transparent open bidding mechanism from Sep 2021 for undertaking the meter reading, spot billing and collection activities in every pocket of the distribution area including involvement of WSHGs. Similarly, TPNODL has engaged various collection mechanisms to collect the monthly revenue. The licensee has put in place new MBC contract, through reengineering of contract and modality of separated meter reading-billing and collection contracts to increase the consumer coverage. It is pertinent to mention here that, by revising the MBC contracts, there has been an increase of around ₹ 304 Crs in LT collection in FY23 in comparison to that in previous financial year. Similarly, billing coverage has increased from 69% to 95%. Improvement in various parameters are detailed in the following sections

2.1.2 Billing Efficiency Improvement

Billing Efficiency reached to 84% at the end of FY'23 from 70% at the starting of FY'22. MBC Contract separation - Single Phase Billing & Collection/Recovery activity has been

separated with deployment of different dedicated Outsourced agencies to carry out Billing & Collection/Recovery, 100% OCR based meter reading implemented to ensure error free meter reading. Each of the Binder area split in small blocks with pre-defined reading date range to maintain efficiency & regularity. Integrated Mobile application will enable auto reading fetching through scanning of meter display leaving little scope of any wrong reading. Analysis of the consumption data of each low Consumption case to identify anomalies in consumption pattern. This helps in identification of faulty meters & Theft probability. The Billing Efficiency trend depicted in the following graph:

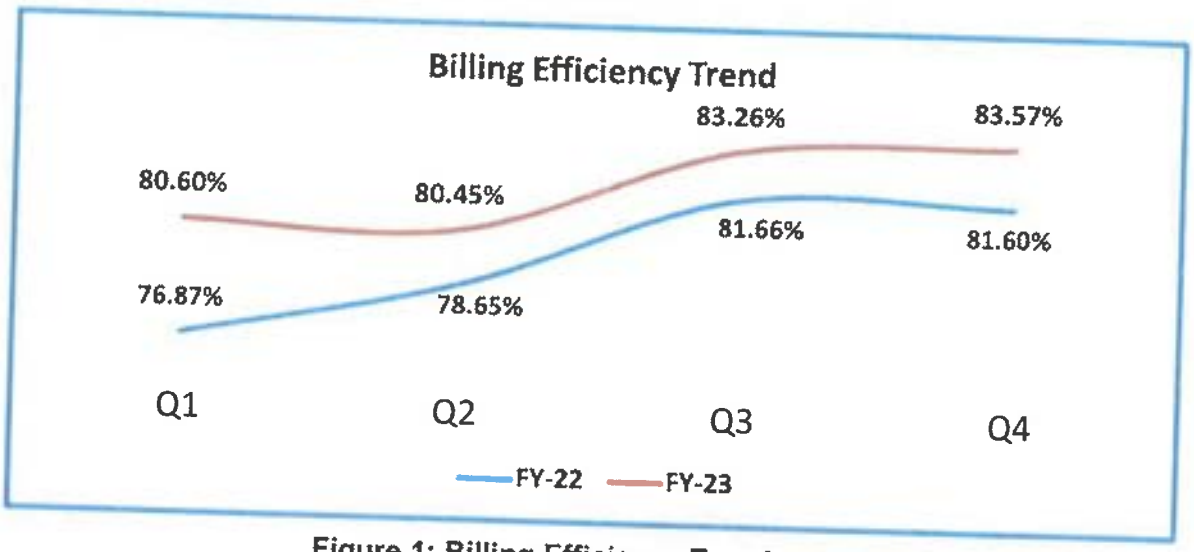


Figure 1: Billing Efficiency Trend

Various initiatives such as increasing Payment avenues, Digital payment platform, My TATA Power app and dedicated services for revenue collection has been launched to connect with consumers. Specific mass LT collection drives Like LT Udaan and LT Vijayapath for Bill collection and past arrear mitigation have been conducted to address the consumer needs. Under Project Nishtha, village camps conducted to resolve commercial issues.

Consumer coverage increased to 77% in FY 23 from 55% in FY 22. Reorganized Commercial structure SCOs/ TL MBC/ HOG Commercial/ TL-RRG/ Client Manager deployed to track collection performance through real time dash board.

Collection efficiency trend since takeover, depicted in the following graph.

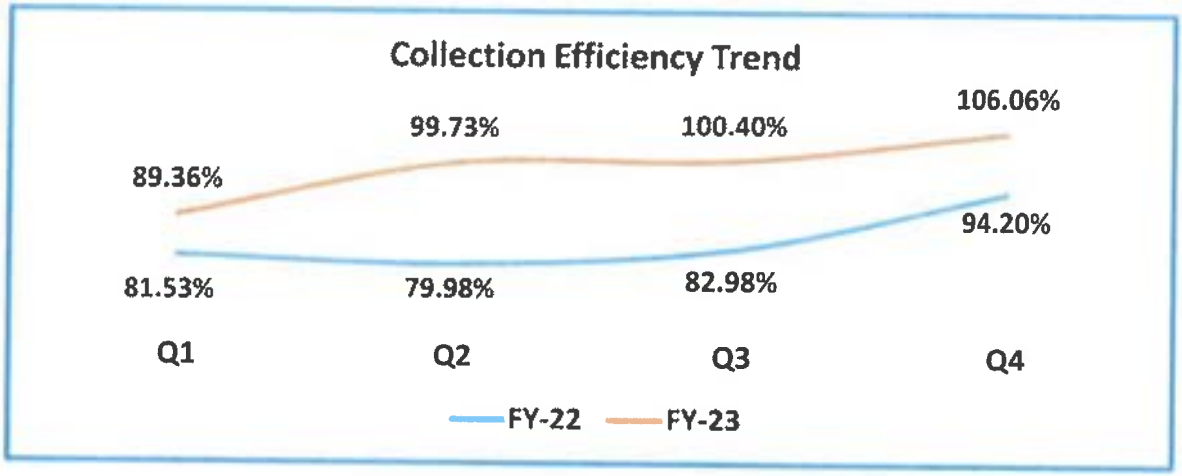


Figure 2: Collection Efficiency Trend

2.1.3 Enforcement Drive

Enforcement activities strengthened and with stringent enforcement drives, 173MW unauthorized load has been booked and more than Rs.58Cr recovered. Under Project Khoj, site verification done for around 4.4lakhs consumers who were not paying for more than 1-3years and around one lakh fictitious consumer billing reversed.

Achievement of dedicated enforcement drives given in the following table.

Table 4: Achievement of Dedicated Enforcement Drives

Particulars	FY 21-22		FY 22-23	
Category	Load Booked (MW)	Arrear Recovery (₹ Cr)	Load Booked (MW)	Arrear Recovery (₹ Cr)
Domestic	64.5	27.84	78.60	20.07
Commercial	75.0	5.65	7.60	2.69
Industrial	0.4	1.20	13.3	8.50
Allied Agro & Agriculture	0.8	4.50	1.90	4.20
Total	**73.2**	**34.06**	**101.4**	**24.03**

- Total 36387 nos theft detected out of 131832 nos. Premises checked in FY 22-23

- 2903 nos Meter tampered identified in FY 22-23 and 100% replaced
- No of Cases resolved FY21-22: 85.4%,FY22-23: 58.62%
- 27 No of Surgical Strike in villages where no entry was possible in last 10 yrs.
- 2 Mega Enforcement Drive conducted per month.
- Surveillance inaccessible premises using Drone with night vision camera
- Regular night & early morning raids
- More than 12k hook removed – 22% converted into new metered connection

2.1.4 Initiatives undertaken for Technical Loss Reduction:

The following initiatives undertaken to reduce the technical loss

- Conductor Upgraded – 69.25 Km (11 kV) & 24.6 km (33 kV). In plan – 296 ckm. (11 kV) & 71 ckm. (33 kV).
- 26 new PSS commissioned. In plan: 21 PSS & 17 new 33 kV lines under ODSSP Ph-IV
- Line Length Reduction through installation of RMUs (23 Nos.) & Link Lines 19.8 ckm.
- Overloaded DTR capacity augmentation & Load Balancing.
- Installation of Voltage Regulators – 2 Nos. already installed & 51 Nos. under procurement.
- LT Conversion from 1-ph to 3-ph 40 ckm.
- LT Bare overhead to LT ABC Conversion 249 ckm.
- DTR LV Side Protection instead of bypassing through oversize conductor strands.
- Thermo-scanning & Ultrasound Scanning to detect electrical leakages & preventive measures to reduce losses – 91 Feeders.
- Installation of underground power cables under CAPEX against the bare overhead conductors

Table 5: Estimation of Voltage wise Technical Loss

Voltage level	% Technical Loss for 21-22	% Technical Loss for FY 22-23	Estimated % Technical losses for FY 23-24	Estimated % Technical losses for FY 24-25	Estimated % Technical losses for FY 25-26	Estimated % Technical losses for FY 26-27	Estimated % Technical losses for FY 27-28
11 KV	4.83	4.09	3.89	3.67	3.47	3.25	3.21
33 KV	3.86	3.47	3.29	3.1	2.93	2.77	2.55

Table 6: Circle wise Technical loss Assessment for 33 KV during FY 22

TPNODL 33 KV Technical Loss Assessment FY22							
Circle	Peak load (MW)	Line Loss (MW)	Trf. (No Load Loss) (MW)	Trf. (Load Loss) (MW)	Distributed loss @ 7.68% (MW)	Total Loss (MW)	Annual Tech loss in %
Balasore	234.76	12.53	0.39	0.72	1.05	14.69	3.59
Baripada	136.52	5.56	0.75	0.98	0.56	7.85	4.31
Bhadrak	113.69	6.96	0.29	0.48	0.59	8.32	4.24
Jajpur	148.76	8.11	0.45	0.58	0.70	9.84	4.0
Keonjhar	109.5	4.37	0.30	0.21	0.37	5.25	3.18
TPNODL	**743.23**	**37.53**	**2.18**	**2.97**	**3.28**	**45.96**	**3.86**

Table 7: Circle wise Technical loss Assessment for 11 KV during FY 22

TPNODL 11 KV Technical Loss Assessment FY22							
Circle	Peak load (MW)	Line Loss (MW)	Trf. (No Load Loss) (MW)	Trf. (Load Loss) (MW)	Distributed loss @ 7.68% (MW)	Total Loss (MW)	Annual Tech loss in %
Balasore	180.07	13.73	1.29	2.05	1.31	18.37	6.26
Baripada	156.77	6.99	0.94	1.23	0.70	9.86	5.16
Bhadrak	132.57	6.19	0.79	0.74	0.59	8.31	4.66
Jajpur	160.01	6.22	1.05	1.35	0.66	9.28	3.95
Keonjhar	109.65	4.13	0.61	0.63	0.41	5.79	4.11
TPNODL	**739.07**	**37.26**	**4.68**	**6.00**	**3.68**	**51.62**	**4.83**

Table 8: Circle wise Technical Loss Reduction Achievement in 33 KV due to Initiatives undertaken FY 23

TPNODL 33 KV Technical Loss Assessment FY23							
Circle	Peak load (MW)	Line Loss (MW)	Trf. (No Load Loss) (MW)	Trf. (Load Loss) (MW)	Distributed loss @ 7.68% (MW)	Total Loss (MW)	Annual Tech loss in %
Balasore	287.16	12.01	0.52	0.94	1.03	14.5	3.26
Baripada	133.76	4.87	0.65	0.86	0.49	6.87	3.95
Bhadrak	111.05	5.83	0.32	0.31	0.50	6.96	3.7
Jajpur	164.79	7.67	0.31	0.39	0.64	9.01	3.8
Keonjhar	110.3	3.09	0.34	0.19	0.28	3.90	2.62
TPNODL	**807.06**	**33.47**	**2.14**	**2.69**	**2.94**	**41.24**	**3.47**

Table 9: Circle wise Technical Loss Reduction Achievement in 11 KV due to Initiatives undertaken FY 23

TPNODL 11 KV Technical Loss Assessment FY23							
Circle	Peak load (MW)	Line Loss (MW)	Trf. (No Load Loss) (MW)	Trf. (Load Loss) (MW)	Distributed loss @ 7.68% (MW)	Total Loss (MW)	Annual Tech loss in %
Balasore	234.07	10.56	0.99	1.57	1.01	14.14	4.41
Baripada	136.52	6.54	0.88	1.15	0.66	9.23	4.29
Bhadrak	132.54	6.16	0.54	0.92	0.59	8.21	4.32
Jajpur	159.12	4.87	1.34	1.06	0.56	7.83	3.35
Keonjhar	109.68	4.08	0.61	0.63	0.41	5.73	4.07
TPNODL	**771.93**	**32.21**	**4.36**	**5.34**	**3.22**	**45.13**	**4.09**

TPNODL has adopted multi-pronged approach for reduction of AT&C loss. For recovery of arrears and addressing past litigation of HT & EHT consumers a specific team under

the leadership of CEO has been formed. 125MW EHT load like Balasore Alloys, NINL, Tata Steel Ferro Alloys, Jabamayee revived with recovery as per mitigation plan of undisputed arrears. On the other hand respective field teams at Circle, Division, Sub-Division and Sections have been empowered to resolve billing issues of consumers. To supplement the above, specific revenue collection drives are conducted along with public communications with consumers. This multi fold approaches has been fruitful in bringing down the AT&C loss.

All the above initiatives have contributed towards reduction in AT&C losses. Further, advanced Technology adoption and analytics have been the prime focus of the licensee to provide quality customer services, manage revenue cycle processes for reduction of AT&C losses and efficiently manage to deliver reliable and quality supply in safe manner to its consumers by meeting various standards of operation.

The following graph depicts the AT&C loss achieved in the two years of operation vis-à-vis the past trend.

Figure 3: AT&C Loss Trend

AT&C loss commitment vis-a-vis achievement shown in the following graph.

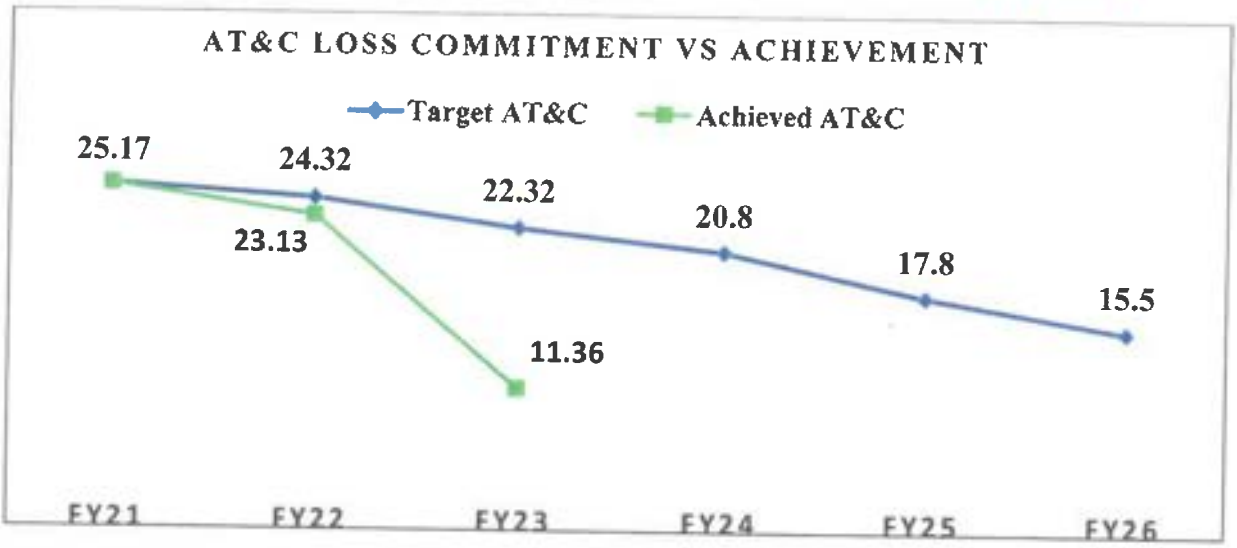


Figure 4: AT&C Loss Trend (Committed Vs Achievement)

2.2 Past Arrear Collection

As part of the RFP, bidders were required to provide a commitment to recover Past Arrears from live as well as permanently disconnected consumers in the first five years of operation. As per the commitment made by TPCL in the bid Hon'ble Commission will review the performance of TPNODL vis-à-vis its commitment to collect past arrears.

Relevant extracts of Vesting order are re-produced hereunder:

" 43

(c) TPCL has committed to the recovery of following quantum of Past Arrears inits bid:

Table 10: TPCL Past Arrear Recovery Commitment

Commitment of Collection of Past Arrears (INR Cr)					
FY22	FY23	FY24	FY25	FY26	Total
50	120	100	80	50	**400**

(d) As stated in the RFP, the Commission shall review the performance of TPNODL vis-à-vis its commitment to collect Past Arrears, at the end of

FY2025-26, on an aggregate cumulative basis, by when TPNODL is required to meet the commitment of Past Arrears collection for the entire period of 5 (five) years."

To reach the target for past arrear collection, the licensee started its focussed revenue recovery drive with deployment of one dedicated executive for Revenue Recovery in each division. With the whole hearted effort of the Executive Engineer, SDOs, Section Managers, Linemen and continuous rigorous monitoring and launch of Project Udaan during March'2022 and Project Vijaypath during March'23, the licensee has been able to achieve past arrear collection of Rs.191.15Crores in FY 22 and Rs 321Crores in FY 23. **Thus the licensee has been able to achieve the target of past arrear collection fixed for five years, only in two years of operation.**

The details of past arrear collected, remitted to GRIDCO as on 31st March'2023 after retaining the incentive and tax, furnished in the following table

Table 11: Status of Pas Arrear Collection (In ₹ Crs)

TPNODL	Arrear Collection	Incentive	GST on Incentive	Adjustments	Amount Payable to GRIDCO	Amount Paid to GRIDCO
	A	B	C	D	E=A-B-C-D	F
FY 2021-22	191.47	16.06	2.89	0.59	171.94	75.64
FY 2022-23	320.90	38.30	6.89	50.49	225.22	242.72
Total	512.37	54.35	9.78	51.08	397.16	318.36

2.3 Capital Investment

Section 39 of the Vesting order of the licensee envisages for a comprehensive Capital expenditure plan for first five years of licensed operation. The extract of the provision of vesting order is reproduced hereunder

39. Capital investment plan

a. *The RFP required the bidders to provide a capital expenditure plan for first 5 (five) years of licensed operations as part of their bid.*

b. *In its Bid submitted in response to the RFP, TPCL committed capital expenditure of ₹ 1,270 crores (Indian Rupee One thousand two hundred and*

seventy crores) only for period FY 2021-22 to FY 2025-26 as follows:

c.

Table 12: Capital Expenditure Commitment by TPCL

Capex Commitment (INR Cr)					
FY22	FY23	FY24	FY25	FY26	Total
246	376	259	247	141	1,270

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

Table 13: TPCL Cumulative Capital Expenditure for 5 years

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

TPNODL receives electrical power at 33kV level from 28 numbers of Grid Sub stations (GSS) out of which 3 nos. GSS are rated at 220/33kV and 25 nos. at 132/33kV located within and in the vicinity of TPNODL operational area. TPNODL distributes the power at 33kV / 11kV / 415V / 230V depending on the demand of the consumers.

At present, there are 108 numbers of 33KV feeders with a combined route length of approximately 3024 KMs supplying power to 244 numbers of 33/11KV Primary Substation (Structures). The 33KV supply is stepped down to 11KV level through 550 numbers of 33/11KV power transformers at these primary substations with an installed capacity of 2615 MVA. Nearly 825 numbers of 11KV feeders emanating from the 33/11KV primary substations having length of approximately 40,188 KMs and supply

power to HT consumers connected at 11KV level and LT customers connected to 11/0.415KV distribution substation. Approximately 74,726 numbers of distribution transformers are installed in all five circles with an installed capacity of 2786 MVA. The length of the LT feeders is 67,486 KMs approximately. These LT feeders supply power to three phase and single-phase consumers, right from large Industrial to BPL.

The entire base network of TPNODL covering 100% 33KV network, 11KV network, PSS and Distribution transformers has been modelled in Cyme Dist software. Load flow analysis of the entire network is done and the abnormalities such as under-voltage, overload portions identified. All the required under-voltage and overload feeder mitigation schemes prepared basing on the load flow analysis. This is then validated with the field teams-prioritizing the works and taken up in CAPEX.

In compliance to section 39 of the Vesting order, TPNODL has proposed Capital Expenditure plan for the FY 21-22 and FY 22-23 and submitted before the Hon'ble Commission. The proposal submitted by TPNODL and the Capital expenditure approved by Hon'ble Commission for the first two years of operation are furnished in the following tables:

Table 14: Capital Expenditure Approved for FY 2021-22 & FY 2022-23

FY	Proposed DPR Cost (₹ Crore)	OERC Approved Cost (₹ Crore)
FY 2021-22	275.4	258.78
FY 2022-23	442.97	326.54

In order to improve the reliability and reduce the losses, major interventions like Network reinforcement, Technology adoption has been proposed in the plan so that equipment failure / tripping can be reduced and reliability, billing & collection efficiency can be improved. The network demanded urgent refurbishment like re-conductoring of feeders, optimization of feeder length, dedicated feeders for industrial/ commercial customers, replacement of damaged / tilted poles, provision of intermediate poles, replacement of joints, enhancing system protection, replacement of sick equipment and network augmentation to improve the reliability of power supply.

Introduction of advanced technologies and analytics have been prime focus areas for improving the accuracy of the meter reading, curtail tampering of the meters and providing

better and effective customer services. Further Business process re-engineering required to improve the customer services. Technology adoption also planned to provide quality customer services, manage revenue cycle processes for reduction of AT&C losses and efficiently manage to deliver reliable and quality supply in safe manner to its consumer by meeting various standards of operation.

The capital investments have been proposed under the following broad cost centers aligned with multiple initiatives and schemes so as to reduce AT&C losses, improve system reliability and augment the network to support continuous load growth. Further, a need is also felt to improve the existing facilities and infrastructure to provide a better consumer experience.

With this objective of ensuring reliable power supply and ensuring best customer services to the end consumers, TPNODL formulated the capital investment plan for the FY 2023-24 under the major heads:

1) Statutory Compliance/Safety
2) Loss Reduction
3) Reliability
4) Network Optimization & Load Growth
5) Technology & Civil Infrastructure
6) Reducing Carbon Footprint

TPNODL proposed Capital Expenditure of ₹ 452.80 Crs for FY 23-24 to carry out various activities under the above major categories which has been submitted separately before Hon'ble Commission for approval.

Table 15: Capital Investment Plan for FY 2023-24 (In ₹ Crs)

Sl. No	Category	Investment Proposed
1	Statutory Compliance/Safety	49.41
2	Loss Reduction	56.61
3	Reliability	118.06
4	Network Optimization & Load Growth	102.14
5	Technology & Civil Infrastructure	121.6
6	Reducing carbon Footprint	4.98
Total		**452.80**

The capitalisation made in the first two years of operation against the approval of Hon'ble Commission are given in the following table:

Table 16: Status of Capitalisation as on 31.03.2023 (In ₹ Crs)

CAPEX	Approval for FY22	Capex upto 31.3.23	Capitalization upto 31.3.23	Balance to Capitalize
FY 21-22	258.78	230.41	211.12	47.66
FY 22-23	326.54	247.19	177.87	148.67
Grand Total	585.32	477.6	388.99	196.33

To speed up the various capex works under the approved CAPEX proposals of the first two years, TPNODL has taken up multiple initiatives as below:

1. Engaging in house teams for supervision of capex works execution under the rate contracts in addition to existing project team
2. Strengthening the project team by deploying officers in various strategic positions.
3. Engagement of BAs for execution of capex work under Rate contracts and standalone order basis
4. Engagement of EPC contractor (SIPS) in addition to the above BAs.

The Capital investment plan and capitalisation schedule in reference to the Rs.1270Crs. CAPEX target of Vesting order have been elaborated in the following table . The capitalisation schedule includes GRIDCO's contribution.

Table 17: Capex and Capitalisation Plan for FY 23 to FY 28 (In ₹ Crs)

FY	FY 21-22	FY 22-23	FY 23-24	FY-24-25	FY25-26	FY26-27	FY27-28	Total
CAPEX As per Vesting Order	246	376	259	247	142	-	-	1270
CAPEX (Approved/Planned)	258.78*	326.54*	452.8	278.18	220.17	210.26	210.01	1956.74
Capitalization	66.4	411.11	658.47	374.98	277.57	254.17	251.37	2294.07

In the first four years of operation, the licensee will be able to meet the committed target of ₹ 1270 Crs investment as assigned under the Vesting order. However, keeping in view

the network and infrastructure requirements, the licensee has proposed Capital investment of ₹ 220 Crs in FY 26, ₹ 210 Crs in FY 27 and ₹ 210Crs in FY 28. Detailed scheme wise DPR will be submitted before Hon'ble Commission each year, for kind approval of Hon'ble Commission.

2.3.1 Additional Capitalization to compensate the contribution of GRIDCO

The capital expenditure would be required to be financed in the ratio of 70 % (Debt) and 30% (Equity) other than depreciation on existing assets (as mentioned below). Since TPNODL has the shareholding of Tata Power (51%) and GRIDCO (49%), in order to maintain 49% stake in the company, GRIDCO would be required to contribute 49% of such equity.

However instead of contributing such equity in cash, GRIDCO may like to contribute such equity in kind. It is further submitted that unless the capital expenditure resources are raised to the fullin terms of Debt (but limited to 70%) and in terms of Equity, the capital expenditure would not be financed. Hence to maintain the 51% to 49% shareholding ratio between TPCL and GRIDCO in the TPNODL and also raise adequate finance, GRIDCO's share of equity which will be contributed in kind (Distribution Assets) will be capitalized over and above the amount capitalized by assets in TPNODL. Moreover, such investment should be approved with grossing up of the equity contribution of GRIDCO and the same needs to be added into the capital investment.

The treatment for contribution of GRIDCO is provided under para 71 of the Vesting Order and the relevant extracts is as given below.

TREATMENT OF EQUITY INVESTMENT FROM GRIDCO FOR FUTURE CAPITAL INVESTMENT

71. Pursuant to Clause 3.6 of the Shareholder's Agreement, the Commission orders that in the event that assets are transferred to TPNODL in lieu of equity investment by GRIDCO, the same shall be allowed in fixed asset base for determination of tariff, after prudence check, provided that the assets transferred are distribution assets. The Commission, exercising powers conferred to it u/s 86(2) of the Act, advises the State Government to consider providing a one-time approval on transfer of its assets to TPNODL through GRIDCO in lieu of equity investment from GRIDCO as and when such transfer is necessitated.

To illustrate the grossing up concept, consider the Capital Expenditure of ₹ 100 Crore. Based on the same, the Capex/ Capitalization, Debt and Equity for the purpose of Tariff would be as provided in the table below:

Grossing up of GRIDCO Equity

Sr No	Particulars	Units	Value
a	Capex /Capitalisation of Project	Rs Cr	100
b	Additional Capex/Capitalisation of Asset (in lieu of Equity investment by Gridco)	Rs Cr	17.2
c= a+b	Total Capex/ Capitalisation to be allowed	Rs Cr	117.2
d	Equity contribution by TPC = c x 30% x 51%	Rs Cr	17.9
e	Equity contribution by Gridco = c x30% x 49%	Rs Cr	17.2
f	Equity for Tariff= 30% of c	Rs Cr	35.2
g	Debt for Tariff=70% of c	Rs Cr	82.1

Hence for every ₹ One crore of capex/ capitalization incurred/achieved by TPNODL after the Effective date, the Hon'ble Commission is requested to approve ₹ 1.172 crores of capex/capitalization. Out of this, as a contribution of the share towards equity, assets worth ₹ 0.172 Crores will be brought into TPNODL by GRIDCO from the assets existing outside TPNODL but which can be used for distribution business.

3. Sales Projection

For projecting the consumption of different categories, TPNODL has analyzed and relied on the past trend of consumption pattern for the last ten years i.e. FY 2012-2013 to FY 2022-23 with due correction towards abnormal trends during Covid 19 period, the impact of electrification of left out households under BGJY (Biju Gram Jyoti Yajona), actual addition/reduction of loads and other factors, decreasing trend of drawl of power through open access along with additional drawl on account of special tariff for industries having CGP with CD up to 20MW, revival of closed units under HT/EHT Category (Balasore Alloys, Nilachal Ispat Nigam Limited etc) and also growth in Industrial consumption in recent months and going forward (mainly from Tata Steel, other steel and Ferroalloys manufacturer, Textile park etc). The category-wise consumption projected for the control period have been depicted in following sections:

3.1 LT Category

Alongwith the normal growth in domestic sector, impact of electrification of left out households around 88,000 not electrified till date under various schemes have been accounted for in addition to normal growth . Further, the normal growth for the first year of the control period has been projected on higher side due to the continued impact of various initiatives for customer convenience started by TPNODL such as Customer care centers , ANUBHAV KENDRAs, Project Sudhar (Sanitization of Government Consumers), Improvement in Billing Coverage (by Separating Billing and Collection Contracts) , enforcement initiatives etc. to curb theft which promotes consumers to take new connections and get legitimate, better and comfortable services.

Due to implementation of project **KRISHI SUDHAR** for sanitization of Irrigation consumers as well as stringent enforcement activities , a growth of 18% was projected for 2023-24 in the submission of Business plan for the first year of the control period with a projected sales MU of 2607.76MU under LT . However, around seventy six thousand numbers of non-existing consumers as per site verification under project Khoj have been removed (converted to PDC) from active directory of billing system in FY 23. Accordingly, the LT sales for FY 23-24 is projected as 2482.58MU with a growth rate of 16%.

Overall LT growth rate considered Y-O-Y for the first control period furnished in the following table

Table 18: Projection of Overall LT Growth

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Projection				
Energy Sales					
LT Sales (MU)	2482.59	2668.17	2896.92	3063.47	3245.58
Y-o-Y Growth	16%	7%	9%	6%	6%

3.2 HT Category

While projecting the sales in HT Category, the licensee has analyzed the consumption pattern of each HT consumer having contract demand of more than 1 MVA. **Post Covid-19 and after reallocation of mining, the consumption under this category peaked due to which the sales in this category has shown a considerable improvement. It is also expected that the same pattern will continue in the coming years as well.** Considering that the worst of pandemic period is over and taking into account the

expected growth in cultivation of prawn in the coastal area leading to growth of its processing industries and also considering upcoming HT consumers, HT sales have been estimated. However going forward, these consumers are expected to demonstrate a steady state of growth. The summary of sales projections for HT category is given below:

Table 19: Summary of Sales Projection for HT Category

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Projection				
Energy Sales(MU)					
HT Sales (MU)	685.58	752.37	814.52	861.79	906.15
Y-o-Y Growth %	10%	10%	8%	6%	5%

3.3 EHT Category

The pandemic Covid-19 had adversely impacted the EHT sales of our DISCOM. On account of Covid-19, EHT sales have decreased by 50 % in 2020-21 and the same trend continued till end of 1st half of 2021-22. During Pandemic clubbed with raw material crisis, agreement with industries like M/s Balasore Alloys Ltd (who was contributing 25% of total EHT sales of TPNODL), M/s Maithan Ispat, M/s MESCO Steel and M/s Jabamayee Ferro Alloys Ltd and M/s Neelachal Ispat Nigam Ltd and M/s Stork Ferro Ltd had got terminated. However, after worst of the pandemic is over, consumption in this category has come back on track and has hence, seen a considerable improvement. Closed units of consumer like M/s Balasore Alloys Ltd, M/s Jabamayee Ferro Alloys Ltd and M/s Neelachal Ispat Nigam Ltd and M/s Stork Ferro Ltd have been revived & restarted their operations.

A lot of efforts has been undertaken by the Licensee for EHT consumer revival and resolution of long pending undisputed arrears of M/s. Balasore Alloys, M/s Jindal Steel and M/s NINL with due formation of committee including GRIDCO and representatives of Govt. of Odisha wherein several rounds of meeting were conducted for mitigation of arrears.

Adding further, introduction of special tariff for the industries having CGP with CD up to 20MW has contributed a lot for increasing sales in EHT category.

TPNODL has projected sales in EHT category in the ensuing years analyzing the consumption pattern of each and every EHT consumer. From FY 2010-11 onwards, most

of the industries are moving towards their own CPP which is reducing the drawal from DISCOM. Presently, there are 41 Nos. EHT consumers including 8 nos. railway traction connections. By the end of the control period, the number of EHT consumer is expected to increase upto 49.

Accordingly, the licensee has projected EHT sales growth Y-o-Y as presented in the following table.

Table 20: Summary of Sales Projection for EHT Category

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Projection				
Energy Sales (MU)					
EHT Sales (MU)	3145.04	3310.58	3589.32	3897.59	4001.74
Y-o-Y Growth %	19%	5%	8%	9%	3%

The projection of no. of consumers for the 1st control period is furnished in the following table. The category-wise breakup is detailed in the attached commercial format BPCF -3

Table 21: Category-wise Breakup of Consumers

Sl. No.	Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
		Projection				
A	No. of Consumer					
1	LT	2165944	2331985	2425272	2534405	2661143
2	HT	731	828	860	904	950
3	EHT	43	44	46	47	49
4	Total	2166718	2332857	2426178	2535356	2662142
5	CAGR	6.1%	7.7%	4.0%	4.5%	5.0%

Sales projection in MU for the 1st control period is furnished in the following table:

Table 22: Category-wise sales projection

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Projection				
Energy Sales (MU)					
LT	2482.59	2668.17	2896.92	3063.47	3245.58
HT	685.58	752.37	814.52	861.79	906.15
EHT	3145.04	3310.58	3589.32	3897.59	4001.74
Total	**6313.21**	**6731.12**	**7300.75**	**7822.85**	**8153.47**

Each category wise actual sales for FY 22-23 and projection upto FY 27-28 are furnished in Format BPC-1. 80MVA additional HT/EHT sales on special tariff, new HT/EHT load of 67MW along with revival of 125MW load of NINL, Balasore Alloys, Tata Steel Ferro Alloys, Jabamayee, have resulted in improvement of EHT-HT mix from 50% in FY 22 to 61% in FY 23. The projection of Sales mix for the entire control period given in the following table:

Table 23: Category-wise sales mix projection

Sales Mix	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Actual	Projection				
LT	39%	39%	40%	40%	39%	40%
HT	12%	11%	11%	11%	11%	11%
EHT	49%	50%	49%	49%	50%	49%
Total	100%	100%	100%	100%	100%	100%
(EHT +HT)Mix	61%	60.7%	60.4%	60.3%	60.8%	60.2%

EHT +HT mix for the balance years have been projected between 60-61%, basing on the projected growth under each category.

4. Projection of Performance Parameters

As per the provisions of regulation 3.14 of OERC (Terms and Conditions for Determination of wheeling Tariff and Retail Supply Tariff) Regulations, 2022, Hon'ble Commission shall consider the AT&C loss reduction trajectory for tariff determination as per the terms of the Vesting order.

Relevant extract from regulation 3.14 are reproduced hereunder:

"3.14. Aggregate Technical & Commercial Loss as per Vesting Order

3.14.1 The Commission shall consider the AT&C loss reduction trajectory for tariff determination as provided in ***Annexure III*** *of these Regulations as per the terms of the Vesting Orders. The Distribution Licensees would be entitled to retain any additional gains resulting from its meeting and surpassing the AT&C loss targets. Thiswould be over and above the return on equity allowed by the Commission as part of these Regulations and shall not be adjusted as other income or in any way appropriated through any truing up process or future Aggregate Revenue Requirementprocess.*

3.14.2 The AT&C loss shall be calculated basing on distribution loss and collection efficiency as per the following formula:

AT&C Loss (%) = [1-(1-Distribution Loss) x Collection Efficiency] x 100where,

Distribution loss and Collection efficiency are in per unit (pu) calculated up to twodecimal points;

Any unit assessed and billed on account of theft shall only be considered in the year ofits realization as specified in the Section 126 (6) of the Act;

Collection efficiency shall be measured as ratio of total revenue realized to the totalrevenue billed in the same year;

Normative collection efficiency shall be considered 99% of the total revenue billed.

Provided that revenue realized or revenue billed on account of electricity duty, delayed payment surcharge, any other surcharge, collection from arrear outstanding oneffective date, energy traded (if any), Inter-DISCOM sale (if any) shall be excluded from the computation of Collection Efficiency

Distribution loss shall be measured as the difference between energy (units) input into the distribution system for sale to all its consumer(s) excluding units of energy traded (if any) / inter-DISCOM sale (if any) and the total of energy (units) billed in its Licensed area in the same year;

3.14.3. *The Distribution Licensee shall calculate the AT&C loss for each year of the control period as per the above formula and submit detailed calculation of distribution loss and collection efficiency separately to the Commission in its Petitions."*

The licensee has taken the benchmark AT & C loss level fixed by Hon'ble Commission in the Vesting order. In compliance to the provisions of above regulations, the normative collection efficiency has been considered as 99% of the total revenue billed.

The distribution loss projection for the entire control period has been worked out basing on the formula:

AT&C Loss (%)=[1-(1-Distribution Loss)x Collection Efficiency]x 100

The performance parameters projected for the control period are given in the following table:

Table 24: Performance Parameters Projection

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Projection				
AT&C Loss	**17.09%**	**15.00%**	**13.83%**	**12.76%**	**11.77%**
Collection Efficiency	99%	99%	99%	99%	99%
Distribution Loss (%)	16.25%	14.14%	12.96%	11.88%	10.88%

NOTARY OF ODISHA (INDIA)

4.1 Projection of Power Purchase Quantum

It is the obligation of the distribution licensee to provide uninterrupted power supply to all the consumers under its licensed area of distribution. To ensure that, the licensee has undertaken category wise sales estimation for the entire control period and assessed the total power requirement.

The tariff Regulation also provides for preparation of a plan for procurement of power to serve the demand of electricity in the area of operation. The provisions of regulations are quoted hereunder:

" **5.4 *Projection of Power Purchase Quantum***

5.4.1. The Distribution Licensee(s) shall prepare a plan for procurement of power to serve the demand of electricity in its area of operation / supply and submit such Plan to the Commission for approval. While doing so, the Distribution Licensee(s) shall prepare monthly demand (MW) and energy requirement (MU) forecast for the ensuing year (on short-term basis) and for next 5 years period (including ensuing year) (on long term-basis) as per these Regulations. The Distribution Licensee(s) shall be guided by the following approach and provisions of these Regulations for estimation / calculation of power purchase requirement.

a. estimate the monthly sales (MU) in their license area,

b. estimate the energy input required at the interface of the Intra-state transmission and/or distribution system considering the approved Distribution Loss for the year and

c. then, calculate energy (MU) required to be procured by GRIDCO from varioussources of generation considering the approved Intra-State transmission systemloss

5.4.2. The estimation of both the short-term and long-term power procurement plan preparedin accordance with these Regulations shall be submitted by the Distribution Licensee(s) on or before 15th September to the Commission and

GRIDCO for preparation of Bulk Power Procurement Plan.

The Distribution Licensee(s) shall consider the same short-term power procurement estimation while projecting ARR for the ensuing year and long term power procurement estimation for next five (5) years in its Business Plan."

In compliance to the above provisions of the regulation, the licensee has estimated the quantum of power required for the entire control period with the distribution loss derived from the AT&C loss target set by Hon'ble Commission in the Vesting order of the licensee. TPNODL has estimated the power purchase requirement by considering the estimated sales requirement for the financial years by taking the above T&D loss level.

The projection of quantum of power procurement and cost thereof taking the approved BSP, transmission charges and SLDC charges for FY 23-24 are furnished in the following table.

Hon'ble Commission has approved a BSP of 335paise per unit, transmission charge of 24paise per unit and SLDC charge of Rs.1.16Crores per annum for the FY 23-24.

The projection of quantum of power procurement and the cost thereof taking the approved BSP, transmission charges and SLDC charges for FY 23-24 are furnished in the following table.

Table 25: Cost of Power Purchase

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Projection				
Input (MU)	7538.39	7839.77	8387.77	8877.37	9148.74
Sales (MU)	6313.21	6731.12	7300.75	7822.85	8153.47
AT&C Loss (%)	17.09%	15.00%	13.83%	12.76%	11.77%
Collection Efficiency (%)	99%	99%	99%	99%	99%
Distribution Loss (%)	16.25%	14.14%	12.96%	11.88%	10.88%
Power Purchase cost@Rs. **3.35/Unit**	2525.36	2626.32	2809.90	2973.92	3064.83
Transmission Charges@24paise/unit	180.92	188.15	201.31	213.06	219.57
SLDC Charges(Rs. per annum)	1.16	1.16	1.16	1.16	1.16
Total Power purchase Cost (₹ Crs)	2707.44	2815.64	3012.37	3188.14	3285.56

OERC (Procurement of Energy from Renewable sources and its compliance) Regulations, 2021 has mandated the distribution companies as obligated entities for complying with renewable purchase obligation. Regulation 3 and 4 of the above regulations are reproduced hereunder:

"3. Scope of Regulations and Extent of their Application

3.1 These Regulations shall apply to all Obligated Entities in the State of Odisha.

The Obligated Entities include:

(a) Distribution licensee (or any other entity procuring power on their behalf).

(b) Any person who owns Captive Generating Plant including co-generation plants based on conventional fossil fuel with installed capacity of 1 MW & above, and consumes electricity generated from such Plant for his own use shall be subject to RPO to the extent of a percentage of his consumption met through such fossil fuel-based captive source.

(c) Any person who consumes electricity procured from conventional fossil fuel-based generation through Open Access and third party sale shall be subject to RPO to the extent of a percentage of his consumption met through such fossil fuel-based source;

Provided that the State Commission may, by order, modify/revise the minimum capacity referred above from time to time.

3. Purchase Obligation from Renewable Sources

3.1 Every Obligated Entity shall meet its RPO target from its own Renewable Sources or procurement of power from other developers of Renewable Energy Sources or by purchase of Renewable Energy from other licensee or eligible renewable power from exchanges or by way of purchase of Renewable Energy Certificates (RECs).

.....

....."

NOTARY

Further the renewable purchase obligation target set by Hon'ble Commission under regulation 4.2 are reproduced hereunder:

4.2 The Commission hereby specifies the Hydropower Purchase Obligation (HPO) along with Solar RPO and Other Non-Solar RPO. Every Obligated Entity shall at least purchase source wise electricity from Renewable sources to the percentage of its total consumption of electricity from all sources excluding the consumption met from hydro sources of power (State & Central), as indicated in the table below:

Table 26:RPO quantum of electricity to be procured from Renewable Sources by Obligated Entity as percentage of total Consumption in KWh

Year	Solar RPO	Non-Solar RPO			Total RPO
		HPO	Other Non-Solar RPO	Total Non-Solar RPO	
2021-22	7.25%	0.18%	5.82%	6.00%	13.25%
2022-23	8.00%	0.35%	6.15%	6.50%	14.50%
2023-24	8.75%	0.66%	6.59%	7.25%	16.00%
2024-25	9.75%	1.08%	7.17%	8.25%	18.00%

Further, to recommend RPO trajectory beyond 2021-22, a joint Committee under the Co-chairmanship of Secretary, Ministry of Power and Secretary, Ministry of New and Renewable Energy was constituted on 17th December, 2020. Based on the recommendation of the Joint Committee, MoP has specified RPO trajectory beyond 2021-22 vide order F.No-09/13/2021-RCM dated 22.7.22.

Table 27: RPO Trajectory issued by MoP

Year	Wind RPO	HPO	Other RPO	Total RPO
2022-23	0.81%	0.35%	23.44%	24.61%
2023-24	1.60%	0.66%	24.81%	27.08%
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%
2028-29	6.16%	2.51%	32.69%	41.36%
2029-30	6.94%	2.82%	33.57%	43.33%

(a) ***Wind RPO*** *can be meet only by energy produced from Wind Power Projects (WPPs), commissioned after 31st March 2022.*

(b) ***HPO*** *shall be meet only by energy produced from LHPs (Including PSPs), commissioned after 8th March' 2019.*

(c) ***Other RPO*** *may met by energy produced from any RE power project not mentioned in (a) and (b) above.*

In compliance to the RPO obligations to reduce the carbon footprint and as the most important obligations towards sustainability of our environment, we have to move towards greater share of renewable power procurement.

Section 39 of Vesting order of the licensee lays down the power procurement conditions. As envisaged under section 39 (d), till the time GRIDCO expresses its ability to meet the power purchase requirement of TPNODL from the PPAs provided in Annexure-4 and any such additional PPAs signed, TPNODL shall be obligated to meet the full extent of power purchase requirement from such PPAs from GRIDCO.

Pursuant to Government of Odisha notification No-PPD-II-2/05(pt) 7947, Bhubaneswar dated 17.8.2006, GRIDCO has been notified as the "State Designated Entity" to sign the Power Purchase Agreements (PPA) for procurement of all forms of power from different generators. GRIDCO sources electricity in bulk from various generators located inside and outside the state and the state share of power from Central generators and also from renewable sources in compliance to the mandated Renewable Purchase Obligations for the four Discoms of Odisha.

GRIDCO is sourcing power from renewable sources to meet the RPO .

4.1.1 SMD Projection

Considering the past drawl trend and additional load growth in each category and additional load towards upcoming HT/EHT consumers, the licensee projected SMD for the period FY 2024-25 upto FY 2027-28. The SMD (MVA) projection for the entire control period has been done based on load mix, consumption patterns and other economic policies. Approved SMD for the FY 23-24 1280MVA has been considered as base.

Table 28: Projection of SMD for FY 24 to FY 28

FY	FY24	FY25	FY26	FY27	FY28
SMD Projection (MVA)	1280	1366	1412	1481	1559

4.2 Manpower Projection

TPNODL has inherited all existing manpower of erstwhile NESCO in line with vesting order. 407 executives and 1752 non-executives as on 1st April 2021 who were on regular rolls of erstwhile NESCO, become part of TPNODL. There was no induction of Manpower since about last ten year in the erstwhile DISCOM.

The massive shortage of manpower posed real challenge for seamless operation. Further, as per manpower analysis, need was felt for creating missing bandwidths in Project Monitoring, Civil Engineering, Network Engineering & Planning, Sub-Transmission System, N/W Protection, Preventive Maintenance, Consumer care, Enforcement, Meter Management. Accordingly plans for induction of manpower were prepared. Further, the commercial organization had to be redefined upto the section level to bring in more focus on commercial activities. The Section Level which is the foundation for all Commercial and Technical activities, is being strengthened. IT & OT – Competencies had to be enhanced to take care of advent of new technologies like SCADA, GIS, ADMS, Data Center, IT applications, ERP, Infrastructure Management & control.

TPNODL carried out detailed study of the existing manpower gaps across various Departments and geographies of TPNODL and worked out requirement of new expert manpower to fill up various resource gap areas like Network Planning & Engineering, Sub Transmission System management, Enforcement, Energy Audit, Safety, Projects, Civil, IT & OT and formulated a comprehensive recruitment plan.

Hon'ble Commission had allowed 8% of the total proposed manpower of 3460 numbering to 277 for recruitment in the FY 21-22 in the ABP order.

However, the approved number was not sufficient to bridge the gap of the huge manpower deficit created due to retirement/attrition as well as non-recruitment over a period of more than a decade and meet the performance standards.

On request by the DISCOMs to revisit the number of recruitments allowed, Hon'ble Commission permitted recruitments for FY 22-23 up to employee / consumer ratio of 1.4/ 1000 Consumers, vide its letter no OERC/RA/TPWODL-38/2021/18 dt. 17.01.2022. The relevant extract of the Order is reproduced below:

"The Commission has now allowed filling up of retirement in view of a low percentage of employees per one thousand consumers. ***The Commission further observes that the recruitment for the ensuing year (FY 22-23) maybe undertaken to the extent so that the number of employees per one thousand consumers including replenishment of retiring vacancies of TPWODL, TPNODL and TPSODL****..... The Commission observes that the number of employees per thousand employees of TPCODL is already high relative to other Discoms and it shall be rationalized over the years to bring it to the level mentioned above.* ***The Commission further directs the DISCOMS to file their separate manpower requirement and Action Plan for FY 22-23 keeping in view the number of employees per thousand consumers as indicated by the Commission above. It shall be kept within 1.40."***

In view of the above, the licensee has formulated its recruitment plan for FY 22-23 and submitted before the Hon'ble Commission.

In FY 2021-22, with the approval of Hon'ble Commission, TPNODL has recruited 474 employees and taken 50 nos. of expert manpower in the required domains on transfer basis. A comparative analysis of the no. of employees and the no. of consumers since FY 2015 is presented hereunder:

Figure 5: Year wise Employee Status

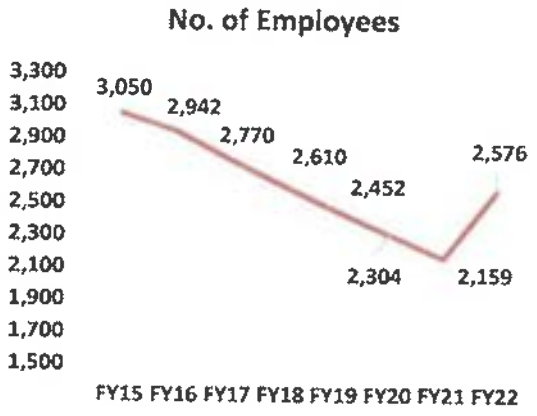


Figure 6: Year wise Consumer Status

It is pertinent to mention here that, on 1.4.1999, the no. of employees was 4557 and the total consumer base was 2.5 lacs. In FY 2021, the consumer base has increased 8 times to 20 Lacs, and the number of employees is 2159, which has reduced by 52%. Only after recruitments in FY 22, the employee position has started improving.

Further, TPNODL recruited 551 employees in FY 22-23 and planned to recruit 284 nos. of employees in the Business Plan for FY 23-24. Hon'ble Commission has approved a recruitment of 277 numbers for the 1st year of 1st Control period.

The projection of manpower for the balance four years of the control period are furnished hereunder:

Table 29: Projection of Manpower from FY 24 to FY 28

Employee strength	FY24	FY25	FY26	FY27	FY28
Initial manpower as on 1st April (A)	**3025**	**3220**	**3266**	**3397**	**3549**
No. of Employees added during the year :(B)	277	114	186	205	226
Employees Retd./Expired/resigned/ separated during the year :©	82	68	55	53	48
No. of Employees as on 31st March of FY D=A+B-C	3220	3266	3397	3549	3727
Average no. of Employees for the year E=(A+D)/2	3123	3243	3332	3473	3638
No. of consumer as on end of FY	2166718	2332857	2426178	2535356	2662142
Ratio No. of Employees/'000 consumers	1.49	1.40	1.40	1.40	1.40

The licensee had proposed recruitment of 294 nos .for the FY 23-24 as per the norms of Hon'ble Commission keeping number of employees/'000 consumers within 1.4 with the opening consumer base of 21,79,217 and projected number of consumers 23,00,306 as on 31st March 2024. However, 76,346 numbers of non-existing consumers as per site verification have been blocked from active directory of billing system in FY 22-23. Accordingly, the closing consumer base for FY 22-23 has been submitted before Hon'ble Commission as 20,41,588 numbers with 41numbers of EHT consumers, 659 numbers of HT consumers and 20,40,888 numbers of LT consumers. Projection of consumer base and sales projection has been done for the four years of the control period considering the closing consumer base of FY 22-23 as the base.

The proposed recruitments are in line with the employee strength benchmark of 1.4 employees per 1000 Consumers as directed by the Hon'ble Commission.

Details of the existing manpower position alongwith the recruitments done in FY 21-22, estimated for FY 22-23 and planned for FY 23-24 in line with the employee strength benchmark of 1.4 employees per 1000 Consumers as directed by Hon'ble Commission are furnished in the following table.

To keep the manpower cost optimized, TPNODL has recruited majorly trainees – Graduate Engineer Trainees, Diploma Engineer Trainees, Commercial Trainees (General Graduates). Same philosophy has been extended for the ensuing years.

For projecting the employee cost, the licensee has considered:

a. 3% escalation considered on Basic pay and GP over the previous year
b. DA as per the 7th Pay Commission and projected DA thereof for the control period
c. Housing Rent allowance considered at 20% of Basic Salary
d. Reimbursement of Medical expenses are considered at 5% of the basic Salary.
e. Nominal escalation of 10% considered for other employee allowances.
f. Impact of 8th pay Commission not considered.

Towards employee cost for the FY 2023-24, Hon'ble Commission has been kind enough to allow the proposed employee cost by the licensee except some disallowance in the proposed cost of CTC employees. The licensee has proposed Rs.92.37Crs towards CTC employee cost with a proposed new induction of 294 numbers during the FY 24. Hon'ble Commission had analyzed the manpower position, retirements and number of consumers of the licensee and allowed 277numbers of new recruitments during the FY 24.
Hon'ble Commission has allowed the employee cost of existing employees as well as terminal benefits for the FY 24 on actual cash outgo basis. However, it is to submit that, the approval accorded towards CTC employee cost is Rs. 39.28Crs less than the proposed cost towards CTC employees, that is Rs.92.37Crs for the FY 23-24.
It has been most humbly submitted before Hon'ble Commission that taking the March'23 salary as base, the CTC employee cost is coming to Rs. 92.37Crores. It has also been submitted before Hon'ble Commission that, the cost projection for CTC employees has been given on actual basis, and therefore the approval of Rs. 53.09Crs for FY 24 will not be sufficient to meet the CTC employee cost.
The base cost for projection of inherited employee cost has been taken as the approved employee cost by Hon'ble Commission for the FY 23-24. For projecting the employee cost for CTC employees the proposed cost which was done on actual basis has been considered for recruitment of 277numbers of employees as approved by Hon'ble Commission in the Tariff Order for the FY 23-24.

The projected employee cost for the control period are furnished in the following table:

Table 30: Projection of Employee Cost from FY 24 to FY 28

(In Crs)

	FY	FY24	FY25	FY26	FY27	FY28
A	EMPLOYEES COST (Erstwhile Employees)			₹ Cr		
1	Total	417.16	443.78	476.99	512.18	553.44
2	Less:-Employee cost Capitalized	2.76	3.02	3.24	3.48	3.76
3	Net Employee Cost	414.39	440.76	473.74	508.70	549.68
B	EMPLOYEES COST (CTC Employees)					
4	Total	83.10	96.83	114.08	133.66	155.80
5	Less:-Employee cost Capitalized	13.82	16.10	18.97	22.22	25.90
6	Net Employee Cost	69.28	80.73	95.11	111.44	129.89
C=(A+B)	Total Net Employee Cost	483.67	521.49	568.86	620.14	679.57

4.3 Administrative and General Expenses

Tariff Regulation, 2022 provides the escalation factor of 7% to arrive at the permissible A&G expenses for each year of control period. Relevant extracts from the Tariff Regulation are reproduced hereunder:

3.9.16. The normal A&G Expenses for each subsequent year will be determined by escalatingthe approved A&G Expenses (excluding additional or special A&G expense) for the previous year, at the escalation factor of 7 % to arrive at permissible A&G expenses for each year of the Control Period.

3.9.17. The Commission, in addition to the normal A&G expenses may allow additional expenses, under this head for special measures to be undertaken by the distribution licensees which are not covered under Capital Investment plan approved by theCommission.

Provided the Commission will undertake a prudence check before allowing such expenditure.

3.9.18. The A&G expense shall be allowed on normative basis in the ARR for ensuing yearand shall be subject to True-Up.

Provided that, in case the actual A&G expense is lower than the approved

A&G expense, the actual A&G expense shall be considered for True-Up purpose.

Provided that, in case the actual A&G expense is more than the approved A&G expense, the approved A&G expense shall be considered for True-Up purpose.

The licensee has proposed Rs.199.20Crs under A&G expenses for the FY 2023-24 out of which Rs. 59.14Crs was towards outsource cost and was considered by Hon'ble Commission under Employee cost while approving the expenses for FY 23-24. After regrouping the outsource cost, Hon'ble Commission has approved Rs. 120.13Cr towards A&G expenses for the FY 2023-24 against the proposed (regrouped) Rs.140.08Crs. for FY 2023-24. The projections for the balance years of the control period has been made taking the approved A&G cost of Rs. 179.27Crs (Rs.120.13+Rs.59.14Crs)for the FY 2023-24 as the base.

Projection for A&G expenses for the balance four years of the control period are detailed in the following table.

Table 31: Projection of A&G Expenses from FY 24 to FY 28 (In ₹ Crs)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28
Property Related Expenses	7.73	8.10	8.49	8.91	9.36
Communication	0.2	0.3	0.3	0.3	0.3
Professional Charges	8.64	9.25	9.90	10.59	11.33
Conveyance & Travelling	16.13	17.26	18.47	19.76	21.14
Other Expenses	146.5	157.9	168.9	180.8	193.4
Total	179.27	192.74	206.05	220.30	235.55

The detail item wise estimation of A&G expenses for the entire control period submitted under annexure-BPF2_A&G .

A&G expenses during the current year as well as in the ensuing years has been envisaged on account of meter reading, billing and collection, IT Automation, AMR related running expenses, Insurance expenses, Professional Charges, Enforcement activities, Customer Care and compensation towards electrical accidents etc. All of these activities would contribute significantly towards reduction of AT&C losses and provide consumer convenience.

TPNODL has engaged various new experienced agencies through transparent open bidding mechanism from Sep 2021 for undertaking the meter reading, spot billing and collection activities in every pocket of the distribution area including involvement of WSHGs. Similarly, TPNODL has engaged various collection mechanisms to collect the monthly revenue. To cater the above activities TPNODL is incurring expenses in form of charges and incentives to boost the revenue collection activities. The cost to that effect is included in the A & G Expenses in order to maintain the activities as TPNODL has to pay the agencies in time each month. The various steps taken by the licensee have been elaborated under steps taken to reduce AT&C loss.

4.4 Repair & Maintenance Expenses

The first and foremost duty assigned to the distribution licensee under the Electricity Act is to develop and maintain an efficient, coordinated and economical distribution system in his area of supply and to supply electricity in accordance with the provisions of the Act.

The entire distribution network of TPNODL comprising of 3,024 Ckt km of 33KV line, 40,188Ckt Km of 11KV line, 67,486 CKm of LT line, 244nos. of primary substations with 550PTRs and 74,726nos. of DTs spread over an area of 27,920sqkm is supplying power to a consumer base of 20.41lakhs under five revenue districts of Odisha.

Proper repair and maintenance of system network is the key to supply reliable and quality power supply to the consumers. It is pertinent to mention that, the entire network right from 33KV feeders to LT consumers were previously owned and maintained only by the Junior Manager (O&M) along with his team comprising of limited number of Lineman A/B/C, Helper, and Jr. Technician posted in respective sections. E&MR section was extending support to section staff for maintenance of 33/11KV primary substations. As sufficient manpower was not available, only limited corrective maintenance and restoration of power supply was in place.

To address the above issues and for proper maintenance of network, separate AMC has been introduced post takeover of TPNODL for 33KV and 11KV maintenance to create a culture of preventive maintenance.

Annual maintenance contracts for 33 kV network have been established with expert market agencies for all 5 circles. This involves 1927 nos of manpower and 44 nos of vehicles. Similarly, AMC is given to 10 different agencies for the 16 divisions across

TPNODL for 11KV & LT Network. This involves 5337 nos of manpower and 209 nos of vehicles. The network is being inspected regularly through manual patrolling as well as drone inspection in forest and inaccessible areas. Thermoscanning is done for the entire network using high power thermo scanning cameras and to identify the defects, hotspots and attend breakdowns in quick time and perform preventive maintenance activities to enhance system reliability by rectifying the probable faults even before they occur.

The Performance Based Maintenance Contract also includes 24X7 Breakdowns Crews for restoration of 33KV & 11KV feeders and substation equipment. Besides, preventive maintenance activities are being performed as per the maintenance plan and schedule prepared by TPNODL using the SAP PM system.

The Annual Maintenance Contracts for maintenance of LT, 11 KV and 33 KV infrastructure, covers both the infrastructure in the GFA /Books of TPNODL as well as the Govt. Funded Infrastructure; the Hon'ble Commission shall appreciate that both, the Company owned Assets as well as those financed by the Government and transferred to the DISCOM to use and maintain, form part of the same Distribution Network and consequently require similar maintenance.

It is worthwhile to clarify that the Maintenance Contracts placed by the Company are for maintaining all Assets in the Network, which includes both Co. owned (reflected as Company's GFA) as well as the Govt. funded Assets. Since these are largely labour-intensive contracts for maintenance of the entire network, the cost of such maintenance cannot be different for own and govt. funded assets.

Various steps taken by the licensee towards maintenance of the network and to improve the quality and reliability of Power Supply are outlined in the following paragraphs.

4.4.1 Project PTR Care

The licensee is having 244 nos. of PSS, 550 nos. of PTR and 3024ckt Km of 33KV line. Under Project PTR Care, in last Financial Year, Silica gel replaced in 514 nos., oil filtration/top-up carried out in 128 PTRs, PTR overhauling done in 47 PTRs, Repaired PTR installation -21nos and capacity of 27 nos PTRs augmented. Below is a brief of the activities carried out.

Table 32: Status of PTR Maintenance

PTR Care	
Description	**Nos**
Silica Gel Replacement	514
Oil Top up/Filtration	128
Breather Replacement	142
PTR Overhauling	51
Repaired PTR Installation	41
New PTR Augmentation	27

Major maintenance activity done in last financial (FY 2022-23) year as below.

Table 33: Major Maintenance Activity done in last Financial (FY 2022-23)

Sl. No.	List of Activity	Scheme	Total
1	Operation "BHOOMI"/Neutral Earthing Maintenance	PTR BACHAO	148
2	PTR Routine Test	PTR BACHAO	125
3	Leakage Arrest of Oil from PTR	PTR BACHAO	78
4	PTR Oil DGA test	PARIKSHAN	311
5	PTR Preventive Maintenance	PM	515
6	CB LIMB/POLE REPLACEMENT 33KV	CB	54
7	CB LIMB/POLE REPLACEMENT 11KV	CB	79
8	CB MECHANISM /LUBRICATION/ Maintenance	CB	121
9	CB Repair- (In House)	CB	72
10	AB SWITCH/ISOLATOR MAINTENANCE/Repair	SWITCHYARD	176
11	LA INSTALLATION/Maintenance	SWITCHYARD	1050
12	PSS Preventive Maintenance	PM	235
13	PSS/Line Thermal Scanning (No's of Hot Spot Found/Rectified)	PM	198
14	Repair/Maintenance of BATTERY CHARGER	PM	
15	Repair/Maintenance of BATTERY BANK	PM	

16	CT Replacement	PM	161
17	PT Replacement	PM	81
18	Switchyard/Control Room Cleaning	SWACH	235

4.4.2 SAP Based Plant Maintenance:

We had introduced SAP Based Preventive Maintenance & testing of PSS equipment's in SAP.

Table 34: Status of SAP Based Plant Maintenance

Date	Circle	No of Notification Raised	Type of Notification Raised			No of Notification Closed	Type of Notification Closed			No of Notification Pending
			M1	M2	PM03		M1	M2	PM03	
YTD Since Apr-22	Balasore	386	189	30	167	264	155	24	85	122
	Baripada	424	81	36	307	396	73	31	292	28
	Bhadrak	605	427	39	139	598	422	37	139	7
	Jajpur	746	428	102	216	675	411	95	169	71
	Keonjhar	428	242	32	154	208	56	20	132	220
	TOTAL	2589	1367	239	983	2141	1117	207	817	448

To ensure proper protection system of the PSS, New Relay installation, new battery bank and charger, New CR Panel installation and LA installation and upkeep carried out. A report on the same is provided below.

Table 35 (a): Maintenance Status of PSS

Sr. No.	Description	FY-2022 Achieved	FY-2023 Achieved
1	Relay Installation Capex	NA	201
2	PTR Augmentation Capex	NA	27
3	NEW CB Installation-CB 11KV	12	107
4	NEW CB Installation-CB 33KV	8	71
5	Battery Bank	44	75
6	Battery Charger	33	53
7	PTR Earthing Capex	NA	98

8	RTU Installation	NA	26
9	CR Panel Installation	NA	82

Table 35 (b): Maintenance Status of PSS

Sr. No.	Description	FY-22 Achieved	FY-23 Achieved
1	Project "NAVIKARAN" PTR Overhauling	24	47
2	Relay Setting Coordination	16	40
3	11KV/33 KV Metering Work	NA	776 222
4	PTR Maintenance in SAP	NA	515
5	PTR Health Index	NA	285
6	PTR Augmentation_Opex	NA	16

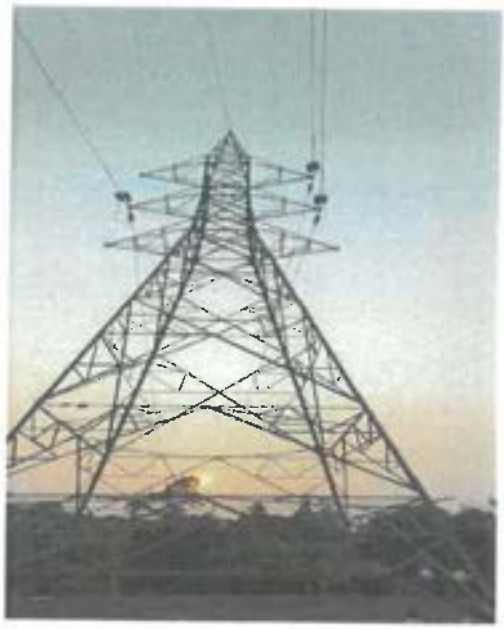
4.4.3 33KV Line Upkeep

Towards the 33KV line upkeep, 1877 nos. of Tilted poles straightened, 2867 conductor rejumpering carried out, 11837nos. of PIN insulators replaced, 1867 nos. of Tilted-Cross arm straightened.

Crossing of the huge 384Mtr span of Subarnarekha River with two interposing PC+6 towers at both sides of the river. This project has helped in providing a reliable power supply to more than 15,000/- Consumers of 33/11kV Rajghat PSS & Gao Amarda PSS.

Table 36: Maintenance Status of 33 kV Line

33KV Line-upkeep	
Description	**Nos.**
Tilted Poles Straightened	1887
Conductor Re-Jumpering	2857
Replacement of Pin Insulators	11737
Tilted V-Cross arm Straightened	2158
Tree Trimming (spans)	16551
Intermediate Pole Erection. (Critical)	153
New Link Lines 33 kV (CKM)	60



4.4.4 Project Raksha

Further, our 11KV system network comprises of 74726 DTRs and 40,188Ckt Km of 11KV line. Steps taken for the upkeep of 11KV system network outlined hereunder. Under project Raksha, oil filtration/top up, HT/LT Bushing replacement, Oil leakage checking, Breather/Silica Gel replacement, repairing /new DTR Body earthing, replacement of burnt socket, augmentation of DTs have been carried out. Brief of the activities upto H1 furnished in the following table.

Table 37: Maintenance Status of DTR

Description	Nos
Oil Top up/ Filtration	5026
HT/LT Bushing Replacement	2802
Oil Leakage / Breather/Silica Gel repl.	1396
DTR Body Earthing Repaired/Installed	2171
Burnt Socket Replaced	15007
Augmentation of Dist. Trf	41
Conversion of LT Bare to AB Cable (cKM)	2404.229

4.4.5 11KV Network Upkeep

Steps taken for DSS maintenance, 11KV line maintenance and to maintain the network hygiene are briefed in the following table

Table 38: 11KV Network Upkeep

DSS Maintenance		Network Hygiene		11KV Line Maintenance	
Tree Trimming / Vegetation Removal(Span)	**39,895**	**Pin Insulator Replaced**	**17833**	**Tree Trimming / Vegetation Removal (Span)**	**178682**
Earthing Resistances Checked	410	HG/DD Fuse Unit	1229	Conductor Restringing (KMtrs.)	1037.65
DTR Oil BDV Test Done	724	Load Balancing Done	2023	Replacement of Sick Conductor (KMtrs.)	63.522
Repair / Installation of New AB Switches	5135	LTDB & MCCB Installed	820	Insulated Jumpers Instl. /Replaced	45289
Refurbishment of Dist . Sub station	11096	LA Earthing Repaired	993	Straightening/replacement of Cross Arms	3627
Installation of LT Protection on Dist Trf:	5196	New DTR AB Switches Installed	413	Installation of Interposing Poles	3162
LA Installation	1076	New Link Lines 11 kV (CKM)	18.21	Stay Set Installed	1392
		Refurbishment Lines 11kV (CKM)	21.159	Line A/B Switch repaired	1671

4.4.6 LV Side Protection of DTRs

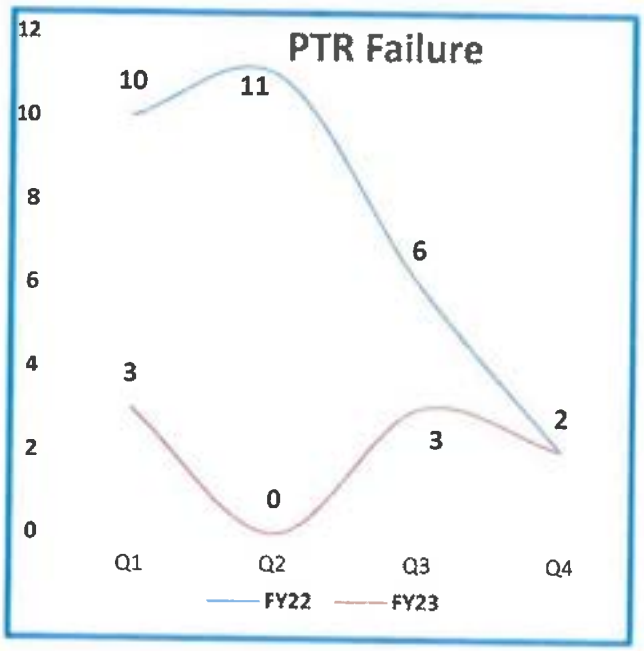
Beside the above, 2546 nos. of distribution substations have been refurbished and power cable replaced in 234 nos of DSS.

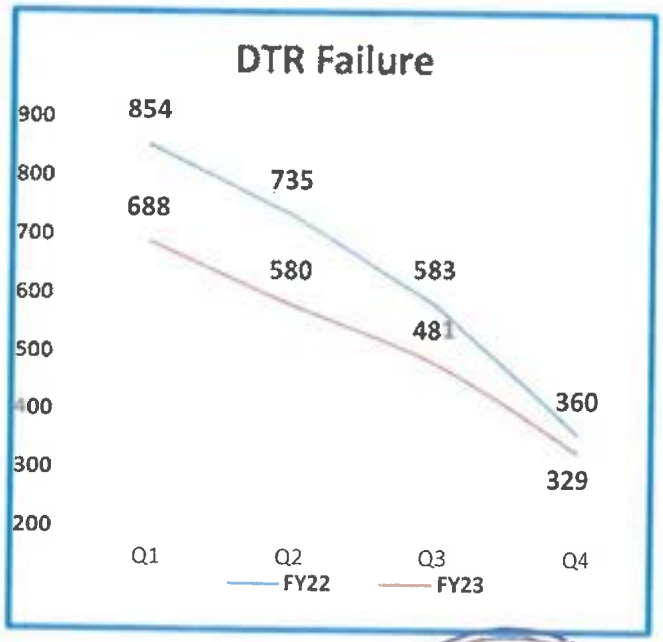
For the LT side protection of DTR, the steps taken are briefed in the following table:

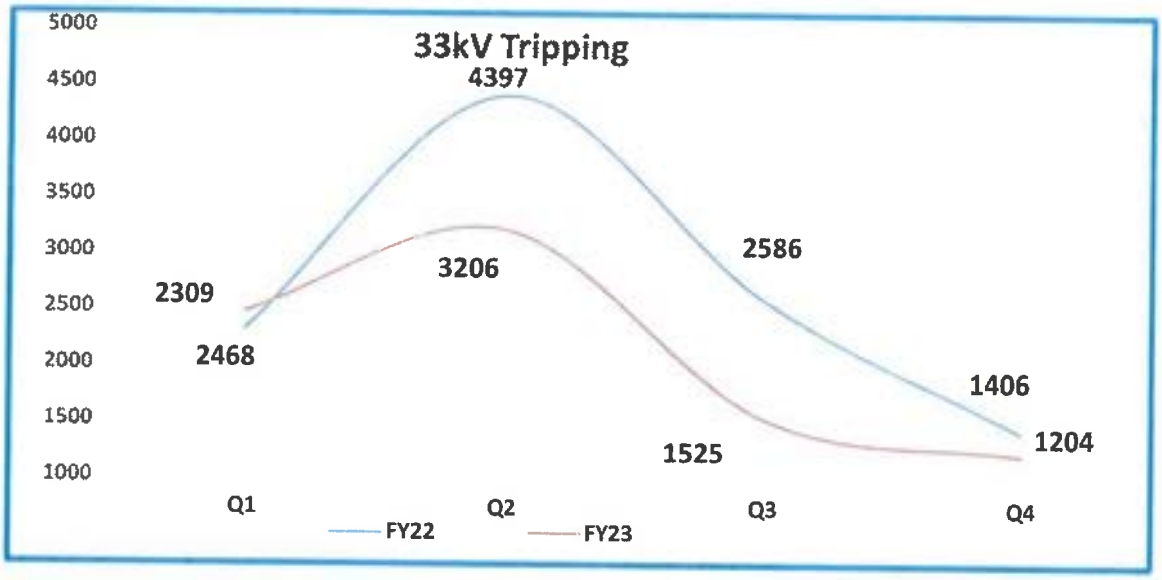
Table 39: Maintenance Status of LT Side of DTR

Circle	LT Air Circuit Breaker (400KVA Trx.)	MCCB 400A (>160KVA Transformer)	MCCB 160A (Upto 160 KVA Transf.)	Kit-kat Fuse
Balasore	70	48	98	1303
Bhadrak	30	34	98	518
Baripada	66	31	89	483
Jajpur	46	56	115	634
Keonjhar	22	29	46	274

The achievements in 33KV & 11kV trippings, DT and PT failure reduction are shown in the following graphs







Tariff Regulation, 2022 provides for permitting the R&M expenditure as a % of Gross Fixed Asset .The relevant provisions from Tariff Regulation are reproduced in the following section.

Repairs and Maintenance (R&M) Expenses

3.1.1. Repair and Maintenance expenses shall be allowed as a % of opening Gross Fixed Assets (GFA) only on assets owned by the distribution company, for each year of the Control Period as provided in the table below:

DISCOMs	TPCODL	TPWODL	TPNODL	TPSODL
FY 23-24	4.20%	4.50%	4.50%	5.40%
FY 24-25	4.00%	4.20%	4.20%	4.50%
FY 25-26	3.50%	4.00%	4.00%	4.20%
FY 26-27	3.00%	3.00%	3.00%	3.50%
FY 27-28 & onwards as per the directives of the Commission	3.00%	3.00%	3.00%	3.00%

3.1.2. The Distribution Licensee(s) shall prepare a plan and budget for periodic preventive maintenance of distribution network including emergency repairs

and restoration works under each division.

3.1.3. The Distribution Licensee(s) shall provide the breakup details of R&M expenses in the ARR for the Financial Year along with requirement of annual maintenance spares for smooth operation with minimum down time of the system.

3.1.4. The Commission shall allow an amount for maintenance of assets added under State and Central Government Schemes @ 3.00% of the opening GFA of such assets. The Distribution Licensee(s) shall be required to separately submit to the Commission along with ARR, the details of assets taken into service under these Schemes.

3.1.5. The Commission may also allow special R&M, in order to enable the Distribution Licensee to undertake critical activities which are not covered under Capital Investment plan approved by the Commission.

Provided the Commission shall undertake a prudence check before allowing such expenditure.

3.1.6. The R&M expense shall be allowed on normative basis in the ARR for ensuing year and shall be subject to True-Up.

Provided that, in case the actual R&M expense is lower than the approved R&M expense, the actual R&M expense shall be considered for True-Up purpose.

Provided that, in case the actual R&M expense is more than the approved R&M expense, the approved R&M expense shall be considered for True-Up purpose.

3.1.7. Under the R&M expense, Distribution Licensees shall keep provision for annual maintenance spares and material bank to meet any exigencies & faster restoration of supply under natural calamities like cyclone, flood etc.

The licensee has furnished the details of legacy asset, asset created and projected for capitalization during the control period on account of own CAPEX , consumer contribution and Govt. grants under Annexure-BPF8_R&M_Norms and BPF7_Depreciation sheets.

Government grants expected to be received/capitalized in this control period alongwith the capitalization scheduled has been detailed in the Annexure-BPF8_ R&M_Norms.

Table 40: Status of Government Grant Expected to be received

Sr. No.	Name of the scheme	Expected fund in Rs Cr.					
		FY-24	FY-25	FY-26	FY-27	FY-28	Total
1	REVAMPED DISTRIBUTION SECTOR SCHEME REFORM-BASED AND RESULT-LINKED (RDSS)	460.2	536.9	536.9			1534
2	ODSSP Phase-IV	110	278				
3	ODSSP Phase-V (CMPDP)	221.81					221.81
4	Special Assistance to State for Capital Investment 2023-24 (SACI)	249.64					249.64
5	State Disaster mitigation fund (SDMF)	46.3	30.34				76.64
	Total	1087.95	845.24	536.9	0	0	2082.09

These assets are expected to be capitalized in the book of OPTCL , except under State Disaster mitigation fund (SDMF) and Special Assistance to State for Capital Investment 2023-24 (SACI), where the fund is expected to be received by the DISCOM directly for capitalization. For arriving at the applicable R&M expenses for the control period, the above fund projected to be received have been assumed to be put to use as per the capitalization schedule detailed under Annexure R&M _Norms.

The gross fixed asset projection for the entire control period, considering the above fund/capitalization is furnished in the following table:

Table 41: Projection of Gross Fixed Asset

Fixed Assets (Cumulative)	FY23	FY24	FY25	FY26	FY27	FY28
Legacy Assets	547.24	547.24	547.24	547.24	547.24	547.24
Own Capex	477.52	1,135.99	1,510.98	1,788.56	2,042.73	2,294.30
Meter & Cables	40.96	149.49	259.62	259.62	259.62	259.62
Consumer Contribution	1,677.37	1,864.37	2,051.37	2,238.37	2,425.37	2,612.37

Govt.Grant	286.44	709.80	1,024.38	1,024.38	1,024.38	1,024.38
Gross Total	3,029.52	4,406.89	5,393.58	5,858.16	6,299.34	6,737.91

Projection of the assets to be capitalized in OPTCL books for licensee's distribution system are projected in the following table:

Capitalization schedule	FY 23	FY24	FY25	FY26	FY27	FY28
To be reflected in OPTCL asset Opening GFA	1675.95	2172.98	3068.10	3605.00	3819.76	3819.76

The R&M expenses as per norms for the control period are furnished in the following table:

Table 42: Projection of R&M Expenses as per Norms for Control Period (In Crs)

R&M	FY24	FY25	FY26	FY27	FY28
		DISCOM			
DISCOM's Gross fixed assets(GFA) as on 1st day of FY	3,029.52	4,406.89	5,393.58	5,858.16	6,299.34
Addition during the FY	1,377.38	986.69	464.58	441.18	438.57
Rate of R & M on GFA	4.50%	4.20%	4.00%	3.00%	3.00%
R&M on GFA	136.33	185.09	215.74	175.74	188.98
Govt. (Funded/Grant) Assets as on 1st day of FY	1675.95	2172.98	3068.10	3605.00	3819.76
Addition during the FY	497.03	895.13	536.90	214.76	0.00
Rate of R & M on Govt. (Funded/Grant) Assets	3.00%	3.00%	3.00%	3.00%	3.00%
R&M on Govt. funded Assets	50.28	65.19	92.04	108.15	114.59
Total R & M	186.61	250.28	307.79	283.89	303.57

Opening GFA for FY 23-24 is as per audited figures for FY 22-23.

Basing on the actual cost incurred towards civil repair and maintenance, Distribution line repairs & maintenance, Transformer maintenance, Distribution line repairs & maintenance and other repair and maintenance in FY 22 and FY 23 and taking into account the committed costs, the projection of R&M expenses for the entire control period detailed in the following table.

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Table 43: Projection of R&M Expenses for the Entire Control Period (In Rs. Crs)

Sl. No.	Particulars (Own)	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
1	Civil repairs & maintenance	1.92	2.05	2.20	2.35	2.52
2	Distribution line repairs & maintenance	32.63	36.23	38.97	41.92	45.10
3	Transformer maintenance	17.89	18.95	20.06	21.25	22.50
4	Other repairs & maintenance	0.25	0.26	0.28	0.30	0.31
5	Distribution line repairs & maintenance	204.50	218.82	234.14	250.53	268.07
6	**Grand Total**	**257.19**	**276.31**	**295.65**	**316.35**	**338.49**

Therefore, considering the critical need of taking actions through engagement of 33KV and 11KV AMCs to ensure expeditious improvement of the reliability performance of the dilapidated network, Hon'ble Commission is most humbly requested to kindly consider the steps taken by the licensee and consider the balance amount over and above the normative R&M, under regulation 3.9.23 of Tariff Regulation for meeting the critical activities planned for up-keepment of system network and to maintain and improve the quality and reliability of power supply.

4.5 Provision for Bad and Doubtful Debts

The Petitioner has considered the non-collectable amount based on the collection efficiency (99%) as bad and doubtful debts while estimating the cost components for the Control period.

The Tariff Regulation provides for permitting Bad and Doubtful debt on normative basis as 1% of total annual revenue billed for sale of electricity. Extracts of relevant regulation reproduced hereunder:

5.8.1 *The Commission shall allow provisioning for bad debts as a pass through in the Aggregate Revenue Requirement, as a prudent commercial practice in the revenue requirement of the licensee. The Bad and Doubtful debt during this control period shall be allowed on normative basis of 1% of the total annual revenue billed for sale ofelectricity.*

Provided that during True-Up, the DISCOMs shall submit the audited annual accountsdepicting provision for bad and doubtful debt for the respective years and provisioning for bad debt shall be allowed subject to ceiling of @ 1% of the total annual revenue billed for sale of electricity and provisioning of bad and doubtful debt mentioned in the audited annual accounts whichever is lower.

Provided further that if subsequent to the write off of a particular bad debt, revenue is realized from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realized.

Accordingly, the projection of Bad Debt for the 1st control period furnished in the following table in Crs

Table 44: Projection of Bad Debt for Control Period (In Rs. Crs)

FY (Projected)	FY24	FY25	FY26	FY27	FY 28
Bad & Doubtful Debt	37.17	39.63	42.98	46.08	47.99

4.6 Depreciation

The capital investments to be made by TPNODL has been allowed recovery of depreciation as per para 39(g) of the Vesting order, provisions of which reproduced hereunder:

"39(g) The capital investments made by TPNODL shall be allowed recovery of depreciation in line with the rates prescribed in Annexure – 3 till the time applicable regulation is notified by the Commission. The depreciation rates specified in regulations shall prevail over the rates specified in Annexure – 3 as and when applicable regulation is notified by the Commission."

OERC (Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022 (herein after called "Tariff Regulation'2022") has been notified on 20th December,2022 and published in the Gazette of Odisha No-3538 dated 23rd December, 2022.

The provision for calculation of depreciation as envisaged in the Tariff Regulation'2022 is reproduced hereunder:

3.8. Depreciation

3.8.1. Depreciation shall be computed separately for assets capitalized prior to the Effective Date and the assets put to use after the Effective Date.

3.8.2. The assets achieving date of commercial operation prior to the Effective Date would continue to earn depreciation as per depreciation rates approved by the Commission prevailing at the time of effective date. Since no loan has been availed by the new Distribution Licensees for these assets, the depreciation allowed to be recovered from tariff must be utilised in the manner as provided below as per terms of the Vesting Order:

a. For the purpose of determination of Aggregate Revenue Requirement, the depreciation on the opening Gross Fixed Assets as of Effective Date, as determined by the Commission subject to prudence check, shall be utilized as per the following priority order:
   i. Funding of Additional Serviceable Liabilities as per the Vesting Order
   ii. Capital Investment
   iii. Working Capital requirement computed as per Tariff Regulations
b. The manner of utilization of such depreciation shall be as per the directions of the Commission. The Distribution Licensee shall maintain a separate accountfor such depreciation.
c. No depreciation shall be allowed to be recovered on assets created out of Government grants irrespective of whether the corresponding grant is transferred to the Distribution Licensee or not.

3.8.3. In case of the assets of the erstwhile DISCOMs, the balance depreciable value as on April 1, 2023, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2023 from the

gross value of the assets.

3.8.4. For the assets of erstwhile DISCOMs transferred to the new Distribution Licensees through the Vesting Orders, the depreciation shall be calculated on the pre-up valued cost of assets at pre-1992 rate on the asset base approved by the Commission.

3.8.5. For assets achieving date of commercial operation (COD)in this control period, depreciation shall be computed in the following manner:

a. The approved original cost of the project/fixed assets shall be the base value for calculation of depreciation;

b. Depreciation shall be computed annually based on the straight-line method at the rates specified in the **Annexure** II to these Regulations:

Provided that the remaining depreciable value as on 31stMarch of the year closing after a period of 15 years from date of commercial operation shall be spread over the balance useful life of the assets:

Provided that the rate provided in **Annexure II**, are the upper ceiling of the rate of depreciation to be provided up to 15th year from the date of commercial operation and the Distribution Licensee shall have the option of indicating, while seeking approval for tariff, lower rate of depreciation, subject to the aforesaid ceiling and the same will be considered for computation of normative loan as per Regulations.

Provided also that the Distribution Licensee, shall submit all such details or documentary evidence, as may be required under these Regulations and as stipulated by the Commission, from time to time, to substantiate the above claims:

The Opening Gross block as provided in the approved opening Balance sheet as on 1st April 2021 has been used for depreciation calculation for those assets existing on the date of commencement of operation. Further, the depreciation rates applicable would be as existing "pre- 92" rates.

Depreciation on Assets created from opening CWIP. The depreciation on these assets has been calculated at same rate that has been used for calculating depreciation on opening assets.

TPNODL has carried out the Physical Verification of the Assets as on 31st March 2021, by independent auditor during the FY 2021-22 and found that majority of the assets under the class of Network Assets, Furniture & Fixture and Office Equipment have crossed the useful life. Thus such assets under that class has reached zero value as on 31st March 2023.

Under the circumstances an amount of ₹ 271.00 crores, ₹. 4.20 crores and ₹ 1.98 crores of Gross Block for the asset Class Network assets, Office Equipment and Furniture Fixtures respectively have reached the useful life and no depreciation to that extent is chargeable.

Depreciation on Assets created after the Effective date till 31.03.2023 (i.e. prior to commencement of new control period FY 2023-24 to FY 2027-28 as per the New Tariff Regulations, 2022), the vesting order under Para 39 (g) permits depreciation at the rates as applicable till notification of the Tariff Regulations. Accordingly, Depreciation on assets created after the Effective Date till 31.3.2023 (i.e. prior to commencement of new control period FY 24-28 as per the New Tariff Regulations, 2022) has been calculated based on these rates provided in Vesting order. The extracts of the Vesting Order as provided under 39(g) are reproduced hereunder:

(g) The capital investments made by TPNODL shall be allowed recovery of depreciation in line with the rates prescribed in Annexure – 3 till the time applicable regulation is notified by the Commission. The depreciation rates specified in regulations shall prevail over the rates specified in Annexure – 3 as and when applicable regulation is notified by the Commission.

Accordingly, for all assets created after effective date till 31.03.2023 depreciation has been calculated at rates as specified in Annexure-3 of the vesting order.

As stipulated in Regulations 3.8.5 of the New Tariff Regulations, 2022 , the depreciation on the assets created during the control period FY 2023-24 to FY 2027-28 has been calculated at the deprecation rate as provided in Annexure-II of the New Tariff Regulations ,2022.

4.6.1 Summary of Depreciation claimed

Based on the above the total depreciation for FY-24 and FY-28 is projected. Capital expenditure towards Metering is to be recovered through monthly meter rents, hence depreciation on meters has not been claimed. Further 'Amortization of Consumer Contribution & Capital Grant' and on opening Assets which is being booked at present in the accounts under the head 'Other Operating Income' has been deducted to arrive at final Depreciation value.

Out of the above deprecation claimed, the depreciation on Assets created out of own capex will be used towards repayment of capital loan and balance amount will be used towards funding of ASL.

It is submitted that, the Hon'ble Commission may allow full depreciation on Opening Assets, which could then be utilized to liquidate the ASL payments.

Table 45: Projection of Depreciation for Control Period (In ₹ Crs)

Depreciation on	2023-24	2024-25	2025-26	2026-27	2027-28
Legacy Own Assets	10.37	10.37	10.37	10.37	10.37
Own Asset	56.85	96.38	115.34	128.19	141.82
Total Depreciation	**67.22**	**106.75**	**125.71**	**138.56**	**152.19**

4.7 Interest Expenses

TPNODL would like to submit that the following interest expenses on loans will be incurred for smooth operation of the licensee.

4.7.1 Interest on Security Deposit

Section 47(4) of the Electricity Act 2003 states that "The distribution Utility shall pay interest equivalent to the bank rate or more, as may be specified by the concerned State Commission, on the security referred to in sub-section (1) and refund such security on the request of the person who gave such security."

The OERC Distribution (Conditions of Supply) Code 2019, Regulation (57) also mandates the payment of interest on consumer security deposit, the manner in which it is to be administered and penal provisions for delay in making such payments.

Relevant extracts of Supply Code, 2019 is reproduced hereunder:

Interest on Security Deposit payable by the Licensee/supplier

57. (i) The Licensee/supplier shall pay interest on security deposit to the consumer, at the bank rate. (SBI Base Rate as on 1st April of the relevant year) provided that

(ii) The Commission in its tariff order for the respective financial year may direct the licensee/supplier to pay a higher rate of interest.

(iii) The interest accruing to the credit of the consumer shall be adjusted annually in the amounts outstanding from the consumer to the licensee/supplier as on 1st May of every year and the amounts becoming due from the consumer to the licensee/supplier immediately thereafter.

(iv) The licensee/supplier shall duly show the amounts becoming due to consumer towards interest on the security deposit in the bills raised on the consumer.

(v) The Licensee/supplier shall pay interest at twice the rate specified under sub- Regulation (i) above for the delay in making the adjustments for interest on security deposit.

Further Tariff Order for FY 23-24 stipulates interest at the rate of 6.75% on the closing balance on consumer's security deposit as on 31.3.23 under para 136. The relevant extract from Tariff order reproduced hereunder-

"Interest on Security Deposit

136. The Interest on security deposit is allowed by the Commission as per the OERC Distribution (Conditions of Supply Code), 2004. The prevailing bank rate is 6.75% per annum during February 2023 as notified by RBI in their website. The Commission, accordingly, allows the interest at the rate of 6.75% on the closing balance on consumer's security deposit as on 31.3.2022."

TPNODL has calculated the interest on security deposit @ 6.75% for the FY 2023-24 upto FY 27-28 as per the Hon'ble Commission's approval in the Tariff Order FY 23-24. The interest on security deposit considered in the control period detailed in the following table:

Table 46: Interest on Security Deposit (In Rs. Crs.)

Interest on Security Deposit					
Particulars	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**
Opening Balance	795.83	875.83	961.12	1,053.64	1,152.77
Addition during the year	80.00	85.30	92.51	99.13	103.32
Security deposit refunded/paid to consumers	-	-	-	-	-
Closing Balance	875.83	961.12	1,053.64	1,152.77	1,256.09
Rate of Interest	6.75%	6.75%	6.75%	6.75%	6.75%
Interest Amount	59.12	64.88	71.12	77.81	84.79

4.7.2 Interest on Capex loan

As per the Tariff Regulations, the provision for interest on capital loan is reproduced hereunder:

*3.7 **Interest and finance charges on Loan Capital***

3.7.1 The loans arrived at in the manner indicated in these Regulations on the assets put to use, shall be considered as gross normative loan for calculation of interest on loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

3.7.2 The normative loan outstanding as on 1st April shall be worked out by deducting the cumulative normative repayment as admitted by the Commission up to 31st March of the previous year.

Provided that the assets of erstwhile DISCOMs as on effective date in terms of the provisions of Vesting Orders shall not be eligible for calculation of interest on loan.

3.7.3 The normative repayment for the year during the Control Period shall be deemed to beequal to the depreciation allowed for that year.

3.7.4 Notwithstanding any moratorium period availed by the Distribution Licensee the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

3.7.5 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the year applicable to the Distribution Licensee shall be considered as the rate of interest:

Provided that in case where the Distribution Licensee avails new loans, i.e., on or after April 1, 2023, the rate of interest on loan in any case shall not exceed approved base rate of return on equity or any capping on rate of interest on such a new loan as specified by the Commission considering the market conditions. The Distribution Licensee(s) shall follow transparent mechanism to avail Loans and, to the extent possible, shall endeavour to invite open tender for availing Loans. However, they shall be required to submit due justification to the Commission for the terms and conditions of the loans raised by them including the loan sanction letter from the banks/ lending institutions, indicating the applicable rate of interest. They shall also justify the reasons for higher interest rate, if availed for the new loan.

Provided further that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided also that if the Distribution Licensee does not have actual loan, then the weighted average rate of interest of the other business of the Distribution Licensee regulated by the Commission shall be considered:

Provided also that if the Distribution Licensee does not have actual loan, and the otherbusiness of the Distribution Licensee regulated by the Commission also does not have actual loan, then the weighted average rate of interest of the Distribution Licensee as awhole shall be considered:

Provided also that if the Distribution Licensee as a whole does not have actual loan, then the Base Rate plus 150 basis points at the beginning of the respective year shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

For the purpose of financing the projected Capital Expenditure, TPNODL shall be availing loans. The broad terms of loans for cost are extracted from the Interest sheet and provided below.

Table 47: Interest on capex loan **(In ₹ Crs)**

Interest on capex loan

Particulars	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
Opening Balance	237.47	641.56	807.66	886.63	936.36
Capitalization considered	658.48	374.98	277.58	254.18	251.57
Loan	460.93	262.49	194.30	177.92	176.10
Repayment (considered equivalent of depreciation)	56.85	96.38	115.34	128.19	141.82
Closing balance-Loan	641.56	807.66	886.63	936.36	970.64
Average loan balance	439.51	724.61	847.15	911.50	953.50
Interest	39.56	65.21	76.24	82.03	85.82
Interest rate applicable	9.00%	9.00%	9.00%	9.00%	9.00%

4.7.3 Interest on Working Capital Loan

As per the OERC (Terms and conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022, Interest on working capital shall be allowed as follows.

" 3.10. Interest on Working Capital

3.10.1. The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Wheeling and Retail supply business for the Financial Year. The working capital for the purpose of ARR calculation shall be computed as follows:

a. Operation and maintenance expenses for one month; plus

b. Maintenance spares @ twenty (20) % of average R&M expense for one month;plus

c. Power Purchase Cost for one (1) month

Working Capital requirement of the Distribution Licensees may be met through depreciation allowed by the Commission on the assets of erstwhile DISCOMs ina manner mentioned in the Vesting Orders and as approved by the Commission. Shortfall in meeting the working capital requirement as mentioned above shall be allowed. The interest on the working capital shall be at a rate equal to the SBI Base Rate or any replacement thereof by SBI from time to time (being in effect applicable for 1 year period) as applicable as on 1st April of the Financial Year (for which Truing Up shall be done) plus 300 basis points or actual weighted average rate of interest towards loan for meeting working capital requirement availed by the Distribution Licensee(s), whichever is lower:

Provided that at the time of truing up for any year, the working capital requirement shall be re-calculated on the basis of the components of working capital approved by the Commission.

Provided that, the variation between the normative interest on working capital recomputed at the time of Truing-up and the actual interest on working capital incurred by the Distribution Licensee, substantiated by documentary evidence, shall be considered as an efficiency gain or efficiency loss, as the case may be, on account of controllable factors."

The Base rate has been defined as one year MCLR as declared by SBI (relevant extract is as provided below).

1.2 Definitions and Interpretation

....

10) **" Base Rate"** shall mean the one year Marginal Cost of Lending Rate ('MCLR') as declared by the State Bank of India (SBI) from time to time;

As per the regulation 3.10.1 , the interest rate applicable for FY 2023-24 would be the one year MCLR declared by SBI as on 1.04.2023 plus 300 basis points. For the purpose of computation of interest on working capital for FY 2023-24 we have taken the one year MCLR declared by SBI which is in effect from 1.4.23 (i.e. 8.5%) as is provided by SBI on its website .

Accordingly, TPNODL has derived the working capital requirement and interest there on for the entire control period as given below.

Table 48: Interest on Working Capital **(In Rs. Crs)**

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28
Operation & Maintenance	76.68	82.55	89.21	96.40	104.47
Power Purchase Cost for one month	225.62	234.64	251.03	265.68	273.80
Spares (20% of R&M expense for one month)	4.29	4.61	4.93	5.27	5.64
Total	**306.58**	**321.79**	**345.17**	**367.35**	**383.91**
Interest rate applicable (SBI base rate as on 1.4 plus 300 points)	11.50%	11.50%	11.50%	11.50%	11.50%
Interest on working capital	35.26	37.01	39.69	42.25	44.15

4.8 Return on Equity

As per para 54 (a) of the Vesting Order, the Return on Equity would be available as follows:

54. Return on equity:

(a) As per the terms of the RFP, the Commission shall allow return on equity, as per the Tariff Regulations, to TPNODL on the equity capital of ₹ 250 crores (Indian Rupee Two hundred and fifty crores) only which was the reserve price of the utility of NESCO.

Further, the Tariff Regulation, 2022 provides the following

" 3.2. Return on Equity

3.1.2. Return on equity on approved reserve price (INR 300 Crore for TPCODL, INR 300 Crore for TPWODL, INR 250 Crore for TPNODL and INR 200 Crore for TPSODL) for the utilities (TPCODL, TPWODL, TPNODL & TPSODL) of the erstwhile Distribution utilities as on effective date in terms of the provisions of Vesting Orders:

Return on equity shall be allowed on the approved reserve price of the utility

from the effective date of operation at the rate of 16% per annum (post tax), in Indian Rupee terms on pro-rata basis as per Vesting Order.

3.1.3. Return on equity on the assets put to use after Effective Date up to date of applicability of these Regulations:

Return on equity on assets put to use after Effective Date up to date of applicability of these Regulations shall be eligible to get return as per Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2014 and its amendments thereof.

3.1.4. Return on equity on the assets put to use under instant Regulations:

Return on equity on assets put to use under these Regulations shall be computed on the paid-up equity capital determined in accordance with these Regulations and shall be allowed at the rate of 16% per annum (post tax), in Indian Rupee terms:

Provided further that for the purpose of truing up for the Distribution Licensee, return on equity shall be allowed from the date of commercial operation on pro-rata basis based on documentary evidence provided for the assets put to use during the year in absence of which the assets shall be considered to be added in the mid of the year.

Provided further that asset funded by consumer contributions, capital subsidies/ Government grants shall not form part of the capital base for the purpose of calculation of Return on Equity.

a. The premium if any, raised by the Distribution Licensee while issuing share capital and investment of internal resources created out of free reserve, if any, shall also be reckoned as paid-up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting capital expenditure, and are within the ceiling of 30% of capital cost approved by the Commission.

b. In case of foreign currency brought as capital, the Commission may consider a separate rate of return if foreign exchange variation is allowed as a pass through.

c. The tax only to the extent of the tax on return is provided as pass through."

On the basis of the above, TPNODL has worked out the Return on Equity (RoE) for the capitalization arising out of the Capex undertaken by TPNODL after Effective Date. As considered for Depreciation and Interest on Capital Loan, we have considered that the capitalization is at the centre of the period. The RoE workings are as follows:

Table 49: Return on Equity Calculations **(In ₹ Crs)**

Particulars	FY 24	FY 25	FY 26	FY 27	FY 28
Opening equity	398.14	595.68	708.18	791.45	867.70
Capitalization considered	658.48	374.98	277.58	254.18	251.57
Equity addition	197.54	112.50	83.27	76.25	75.47
Closing equity	595.68	708.18	791.45	867.70	943.18
RoE (opening)	63.70	95.31	113.31	126.63	138.83
RoE (addition)**	15.80	9.00	6.66	6.10	6.04
Total RoE	79.51	104.31	119.97	132.73	144.87
RoE With Tax	106.25	139.39	160.32	177.38	193.60
Tax	26.74	35.09	40.35	44.65	48.73

4.9 Carrying Cost

TPNODL has claimed carrying cost @ 7.45 % on cumulative gap for the financial year. The details of carrying cost furnished in Annexure-BPF4-GAP.

4.10 Non-Tariff Income

The licensee has relied on the approved Non-Tariff Income for the FY 2023-24 and done the projections of the Non-Tariff Income for the balance years of the control period. The projection of NTI for the entire control period furnished in the following tab

Table 50: Non –Tariff Income (In ₹ Crs)

Particulars	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Projected Non-Tariff Income	188.25	200.82	213.35	225.33

5. Revenue and Current Year GAP

5.1 Revenue at Existing Tariffs

The licensee has estimated the revenue from sale of power considering the sales projected for the balance four years of the control period FY 2024-25 to FY 2027-28 . The actual ABR for EHT, HT and LT for the FY 2022-23 with impact due to allowance of 25paise rebate per unit to Railway Traction category with a net 5paise impact in EHT and revision of tariff for Allied Agro Industrial activities, etc with a net impact of 8paise per unit in HT has been considered for projecting the revenue for the control period. The projected total revenue based on the existing ABR for the entire control period are provided in Form –BPC2.

5.2 Revenue Requirement Projection and GAP

As per the Tariff Regulations, the ARR needs to be worked out for Wheeling and Retail Supply business separately. However, such segregation requires expenses separately for Wires and Retail Supply business. In addition, the O&M expenditure also needs to be segregated separately. At this point of time, TPNODL has not segregated the same. Further, even the Hon'ble Commission has approved the expenditure under various heads for both the businesses together and has approved the segregation under pre-defined ratio.

In view of the same, the licensee is placing before the Hon'ble Commission the revenue requirement for the combined business i.e Wheeling and Retail Supply as such for the entire control period. However, in this submission, for the purpose of working out the Wheeling Charges, we have segregated the expenditure on the basis of the ratios used by the Hon'ble Commission in the various tariff orders.

The projection of revenue requirement and the expected revenue projection along with the Deficit/Surplus year wise for the entire control period is given in the following table.

Table 51: Revenue Requirement Projection and GAP (In ₹ Crs)

Particulars	FY24 (Projected)	FY25 (Projected)	FY26 (Projected)	FY27 (Projected)	FY 28 (Projected)
Power Purchase Cost (A)					
Cost of Power	2,525.36	2,626.32	2,809.90	2,973.92	3,064.83
Transmission Charges	180.92	188.15	201.31	213.06	219.57
SLDC Charges	1.16	1.16	1.16	1.16	1.16
Total Power Purchase Cost	**2,707.44**	**2,815.64**	**3,012.37**	**3,188.14**	**3,285.56**
Distribution Cost (B)					
Employees cost	483.67	521.49	568.86	620.14	679.57
Repair & Maintenace Cost	257.19	276.31	295.65	316.35	338.49
Admnistrative & General Expenses	179.27	192.74	206.05	220.30	235.55
Bad & Doubtful Debt including rebate	37.17	39.63	42.98	46.08	47.99
Depreciation	67.22	106.75	125.71	138.56	152.19
Interest on loans	74.81	102.22	115.94	124.28	129.96
Interest on Security Deposits	59.12	64.88	71.12	77.81	84.79
Return on Equity	79.51	104.31	119.97	132.73	144.87
Tax on Return on Equity	26.74	35.09	40.35	44.65	48.73
Total Distribution Cost	**1,264.71**	**1,443.41**	**1,586.63**	**1,720.90**	**1,862.14**
Special Appropriation (C)					
Carrying Cost @ 7.45%	5.17	15.88	16.72	15.27	16.90
Total Special Appropriation	5.17	15.88	16.72	15.27	16.90
Total cost (A+B+C)	3,977.32	4,274.93	4,615.73	4,924.31	5,164.60
Less: Miscellaneous Receipt	154.99	188.25	200.82	213.35	225.33
Total Revenue Requirement	3,822.33	4,086.68	4,414.91	4,710.95	4,939.27
Revenue from Tariffs (at Existing Rate)	3,717.23	3,962.69	4,297.69	4,607.96	4,798.54
(Deficit)/ Surplus	**(105.10)**	**(123.99)**	**(117.22)**	**(103.00)**	**(140.72)**

6. Performance of TPNODL in First Two Years of Operation- Initiatives Undertaken

In compliance to the vesting order of Hon'ble Commission, TPNODL started operation with effect from 1.4.2021. The overview of the network position furnished are depicted in the following table:

Table 52: Overview of the Network Position

Particulars	As on 31.03.21	As on 31.03.22	As on 31.03.23	Growth (Nos.) w.r.t. takeover	Growth (%)
No. of 33/11kV Sub-station (Nos.)	217	236	243	26	**11.98%**
Power Transformers (Nos./ MVA)	488/2211	524/2419	550/2615	62/404	**12.70%/18.27%**
Distribution Transformers (Nos./ MVA)	70429/2583	72323/2657	74726/2786	4297/203	**6.1%/7.9%**
33KV Line (CKT Km.)	2,868	2,895	3,024	156	**5.44%**
11KV Line (CKT Km.)	37,069	37,591	40,188	3119	**8.41%**
LT Line (CKT Km.)	66,300	66,672	67,486	1186	**1.79%**
No. of Consumers:					
EHT	36	37	41	5	**13.89%**
HT	557	614	659	102	**18.31%**
LT	20,07,540	20,88,432	2040888*	33348	**1.66%**
TOTAL	**20,08,133**	**20,89,083**	2041588	33455	**1.67%**
Sales :					
Input (MU)	4941	5327	6473	1532	**31.01%**
Sales (MU)	3922	4347	5410	1488	**37.94%**
Number of Employees	2158	2585	3025	867	**40.18%**

76,346 non-existing consumers as per site verification have been blocked from active directory of billing system in FY 23

The performance parameters of the licensee during two years of operation given in the following table

Table 53: Performance Parameters: AT&C Loss Achievement

Key Business Parameters (Overall)	FY.2020-21 (at Takeover) A	OERC Approved Target for FY 21-22 B	FY.2021-22 (Actual) C	Variance w.r.t. OERC Target D=C-B	OERC Approved Target for FY 22-23 E	FY.2022-23 (Actual) F	Variance w.r.t. OERC Target G=F-E
INPUT (MU)	4941.19	5880	5327.04	-552.96	6020	6473.32	453.32
SALES (MU)							
EHT	1424.98	1696.49	1676.03	-20.47	1680.00	2651.93	971.93
HT	388.87	415.60	503.27	87.67	500.00	625.42	125.42
LT	2107.78	2688.93	2167.71	-521.22	2735.30	2132.70	-602.59
Total	**3921.63**	**4801.02**	**4347.00**	**-454.02**	**4915.30**	**5410.05**	**494.75**
SALES (₹ Crs)							
EHT	920.84	1061.94	1112.38	50.44	1099.48	1648.37	548.89
HT	252.38	259.87	352.45	92.58	328.77	427.95	99.18
LT	952.27	1223.80	1095.31	-128.49	1272.78	1127.59	-145.20
Total	**2125.49**	**2545.61**	**2560.14**	**14.53**	**2701.04**	**3203.91**	**502.87**
COLLECTION (₹ Crs)							
EHT	913.10	1051.32	1120.48	69.16	1088.49	1721.61	633.12
HT	266.60	257.27	370.35	113.08	325.48	451.84	126.36
LT	824.29	1211.56	920.83	-290.73	1260.05	1224.48	-35.57
Total	**2003.99**	**2520.15**	**2411.66**	**-108.49**	**2674.03**	**3397.92**	**723.89**
Distribution Loss %	20.63%	18.35%	18.40%	0.05%	18.35%	16.43%	-1.92%
Collection Efficiency %	94.28%	99.00%	94.20%	-4.80%	99.00%	106.06%	7.06%
AT & C LOSS %	**25.17%**	**19.17%**	**23.13%**	**3.96%**	**19.17%**	**11.36%**	**-7.81%**
Realization Per Unit (₹/kWh)	4.06	4.29	4.53	0.24	4.44	5.25	0.81

Both T&D Loss and AT&C Loss reduced by 1.92% and 7.81 % respectively in FY 2022-23

Development of distribution infrastructure for improving reliability of supply needs proper planning, designing& engineering and smooth operation and condition based maintenance.

After take over, TPNODL did a comprehensive study of the entire network. Entire HT network of TPNODL (33 & 11KV) is now 100% documented in terms of single line diagram (SLD). These SLD were prepared through a focused drive for more than 6 months where in network data was captured through the closed coordination with JE/SDOs/ Lineman. The entire base network of TPNODL covering 100% 33KV network, 11KV network, PSS and Distribution transformers has been modelled in Cyme Dist software. Load flow analysis of the entire network is done and the abnormalities such as under-voltage, overload portions identified. All the required under-voltage and overload feeder mitigation schemes prepared basing on the load flow analysis. This is then validated with the field teams-prioritizing the works and taken up in CAPEX
The status of network planning is tabulated below:

Table 54: Status of Network Planning

Circle	Agency for planning	Status as on Date	Remark
Balasore	PRDC	Completed	1) 33 KV and 11 kV Network modeling completed on the SLD basis.
Jajpur	TPDDL	completed	1) 33 KV and 11kV Network modeling and Analysis completed 100% on Geo reference basis.
Bhadrak	In-house by NEG team	Completed	1) 33 KV and 11 kV network modeling 100 % completed on the SLD basis.
Baripada	In-house by NEG team	Completed	1) 33 KV and 11 kV network modeling 100 % completed on the SLD basis.
Keonjhar	In-house by NEG team	WIP	1) 33 kV Modelling completed and Analysis 100% on SLD basis.

The licensee is planning the capital investment prioritizing the network development requirements.
Currently most of 33 KV network is operating on the radial mode. As of today only 5% PSS have the double source. However TPNODL envisages to increase this feature of operation in phased manner as indicated in table below:

Table 55: TPNODL Plan for N-1 Reliability

TPNODL Plan for N-1 Reliability at 33 KV level					
Financial year		FY22	FY23	FY24	FY25
Nos of PSS with N-1 Source reliability	In Nos	11	30	48	56
	In %	4.74%	12.93%	20.69%	24.14%

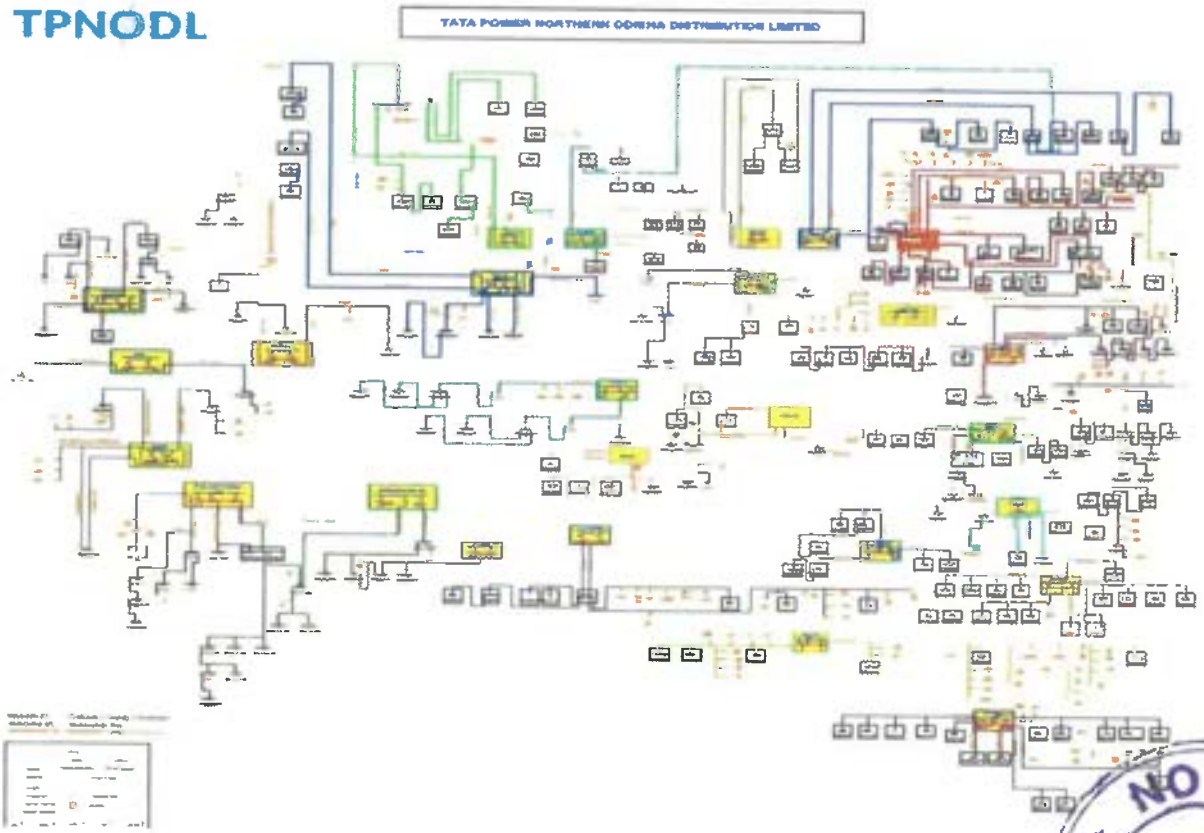
As underground network is the most reliable as compare to O/H lines, conversion from overhead to underground lines are proposed to provide the reliable power to the important/ critical load during the cyclone period as well as normal days. The recommendations from report of "Task force on Cyclone Resilient robust T&D infrastructure in coastal area" are considered while keeping provision for conversion to underground cables of critical 33 and 11 KV O/H lines feeding District Headquarters. Accordingly, detailed studies are undertaken for Balasore and Bhadrak city, within 20 Km from sea coast.

Initiatives undertaken by the licensee are furnished hereunder:

6.1 GIS Mapping

100% of 33KV, 11KV network and all PSS and GSS locations have been mapped on GIS.

33KV and 11KV Network modelling completed on SLD basis.



6.2. HT Loss Assessment

Circle –wise HT losses quantified as depicted in the following table

Table 56: Circle wise HT Loss Assessment

Circle	33 kV Network		11 kV Network	
	Length (Km)	Annual Loss (%)	Length (Km)	Annual Loss (%)
Balasore	739	3.58	7394	6.26
Jajpur	323	4.00	3125	3.95
Bhadrak	368	4.24	4533	4.66
Baripada	624	3.63	10508	5.16
Keonjhar	573	3.17	6500	3.8
TPNODL	**2653**	**3.79**	**32060**	**4.7**

6.3 Energy Audit Details

The energy audit is considered as the priority objective by the TPNODL. With the goal of accurately measuring energy consumption at various voltage levels, the TPNODL has made efforts to revive feeder metering at various voltage levels. To ensure accurate energy accounting, the TPNODL has taken initiatives to replace faulty and defective meters, install and revive PT and CT units for reliable voltage and current source for metering, and check metering connections while also rectifying unsafe wiring conditions.

The various key energy audit initiatives taken by the utility is as follows:

6.3.1 33kV Feeder Metering Status at the Energy Exchange Level of OPTCL GSS

The energy meters installed at the exchange points, i.e. 108 Nos. of 33 kV feeders (Including 33 kV dedicated consumers) emanating from the O.P.T.C.L. G.S.S., are metered and their energy is monthly accounted. To ensure 100% energy accounting at the exchange level, a dedicated metering rectification drive was undertaken to rectify any discrepancies in the metering process. This involved checking all the meters for wiring issues, meter connections, and replacing any old or defective meters.

Table 57: The status of 33 kV TPNODL Feeder metering at OPTCL GSS

Circle	TPNODL 33 kV Feeders (at OPTCL GSS)	33 kV Feeder with Meter	% Metering
Balasore	32	32	100%
Baripada	21	21	100%
Bhadrak	10	10	100%
Jajpur	17	17	100%
Keonjhar	28	28	100%
Total	108	108	100%

In addition to this 17 No of dedicated 33 kV Consumers are also metered. To maintain accurate energy accounting at the energy exchange level, a monthly energy audit is conducted by analyzing the raw data files of each meter and comparing them with OTPCL-installed energy meters. It is also ensured to have accurate energy accounting at the energy exchange points of utility so as to ensure timely payment of the Bulk Power Purchase Invoices without any delays due to discrepancies or disputes in energy consumption accounting at the energy exchange points of the utility.

6.3.2 33 kV and 11 kV Feeder metering

The utility has made significant efforts to revive the 33 kV and 11 kV feeder metering at the PSS level in order to accurately measure energy consumption for energy audit purposes. To achieve this, a dedicated project was undertaken, which included the replacement and installation of 650 feeder meters, installation/revival of 521 Line PTs and CTs to replace burnt and faulty metering units, shifting of meters to panels inside PSS, rectification of unsafe wiring and connections, and mapping of complete energy flow of feeders for audit purposes. The Initiatives taken to establish robust and accurate energy measurement infrastructure.

With the aforesaid initiatives, 100 % 11 kV Feeders and 95% of the 33 kV Incomer feeders are metered. This will facilitate the audit of the 11 kV and 33 kV feeders and identify the loss-making feeders to initiate loss reduction activities.

The Circle wise current status of metering is as follows

a) 11 kV Feeder metering status-100% 11 kV feeders are metered.

Table 58: 11 kV Feeders Metering Status

Circle	11 kV Feeders	Total Readable Feeder Meters	% Metering for Feeders
Balasore	220	220	100%
Baripada	182	182	100%
Bhadrak	127	127	100%
Jajpur	133	133	100%
Keonjhar	163	163	100%
Total	825	825	100%

The Bhadrak, Jajpur, and Keonjhar Circles now have 100% 33 kV feeder metering. 10 Nos. 33 kV feeders are currently undergoing PSS refurbishment, which is scheduled to be completed by July 2023.

6.3.3 AMR installation

The utility has started initiative for the AMR installation for all the 11 kV and 33 kV feeders, with an objective to capture the meter data remotely without manual intervention so that timely and accurate energy accounting can be carried out. In order to capture the feeder meters remotely we have started the initiative for the AMR installation for the 11 kV and 33 kV Feeders. Following is the progress for the AMR modem installation for the feeders

Table 59: Progress for the AMR modem installation

Circle	11 kV Feeders			33 kV PSS Feeders		
	Total 11 kV Feeders	Modem Installed	Completion %	Total 33kV Feeders	Modems Installed	Completion %
Balasore	222	145	65%	67	41	61%
Baripada	190	132	69%	53	27	51%
Bhadrak	127	85	67%	35	33	94%
Jajpur	127	124	98%	41	22	54%
Keonjhar	159	159	100%	47	13	28%
Total	825	645	78%	243	136	56%

The installation of AMR modems has been completed for 78% of the 11 kV feeders and 56% of the 33 kV feeders. However, Jajpur Circle have achieved 100% AMR installation for their 11 kV feeders.

6.3.4 Feeder wise Consumer Mapping

The utility has taken an important step towards feeder-wise consumer mapping to audit the losses of the feeders. As a part of this initiative, the mapping of 33 kV and 11 kV feeder-wise consumers has been completed for around 20 lakh consumers, including both HT and LT consumers. The mapping is continuously updated in coordination with the respective circle and divisional managers. Subsequently, the consumer mapping is correlated with their metering and billing data to calculate the feeder-wise Transmission & Distribution (T&D) and Aggregate Technical & Commercial (AT&C) losses. This initiative will help in identifying the high loss-making feeders and taking corrective actions to reduce the losses.

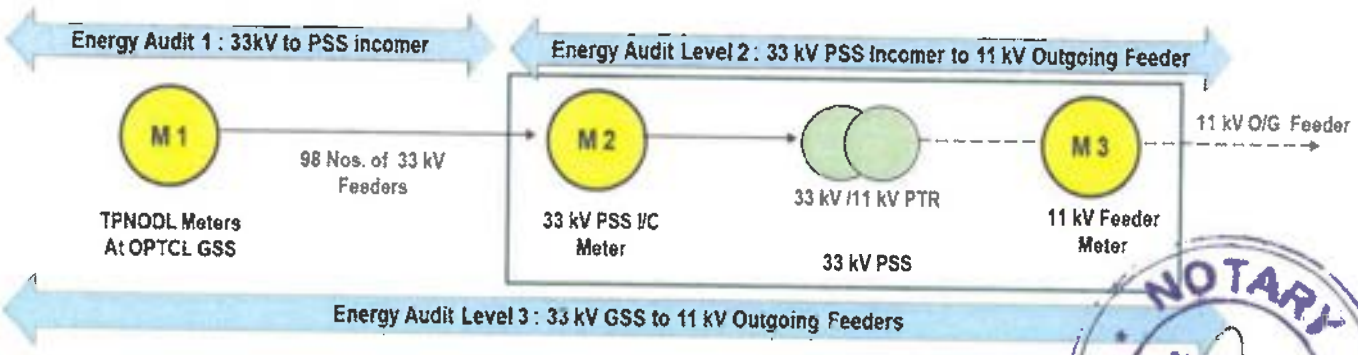
6.3.5 Energy Audit of the 33 kV Feeder Tree (From the 33 kV GSS Level to 11 kV energy flow)

The utility has achieved 100% metering performance for the 11kV and 33 kV voltage level by taking the aforementioned initiatives for feeder metering revival. As per the Bureau of Energy Efficiency (BEE) directives, energy loss is calculated at various levels of the energy system. Therefore, energy audits have been completed for the 91 Nos. of 33 kV feeder trees (excluding dedicated feeders) at various levels in the utility's service area.

a) **Energy Audit Level 1:** Energy audit was carried out for all 91 Nos. of 33 kV TPNODL feeders emanating from the OPTCL GSS, i.e., computation of the 33-kV line loss up to the PSS level.

b) **Energy Audit Level 2:** Energy audit was carried out for 33 kV PSS (236 Nos.), i.e., computation of the energy loss between 33 kV PSS incomer to 11 kV outgoing feeders.

c) **Energy Audit Level 3:** Energy Audit was carried out between the 33 kV TPNODL feeders (91 Nos.) emanating from GSS to the 11 kV Feeders (817 Nos.) falling under them i.e. computation of the energy loss between 33 kV GSS energy flow to 11 kV Outgoing feeders



The sample audit is as mentioned below. The details of all the 33 kV feeders and the PSS is attached as annexure:

Table 60: Energy Audit Level 1: 33 kV Feeder to the 33 kV PSS incomer

SL NO	33 KV FEEDER NAME	GSS INPUT	PSS / 33 KV CONSUMER	PSS IC / 33 KV CONSUMER (MU)	TOTAL PSS IC / 33 KV CONSUMER (MU)	% LOSS GSS TO PSS IC (C-E)
A	B	C	D	E	F	G
1	JARKA	4.5680	JARKA	2.3970	4.5020	1.44%
			NARSINGHPUR	0.6870		
			NEULPUR	1.3910		
			33 KV CONSUMER	0.0270		

Table 61: Energy Audit Level 2: 33 kV PSS incomer to 11 kV Outgoing Feeders

PSS / 33 KV CONSUMER	PSS IC / 33 KV CONSUMER (MU)	TOTAL PSS IC / 33 KV CONSUMER (MU)	% LOSS GSS TO PSS IC (C-E)	11 KV FEEDER NAME	11 KV FEEDER (MU)	TOTAL 11 KV FEEDER (MU)	PSS LOSS (E-J)	%PSS LOSS
D	E	F	G	H	I	J	K	L
JARKA	2.3970	4.5020	1.44%	DHARMASALA	1.1140	2.3851	0.0119	0.50%
				NAKPOLE	0.5175			
				KAEMA	0.7536			
NARSINGHPUR	0.6870			NALAKULA	0.1696	0.6822	0.0048	0.70%
				KUNDAPATANA	0.2084			
				KOTAPUR	0.3042			
NEULPUR	1.3910			CHANDIKHOL	0.6876	1.3796	0.0114	0.82%
				NEULPUR	0.6921			
				SUNDARIA	0.0000			
33 KV CONSUMER	0.0270							

Table 62: Energy Audit Level 3: 33 kV GSS to 11 kV Outgoing Feeders

SL NO	33 KV FEEDER NAME	GSS INPUT	PSS / 33 KV CONSUMER	11 KV FEEDER NAME	11 KV FEEDER (MU)	TOTAL 11 KV FEEDER (MU)	GSS TO 11 KV FEEDER LOSS (C-J)	% GSS TO 11 KV FEEDER LOSS
A	B	C	D	H	I	J	M	N
1	JARKA	4.5680	JARKA	DHARMASALA	1.1140	2.3851	0.0941	2.06%
				NAKPOLE	0.5175			
				KAEMA	0.7536			
			NARSINGHPUR	NALAKULA	0.1696	0.6822		
				KUNDAPATANA	0.2084			
				KOTAPUR	0.3042			
			NEULPUR	CHANDIKHOL	0.6876	1.3796		
				NEULPUR	0.6921			
				SUNDARIA	0.0000			
			33 KV CONSUMER					

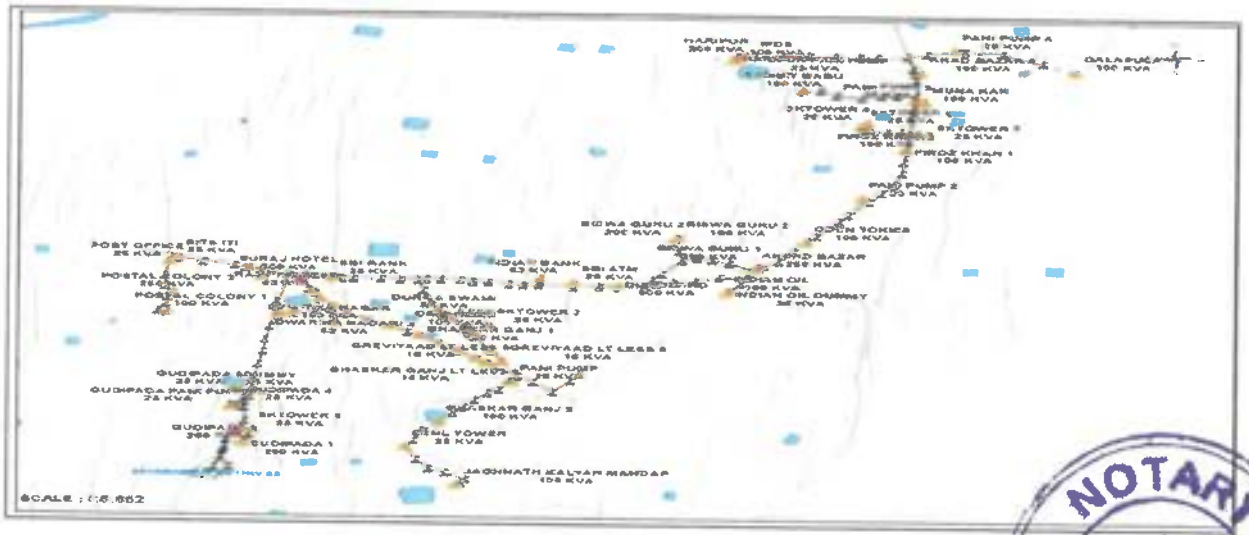
6.3.6 Enforcement activities integrated with Energy audit Data

The energy consumption data for each feeder is compared with the billed units of 1-Ph, 3Ph, and 11 kV consumers that are mapped to those feeders. The data is shared with the with the enforcement team to initiate the enforcement activities for detection of any possible electricity theft so as to mitigate the energy pilferage across the utility. Additionally, the energy audit team checks the 11 kV meters, P.T., and C.T. connections in coordination with MRT to validate the exact multiplying factors. These initiatives have established a framework for systematic energy audit.

6.3.7 Energy Audit based on the GIS mapped feeder

The GIS network mapping is utilized for the energy audit purpose. The project for the feeder and consumer mapping in the GIS has been started for the Balasore Circle. Wherever feeder and pole wise consumer has been mapped the data is extracted by the energy audit team. The team has started installation of smart meters on those Distribution transformers so that DT wise energy audit can be carried out. In line with this one 11 kV feeder "Sahedevkuntha" is completely mapped GIS and the data is used for the systematic energy audit purpose. The feeder has 58 Nos. of 3 Phase DT and 14 No of Single-phase DTs. All the 3 Phase DTs are metered and out of which 29 Nos. are smart meters. We have started auditing the DTs.so as to calculate the DT wise losses. In future it is planned to carry out such audits for the Balasore and Jajpur Circle wherever 11 kV feeder is under GIS survey.

11 kV "Sahedevkuntha" feeder from "Sahedevkuntha PSS, Balasore"



The above initiatives have helped to establish a sustainable framework for energy audit activities within the utility. This framework allows for the systematic accounting of energy consumption at each strategic level so that loss-making areas/feeders can be identified for carrying out loss mitigation activities, thus improving the overall efficiency across the utility.

6.4 Mission 100: Project Raksha 2.0 - DTR Maintenance

Distribution Transformer (DTR) is one of the most vital power delivery assets & any failure of the same results into loss of revenue on account of unserved energy, impacting the reliability as well as customer satisfaction and further adding towards Operational Expenditure on account of repair/replacement.

The record of last 3 to 4 months indicates alarming trend of DT failure. The increased failure rate of DTRs results in large burden on our Transformer Repair management cycle involving in-house as well as external BA workshops. The analysis of failed DTRs also indicate requirement of urgent attention on few vital aspects of DTR maintenance such as Oil level, Breather, LA s, Earthing and LT Protection.

While the DTR maintenance activities are picking up from month of October 22, we need to have a focused approach on completing the Maintenance as well as installation of LT Protection devices of high capacity DTRs mainly 100 kVA and above in Urban and Industrial areas.With this specific requirement in view, we are launching **"MISSION 100: PROJECT RAKSHA 2.0"** with an objective to complete maintenance activities of 20 NOS. of DTRs in each Section every month till March 2023. This would result in completing 100 Nos DTRs by each section in balance 5 months of the financial year.

As on 31st March'23, DTR Maintenance (63KVA & above) of 11,096 DTRs has been completed out of 15,000 DTRs, achieved approx. 73% of DTRs (63KVA & above)

The Overall scope and coverage of DTRs under MISSION 100: PROJECT RAKSHA 2.0 is given in table 1 below:

Table 63: Scope of Activities under MISSION 100: PROJECT RAKSHA 2.0

Sr. No.	DT Rating	Scope of Activities		LT Protection
		Maintenance Activities	Installation of LT Protection Devices	
1	63 kVA	100%	(Urban & Industrial)	KitKat Fuse
2	More than 63 kV up to & less than 250 kVA	100%	(Urban & Industrial)	MCCB & KitKat Fuse
3	250 kVA & Above up to 1 MVA	100%	100 %	ACBs

The above said project will be planned thru SAP and shall be executed by AMC teams under supervision of TPNODL Lineman /AMC Supervisors ensuring 100% safety compliance.

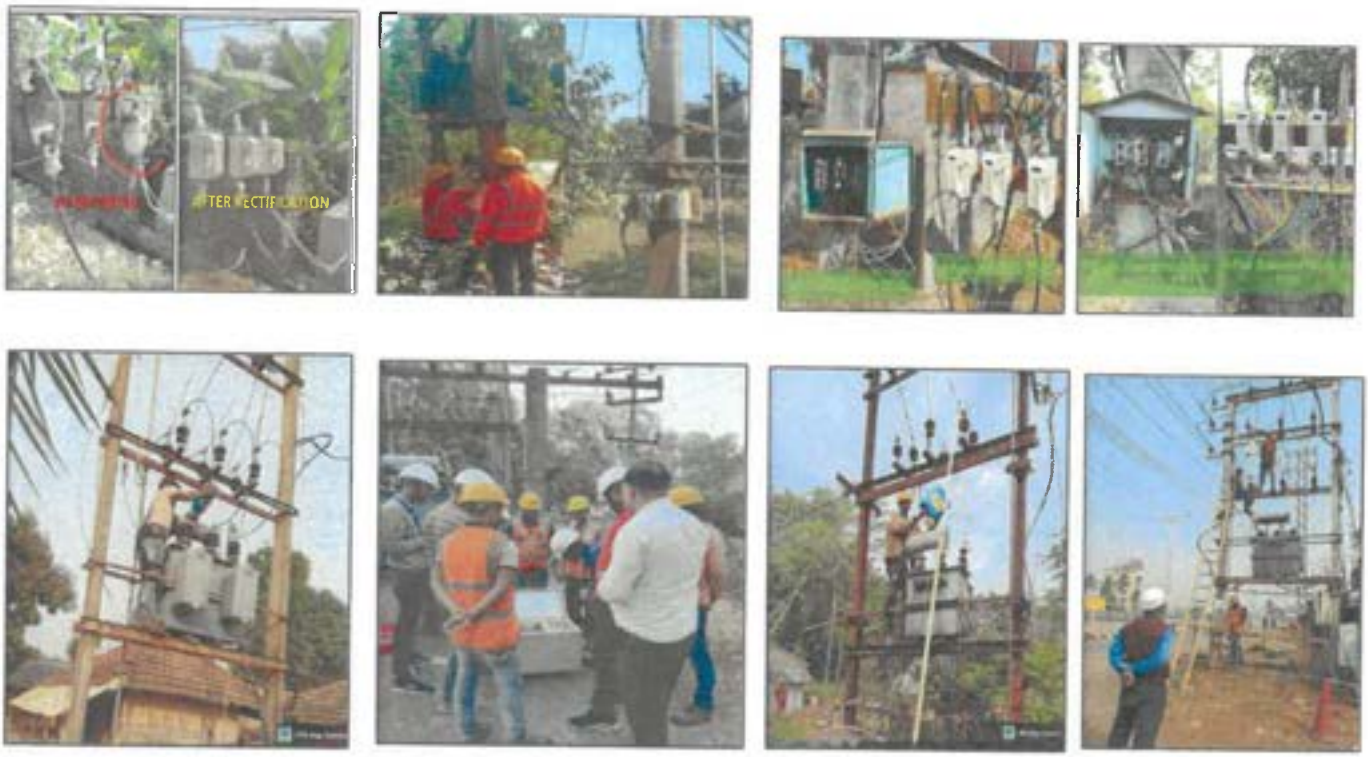
While COS and MPG teams will be helping in planning and coordinating activities, section teams are expected to ensure necessary reservations of materials through SAP. Details of activities to be undertaken in the Project Raksha 2.0 are given below:

Table 64: Details of Activities under MISSION 100: PROJECT RAKSHA 2.0

Sl. No.	Activity	Work Description for (DTs > 100KVA & 63 KVA)
1	Installation of LT Protection Devices	Providing LT Protection devices such as Kit Kat Fuses, MCCBs or ACBs based on the rating of DTR as per Table 1
2	DTR Oil Top – Up	Topping up of Oil in all the DTs (as per SOP attached)
3	Breather Replacement	Silica Gel &Breather Replacement / New Installation.
4	Socket Replacement	Judiciously cut off old sockets & crimp newer sockets with proper rating. (Only Crimping Tools to be used)

5	HT Fuse Maintenance	Installation of Proper Rating of HT Fuses & Usage of emery sheet to abrade the Horn Gaps & remove the metallic residue.
6	Tree Trimming	Tree trimming / vegetation removal drive for all Substations
7	Zero Oil Leakage	Arresting of Oil Leakages – washer / Studs / gasket replacement, Tightness check of all the parts – Drain valve, Inspection Window, Bushing, etc.
8	A/B Switch maintenance/ repair	Any repair related to maintenance / repairing of DTR A/B switch to be carried out
9	Earthing Installation	Earthing of DSS to be initiated or repairing of older earthing

Annexure-1: Description of Activities to be carried out During DTR Maintenance



6.5 Mega Block Initiatives

Long 8 hours outage involving 11KV & 33KV team, Project, AMC for effective maintenance in a single outage with a Prior announcement to all the affected areas & Information to DC, Local MLA, Industries etc. A holistic approach of Maintenance including all type of repair/replacement of vulnerable network elements, installation of LT protection

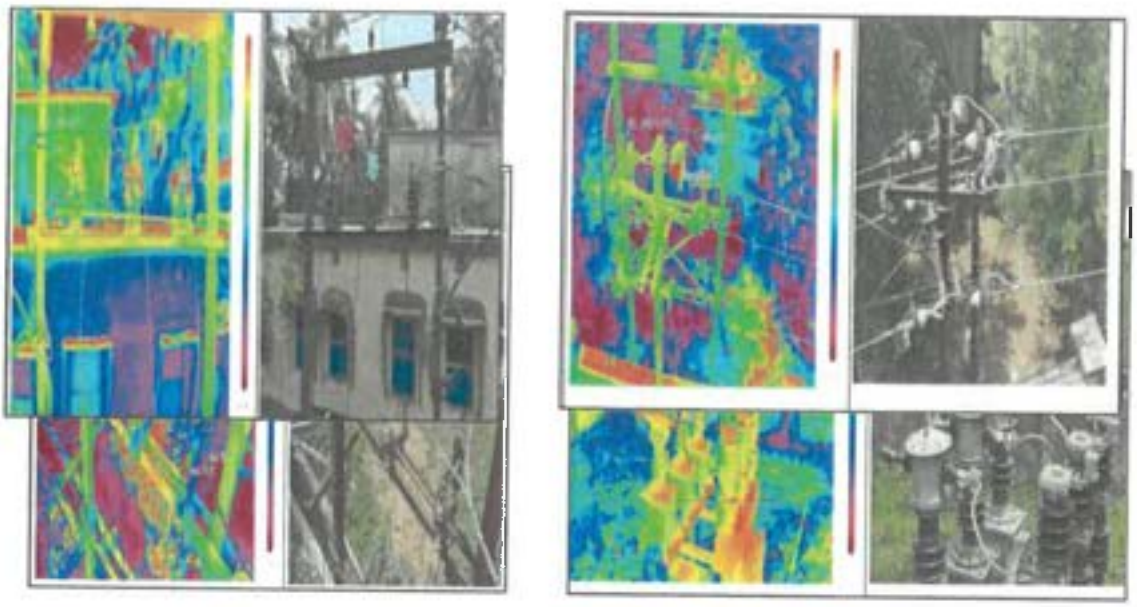
to reduce hand trips along with Installation of "Bird spikes" at various locations prone to bird faults like DP structure etc.






6.6 Drone Driven Feeder Maintenance

This drone driven feeder maintenance initiatives were taken up in 2 respect. First the aerial survey of Lines & network to capture vulnerable locations in feeders in terms of damaged/broken insulators, cross arms, jumpers, sagging, tree infringement etc. & the same methodology is particularly very useful for the network where the feeder is running through deep forest, inaccessible rural areas like paddy filed, water logged areas etc. Based on the aerial survey maintenance works are initiated. Secondly, the usage of drone fitted with thermal sensing camera to capture the hotspot in the network & taking corrective actions there off. As on date, **TPNODL has completed Aerial Survey / Thermography of 41 nos. 11kV Feeders & covered approx. 1429 kms. Completed total 99 Nos. of Priority feeders (41 nos. through Drone & 58 nos. through hand – held) by March 23.**



6.7 PTR Health Indexing

163 No's PTR health card index is being prepared as per the testing conducted by STS Team. 163 Nos health card already made & rest 183Nos. health card will be completed by Dec'22. This project was initiated for Phasing out Sick PTR on the basis of THI (Transformer Health Indexing) formed & repair policy where more than 25years old PTR with more than 2times repaired would be diminished.

6.8 Project PTR Bonchao

PTR Overhauling on Site for the first time. Same was already completed for 45 No's of PTR & Target to complete another 30 No's by March-23. This has helped us enormously in reducing the PTR failure rate across the entire organization. We have achieved "Zero" PTR failure in Q-2 of FY 2022-23.

6.9 11KV Voltage Regulator

11KV voltage regulators are explored to improve the Voltage Level particularly for the feeders where very low voltage issues are reported. 2 Nos. of these Voltage Regulators were procured at initial phase for pilot installation, out of which:

- 1 No. was successfully installed at 11KV Dosinga Overhead feeder of Dhamara PSS at Bali Sahi location.

- The 2nd Voltage Regulator was installed and commissioned on 24th March'2023 at Pokhoria, under Jharadihi Feeder, ESO Bahalda, Rairangpur.

The installation has helped to improve the power quality, as the voltage at the receiving end is maintained constant amidst varying demand, increasing the longevity of all load equipment.

6.10 Satellite PSCC

In addition to main PSCC at Kalimata Mandir, Licensee has taken initiative to set up satellite PSCC at each divisions (Total 16 Nos.) to ensure safety of 11kV hand-trips taken for LT work as well as in view of faster response & communication between PSCC & filed crew to cater vast areas across TPNODL. Same was already set up at 12 divisions & others in progress.

6.11 Power Cable Fault Locator

TPNODL purchased the latest version of mobile Underground Power Cable Fault Locator system, deployed for cable testing, fault location, cable route tracing & identification activities of underground network for all critical & inaccessible underground cable sections across TPNODL Earlier there was no such Cable Fault Locator System resulting to very high down time for any cable fault and many cables sections are lying unattended/idle/faulty since more than 5+ years. This Fault locator system has enabled us to locate the cable fault with minimum possible timeline which in turn will help in faster restoration & reliability improvement. We have already attended around 40+ faulty cable sections of erstwhile NESCO period & all cable failures from here on will be attended immediately "As & when" faulty basis. Further, we have placed a rate contract with M/s

Raychem who is providing us Cable Jointing kits/Accessories along with repair services of all types' right from excavation to joint preparation.

Table 65: Cable Fault location Identification Status through Power Cable Fault Locator

Input Received	No of Calls Received	No of Calls Attended	Healthy	Joint Box Fault	Termination Fault	Others
Sub Transmission (33 kV)	36	30	10	4	16	
Distribution (11 KV)	41	21	13	1	7	
Projects	32	25	21	0	2	
QA/Stores	3	3	1	0	0	2
Cable Route tracing	4	4				
Total	116	83	45	5	25	2

6.12 Project 100% TREE FREE FEEDERS

Since the month of May-2022, the COS team have initiated an extensive tree trimming activities & we have received a huge support from the circle / division / section teams as well. In view of

maintaining a 2.5 metres distance from the 11KV Lines, a project named "100% TREE FREE FEEDER" was initiated by the COS team, wherein the Associate shall be ensuring & certifying each and every 11KV feeders to be vegetation free. All the Tree Free Feeders needs to be also re-validated by the Associate & due verification by the COS team is conducted to validate the claim. This initiative has not only reduced the transient faults in the network but also reduced the restoration time during Kalbaishakhi or any natural calamity. As on 31st March'2023, 657 Feeders out of 831 Feeders have been completely "100% Tree Free Feeders" i.e. 79% achievement.

6.13 Project SPARSH

A Project SPARSH is also being launched for touching every 3 phase and 1 phase consumer for resolution of their billing issues and ensuring collection of arrear amount along with current demand.

Table 66: Scope of Activities under Project SPARSH

Sr. No.	Consumer Segment	No's	Total Arrears (In Cr.)	Responsibility Centre
1	HT consumers with load > 70 kVA	211	5.81	KCG Client Manager
2	LT consumers with load > 70 kW	26	1.01	
3	HT consumers with load 20 to 70 kW	1010	9.48	Project Sparsh : Division
4	LT consumers with load 20 to 70 kW	925	7.22	
5	HT consumers with load 5 to 20 kW	559	1.26	
6	HT consumers with load <=5 kW	127	0.22	
7	LT consumers with load 5 to 20 kW	10978	31	
8	LT consumers with load <=5 kW	2896	3	
9	LT 1 Phase consumers with arrear > 25k	154454	984.82	Project Sparsh : Section
10	Govt (1 Phase only)	7696	68.87	
11	Govt (All except 1 Ph)	9991	14.25	Project Sudhaar
	Grand Total	**188873**	**1127.83**	

This Project Sparsh will have two sub initiatives: Sparsh for LT 3 Phase & Sparsh for 1 Phase. The project will be headed by Executive Engineers of all the Divisions and will be supported by Divisional Champions.

6.14 Project NISTHA

AT&C loss reduction is the key focus area for the TPNODL. In continuation to our efforts for building up the efficiencies and for reduction to AT&C loss, it is quite essential to identify and implement the initiatives which can have a significant impact for tapping the losses across the system.

Among various loss reduction initiatives, the focus on improving the "Billing & Collection Efficiency" are key areas that can significantly contribute to AT&C loss reduction. In line with this objective, it is observed that LT revenue constitute almost 45% of the total turnover of TPNODL but LT AT&C Losses are around 50% on an average across the Company. Also huge arrears have accumulated against LT consumers due to very poor customer reach (around 35%) for collection. Also in the past, due to lack of proper field governance, there has been numerous scenarios of provisional billing much of it is disputed due to issues of lack of proper metering and Billing. Consumers have rampantly started hooking, tampering and theft of energy. On analysis, the following scenarios emerge:

Table 67: Analysis Report of Project NISTHA

Customer	Meter	Billing	Collection	Reasons
Yes	No	No	No	• Unmetered • Defective meter • Theft of energy/ tampering
Yes	Yes	No	No	• Saubhagya meter not updated in system • System generated Provisional Billing not reaching customers • Poor Billing reach by meter readers
Yes	Yes	Yes	No	• Low collection reach • Disputed Provisional Billing, past disputes
No	No	Yes	No	• Ghost customers • Duplicate metering connections

All of these scenarios are causing severe leakages to the revenue of TPNODL and contributing to high AT&C losses. Therefore, in order to enhance the billing & collection efficiencies drastically the **Project NISTHA** is being launched as a **ONE STOP SOLUTION.**

Under this program, comprehensive outreach village wise Camps would be organised at every Sub Division where the following services will be provided to the consumers.

- Spot resolution of disputed bills.
- Spot registration of new connection.
- Spot replacement of defective meters
- Spot reading based bills and duplicate bill generation.
- Spot collection of arrear payments

- On spot Installments.
- Spot correction of consumer Data.

6.15 Project SUDHAAR

In order to ensure that all the Government buildings and establishments are properly metered and energy being accounted for, a mass drive **"Project Sudhaar"** is to be initiated across TPNODL in this month for checking all the government buildings and establishments. The drive is aimed to ascertain the metering and supply status of government connections and take corrective action accordingly to bring them into the billing net to improve billing efficiency as also to address the billing disputes, incorrect provisional billing to arrive at correct recoverable amount. Apart from this, it is also required to verify their connected load w.r.t to their sanctioned load.

6.16 Revamped Drive for "PROJECT KHOJ"

Since inception, Team-TPNODL is adopting focused approach in providing better services to its consumers. Various imitative like Model Gram Panchayat, separate agencies for Billing and Collection, Enhanced Customer Care are some testimony of our commitment towards enhanced service delivery.

With enhanced service, it is expected that revenue collection would also improve and billing database would be sanitized. It has been observed that there are still around 4 Lac consumers who are billed on provisional basis and still not paying the bill since long. This is adversely impacting our AT & C losses.

To overcome this enormous challenge, it has been decided to launch a special drive which will extend the activities of "Project Khoj" in the month of August so that such consumers can be brought under billing net and revenue can collected for this set of consumers. Following activities are envisaged during the special drive:

- Individual SC No. premise to be visited for determining whether such actually exists or not at site.
- Consumers actually found on site to be attempted for collection of pending energy dues (Min ₹ 500 from each SC Number). Collection to be done only through TPNODL collection app.

- In case consumer has not received the correct bill same to be got rectified and recovery to be pursued accordingly.

A dedicated War-Room will be operational to support and monitor the progress of project. Following will be the responsibilities of the war room

- Resolving issues related to functioning of Billing & Collection App.
- Billing to be tracked by War Room along with Division Leads after receipt of the photometer reading on WhatsApp.
- Instant Bill Generation by War Room along with Division Leads, wherever required.
- Providing centralized response related to New Connection, Billing, Collection, MMG & Bill Revision
- Circle/ Division/ Sub-division/ Section wise Data Collection & MIS.

6.17 4000+ Airtel Payments Bank Outlets for Payment of Electricity Bills

TPNODL has joined hands with Bharti Airtel (Airtel), India's premier communications solutions provider, to offer integrated bill payment solutions to its registered customer base of over 20 lakhs in a vast distribution area covering 27920 sq. km. in Northern Odisha serving a populace of approx. 97 lakhs.

With this pioneering partnership between power sector and telecom sector, TPNODL's customers can now pay their electricity bills conveniently at over 4000 banking points of Airtel Payments Banks, in North Odisha and avail 5% discount (3% for digital payment & 2% for payment within due date).

Inauguration Meeting during launching of Airtel Payment Bank

While the front end solutions will be managed through Airtel Payments Bank, the back end connectivity will be powered by integration of TPNODL IT systems with Airtel IQ, which is world's first network integrated Communication Platform as a Service (CPaaS) ecosystem that allows enterprise to embed voice, messaging (Text and WhatsApp), video in mobile/ web application. Through this integration, SMS & IVR communication would be sent to consumers on bill generation, before rebate date and before disconnection providing all bill details along with a link of locator for nearest Airtel Payments Bank outlets and a link for online payment.

This is yet another innovative initiative by TPNODL to provide consumers with a multitude of payment options closer to their homes. Earlier TPNODL has enabled electricity bill payment through various physical avenues like Mo Seva Kendra, CSC, Bharat Money Stores, along with digital payment options through BBPS, TPNODL Website, and My TATAPOWER App.

6.18 8000 Spice Money Outlets for Payment of Electricity Bills

TPNODL has joined hands with Spice Money, India's leading Rural Fintech, to offer integrated bill payment solutions to its registered consumer base of over 20 lakhs in a vast distribution area covering 27920 sq. km. in Northern Odisha serving a population of approx. 97 Lakhs.

With this pioneering partnership between power sector and Micro Financing sector, TPNODL's consumers can now pay their electricity bills conveniently at over 8000 outlets

of Spice Money, in the North Odisha and avail up to 5% discount (3% for digital payment within due date).

As India increasingly embracing digital ecosystem to empower consumers, this partnership will play an active role in furthering digital payments for electricity services as also to create a robust digital ecosystem. TPNODL continues to build on its host of services to consumers and this newly added Payments Avenue will further enhance customer experience.

Inauguration Meeting during launching of Spice Money Outlets

While the front end solution will be managed through Spice Money Outlets, the back end connectivity will be powered by integration of TPNODL IT system with Spice Money Back end system, through for a real time and safe payment avenue, one which will be well past regular banking hours and also available seven days a week. Availability, the payment cycle shall get shortened with this arrangement.

This is yet another initiative by TPNODL to provide consumers with a multitude of the payment options closer to their homes. Earlier TPNODL has enabled electricity bill payment through various physical avenues like Mo seva, CSC, Bharat Money Store, Airtel Payment Bank stores along with digital payment options through BBPS, TPNODL Website, and MY TATAPOWER App.

6.19 Online New Connection Processing for HT/EHT And 3 Phase Consumers (>5KW)

Team TPNODL has been rolling out various initiatives to provide better service delivery for the consumers. Release of new connection is an important milestone to onboard new consumers in TPNODL and provide the opportunity to delight him/her with our first time right service delivery. It is also noteworthy to mention that performance standards of OERC also needed to be strictly enforced for the release of new connection.

Over the last few months, various improvement initiatives has been rolled out including FG module on new connection for improving experience of new consumers. With this background, 'NO' new 3 phase (>5KW) connections of consumers will be released manually from any Section/Sub-Division/Division/Circle office. 100% new connection and load change cases to be processed through ONLINE NSC module of FG (for both 100% deposit scheme & 6% supervision scheme). All Attribute change cases, are to be processed by consumers through TPNODL web-site under "Consumer Login" section. MRT to release all new connection cases against Reference no. only through FG-NSC module.

In order to expedite the new connection process all documents pertaining to new service connection has to be scanned at the first receipt point and uploaded against the application in FG NSC module. Manual file movement and approvals to be stopped completely. During approvals the scanned images of documents are to be referred in the system only.

6.20 Launch of WhatsApp Interactive Service- Available On WhatsApp Number 7777004759

This step of TPNODL is towards keeping the customer at the center of all we do and aligned with our First Mission Statement of "Improve upon Customer Centricity". This will also help us in our journey towards Digitization.

The main feature of this service is:

- **Mobile No. / Email-id update**
- **No Power Supply Complaint Registration**
- **Complaint Status**
- **Billing Information**
- **Duplicate Bill PDF**
- **Reach out to us**

Consumers can simply send a "Hi / Hello" on WhatsApp number 7777004759 and can start the chat / Interactive online session from the comfort of their home /office or even while travelling without having to contact the call centre or the customer care centres or the TPNODL offices.

In a fast-paced, technology driven world, our objective of provide this service to our customers with the best-in-class experience, at their fingertips and hassle-free. We are confident that it will prove to be a great addition in enhancing our customers' experience.

6.21 Integration of the Commercial Complaint Management Process with Fluent-Grid System

The integration of "No Power Supply Complaints Management Process" is already done in FG system and the same was deployed with effect from 7th February 2022. This complaint management process is successfully operational and widely used by operation team for proper monitoring and resolution of the complaints.

In continuation to above, we are happy to announce about the Complete Integration of the Commercial Complaints Management Process in the Fluent Grid system. Now, all type of Metering, Billing and other Commercial Complaints can be lodged in FG system and can be processed systematically through this system.

The main benefits of this integrated Commercial Complaint handling process are:

- Intimation to the consumer about registration and resolution of complaints through system-generated SMS alerts.
- Automatic and SLA based complaint assignment to respective department.

- System-based automatic escalation notifications to concerned authorities in case of non-resolution of complaints within prescribed timelines.
- Re-opening of resolved complaints in case the consumer is not satisfied with the resolution.
- Automated report availability for monitoring and review.

The Customer Service Team, FG team and Commercial Team have already conducted Knowledge Sharing Sessions of this integrated process and more than 100 employees have already been trained. Similar sessions will also be arranged for left out team members.

All team members are advised to register all types of Commercial Complaints through FG System only and no Manual Complaints / requests should be processed. The complaints can be registered at all Customer Care Centers, Call Center, and Section Offices and by other officers who have the suitable rights of FG Grid. We expect wholehearted support and involvement of all the respective stake holders to make this successful. Suitable roles / rights have already been assigned to the team members of respective groups. This initiative is aligned with our Company's First Mission Statement "Improve upon Customer Centricity".

6.22 Meter Reading & Billing Group (MRB) - 1 Phase

- MBC Contract separation - Single Phase Billing & Collection/Recovery activity has been separated with deployment of different dedicated Outsourced agencies to carry out Billing & Collection/Recovery.
- OCR Based Meter Reading being introduced for error free meter reading. Integrated Mobile application will enable auto reading fetching through scanning of meter display leaving little scope of any wrong reading.
- Analyze the consumption data of each low Consumption cases to identify anomalies in consumption pattern. This helps in identification of faulty meters & Theft probability.
- MRU wise Billing for Slab adherence & better Customer Service. Each of the Binder area split in small blocks with pre-defined reading date range to maintain efficiency & regularity.

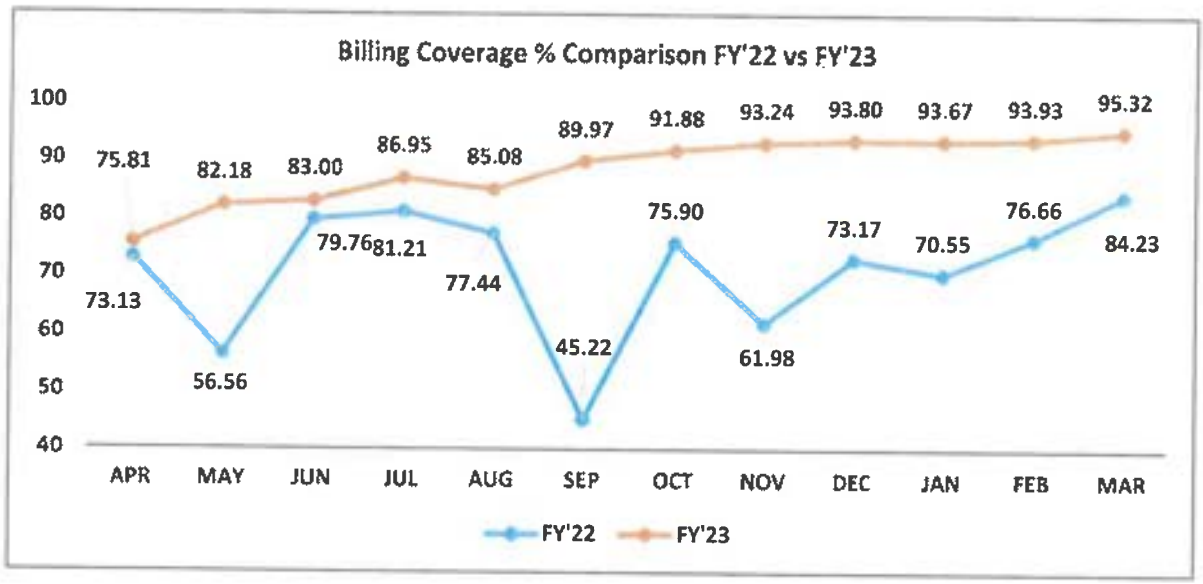


Figure 7: Billing Coverage Comparison FY22 Vs FY 23

6.23 Aerial Meter Reading for Lift Irrigation (LI) Consumers by using drone and BLE (Bluetooth Low Energy) meters.

TPNODL serves around 35K Lift irrigation (LI) consumers under Agriculture tariff category. Most of the consumers under this category are located deep inside the paddy fields. Locations are inaccessible, far away from roads and walking through the land is not possible. Installation of cellular modems to take remote reading for these consumers are neither feasible (due to low cellular network presence in rural agricultural land) nor economical (because of low tariff rate).

TPNDOL has already launched a program to take meter readings for the PLI connection using drones. As part of this project, 1500 Bluetooth enabled meters have already been installed for the PLI connections in TPNODL Area. The entire project is expected to be completed by 31st Mar 2023. The drone will automatically capture the meter readings and send the information to the backend system for generation of the energy bill. These connections will not require manual readings. As a result of geographical challenges associated with LI meters, this project will be a technological breakthrough in the timely capture of meter readings for LI connections. As a result, we will be able to provide timely and accurate bills to our consumers.

6.24 Initiative to build Safety Culture at TPNODL FY 2022-23

Safety is the core value of TPNODL. Senior leaders at TPNODL provide a strong and visible leadership to promote safety culture necessary for the systematic management of job safety at site. TPNODL has put in place the Health & Safety Policy, Our Value-SCALE, Safety Principles and the Safety Code of Conduct, which are followed by all employees always.

- Apex Leadership Team (ALT) meets every quarter on safety related issues and concerns and identify improvement areas.
- The Safety Apex Committee, chaired by the CEO reviews major safety initiatives and programs. CEO reviews the progress of the safety management system of circles. There is structured approach in form of circle safety committee to drive and implement safety across organisation.
- The senior leadership team communicates on safety in town hall meetings and by active participation in safety activities, safety trainings, workshops and through various R&R schemes. The SLT sets personal examples in day-to-day work by putting safety matters high on the agendaof meetings, conducting safety sessions during their visits to the operations/projects sites.
- All employees and business associates undergo safety induction trainings (including audio-visual), on first entry into the TPNODL to ensure that they are informed adequately about safety processes and instructions, as appropriate.
- Tata Power Skill Development Institute (TPSDI) conducts safety training program to meet the safety Capability of Business Associates employees.
- TPNODL has devised various Safety Reward & Recognition (R&R) mechanisms in order to encourage positive safety behaviors across various levels.
- 100% personal protective equipment provided to all business associate employees and TPNODL employees.
- Consequence Management Policy is in place to guide employees to prevent unsafe act and violation, which may lead to untoward incidents. Appropriate actions are taken for the safety violations done by employees.
- Regular safety communication is done to all in every meeting in TPNODL commences with a Safety Instruction.
- Safety themes are decided every month and communicated to create safety campaign across organization.
- Mass awareness on fire and safety for employees and stakeholders is done during the celebration of National Electrical Safety Week and Fire Week across the

organization. Employees and their families are involved in various activities during the week.

- As per the safety policy, all employees are empowered to stop any unsafe work. These employees are also rewarded from time to time.
- A system generated Daily Incident Report and reaches the mail box of senior leaders and departmental heads. This gives details of the incidents across the organization occurring during the day.
- All incidents are investigated using standard analyses checklists to establish the root causes. For high potential/high severity incidents and near misses, a CFT is formed to investigate causes and identify suitable corrective and preventive actions to avoid recurrence. All incidents are reported and investigated to find out the root cause and corrective action and preventive action made to prevent reoccurrence.
- All incident learnings sharing with all employees and BA employees.
- We established practice yard with class room porta cabin at division level to develop skill of BA employees.
- Public safety awareness created through mobile vehicle demonstration, display of hoarding at Gram panchayat level, posting videos and messages through social media.
- Behavioural based safety training for TPNODL employees and BA employees conducted. SURAKSHA PARIVAR unique safety drive conducted for employees and their family members to build up safety culture all across the TPNODL.

6.24.1 Safety Training Centers/Yards

13 practice yards with porta cabins installed in all across 16 divisions in 16 division TPSDI training center is installed at CED, Balasore for L1 safety training. Safety Training conducted for (Employees/BA/Public) during FY 22 and FY 23 are given below:

Table 68: Details of Safety Training Conducted in FY 2021-22

Sl. No.	Training Details	No. of Persons Covered
1	Awareness on Felt Leadership	119
2	Safety Marshel "Train the Trainers"	575
4	Safety Induction (New Joining) officers	172
5	"Train the trainer" programme for engineers	79

6	Safety induction for new BA employees 11 and 33 kV AMC, MMG	8904
7	Safety training for 6% BA employees	144
8	TPSDI training attended	755
	Grand Total	**10748**

Table 69: Details of Safety Training Conducted in FY 2022-23

Sl. No.	Training Details	No. of BA Employees Covered
1	Fire safety training	2236
2	Safety Awareness Session	7758
3	Safety Induction Training	7893
4	Demonstration at site for Safety Zone Creation /Work at Height /PPEs/PTW	5622
5	Safety induction training to TPNODL new joined employee	672
6	Behavior Based Safety Training(TPNODL and BA employee)	5676
7	TPSDI training	1064
8	Handhold Practical demonstration training at practice yard and classroom training at porta cabin	2097
	Grand Total	**21683**

Initiatives are undertaken for the reduction of Electrical Accidents (Fatal/LTI etc.) for humans and animals

6.24.2 Step taken to reduce Electrical Accidents

- ✓ Innovative Pole climber Designed and trial completed for phase-wise implementation
- ✓ Innovative Self-locking Spring Controlled clamp used to overcome the problem of carrying 6 no of discharge rods by two-wheeler.
- ✓ Vertical lifeline:-Provision for a vertical lifeline and fall arrester is implemented while working on tower erection.

- ✓ Installation of Cable height meter The Cable Height Meter is an electromagnetic frequency-controlled handheld meter for the measurement of cable sag, cable height, and overhead clearance.
- ✓ Audiovisual of full body harness anchoring and wearing a helmet. FBH equipped with LED to visualize of anchoring hooks and wearing a helmet. The red color LED will blink while wearing the FBH and fastening the waist strap.
- ✓ Surprise Night visit:-101 Nos of surprise night visits and alcohol detection tests by the line managers
- ✓ Transformer Oil top-up with SOP at sites to reduce loading, unloading, and transportation hazard
- ✓ LTDB Box:-Installation of 118 LTDB Box for LT fuse protection in DTR
- ✓ Regular Surprise Safety Audits of 768 nos. were conducted, 94 batches of awareness sessions were organized and 1625 employees participated.

6.24.3 Process Development for Safety

- ✓ Job Safety Analysis -JSA prepared for all non-routine activities. Site specific JSA has been carried out at the site by Project Engineer /Section Manager and approved by immediate superior for all planned maintenance jobs. Every JSA must have the SLD showing the isolation points & discharge rod locations. Joint survey and risk assessment should be carried out by visiting the worksite by Operations, Projects & BA team.
- ✓ Safe zoning must be ensured before work on Electrical system of HT line and system where mandatory outage is required.
- ✓ SOP for all activities shall be reviewed to include learning, extensive awareness and monitored for its implementation.
- ✓ Work has been carried out after ensuring the control measures at site by the site supervisor as per SOP/SMP/WI/JSA. Anticipated hazards to be discussed in toolbox talk prior to start the work.
- ✓ No Supervision No Work concept to be ensured. Concerned officers shall monitor the activities of Site Supervisor deployed by the BA.

6.24.4 Training, capability development and competency development/Behavior intervention

- ✓ All the Project BA supervisors are trained on SOP preparation & reading of single line diagram (SLD). Workmen without undergoing Safety induction training is not allowed to work.
- ✓ Technical & safety competency mapping of BA supervisors to be re-assessed and training is provided in addition to training on Behavior safety. Competency mapping of Project BA supervisors is carried out with developmental plan.
- ✓ Behavioural improvement required. Extensive TBT had been conducted across the TPNODL to stop unsafe act by co-worker. BBS interventions through AKAR was implemented across TPNODL.
- ✓ Efficacy of individual Safety Commitment to be reemphasized through mass meetings at every section level.
- ✓ Test Before Touch – Reinforce this concept by behavioural interventions.
- ✓ Alcohol use by workmen during work had been checked using breathe analysers.
- ✓ Involvement of family members of workmen to ensure during safety discussions to reinforce safe practice adoption. In TPNODL 56 Suraksha pariwaar Session conducted.
- ✓ A total of 1541family members participated.

6.24.5 Public Awareness

- ✓ Consumer awareness drive had been taken up to make public aware of unsafe acts being done by workman and request public to report such unsafe acts through WhatsApp number.
- ✓ 43 public safety awareness rallies conducted in FY23.
- ✓ 165 electrical safety awareness training conducted at school and college level.
- ✓ Display of Public awareness video through LED van through all 5 circle in TPNODL.
- ✓ Sharing of whatsApp no to the public to report unsafe condition /act.
- ✓ Sharing of pamphlet and display electrical safety awareness video in rural areas.

6.25 IT & OT Technology Adoption

In the "Existing Challenges" section and "Outdated Technology" sub section OT technologies (SCADA and GIS) and IT system with Disaster Recovery Centre will gear up for technology adoption with security and back-up in phased manner for enhancing the efficiencies and effectiveness for improved services to the consumers. Various initiatives have been taken to establish IT and OT Technologies to drive the benefits as mentioned below:

6.25.1 Information Technology (IT) Landscape

Under IPDS scheme, M/s Fluent Grid has implemented CIS (Customer Information System) including meter reading and billing system and CRM system including New Connection Module, Meter management module, Fraud Management, Disconnection & Dismantling modules etc. Under IPDS, it was planned for selected consumers but to provide uniform services to all our consumers, we have enhanced the services for 100% consumers having advanced and efficient system to generate, deliver and collect the bill to the consumers. We have also implemented ERP Solution under SAP platform to make the enterprise level processes effective and efficient so that overall all the function could work through digital way using advanced technologies.

In addition to this, we have also introduced various other initiatives to provide the services on consumer's fingertip using various mobility solution and few key services are mentioned below:

- Mobile app (My Tata Power App) to provide one app solution from applying to new connection, billing & payment update and history, complaint registration etc.
- Interactive solution through whatapp
- SMS based intimation on various services
- Mobile app for collection
- Mobile app for Fuse Call Complaint Handling
- OCR Based bill generation etc.

Apart from this, TPNODL has started rolling out Smart Metering, HES and MDM system along with various mobility landscape. This is being scaled up and initiation prepaid solution for consumers linked with Mobile app & SMS to provide various updates for prepaid balance.

6.25.2 Key considerations for IT Landscape Transformation

- Development of On-premises data center for hosting various applications and creation of DR center for handling any eventualities.
- Bespoke Applications for digitalization of business processes.
- Mobile Applications for consumers and employees to stay connected all the time for faster action and response.
- Cyber security practices to protect the systems from any penetration and vulnerabilities.

Customer Service digital Platform for TPNODL, which is envisaged for consumers are mentioned below:

a) **Payment Gateway** – A centralized proprietary payment gateway is planned to be established which would seamlessly integrate with all collection touch points like website, mobile app, counters, partner agencies, mobile wallets into a single repository where verification and validation of payments would be done and would be posted to the billing system.

b) **TPNODL Website** – A new revamped website design for taking consumer Energy & Non energy Payments and provide all information of company new development and practices through this site. Consumer can apply new connections as well as any change in ownership. Encourage green initiatives wherein consumers can apply for Roof top solar connection through our website.

c) **E-Collection App** - It is the main platforms for collection of Energy & non-energy Payments and get integrated with all types of payments like cash, Credit/Debit card, internet banking, Wallets and UPI etc. Real-time Syncing with our Billing platform so that payment can accept on real time and deliver message to consumer through SMS.

d) **Mobile App - MY TATA POWER** – In the current digital world, people uses smart phone and to provide services on their mobile phone, consumer app has been developed and now will keep on adding various new features, integrating with various business system. This is the convenient and beneficial to consumer in the way of Check their Bill history, process their self-meter reading, payment history & raise their complaints.

e) **MMG 2.0** – Various field activities are carried out by our field team like installation of meter installation be it New Connection, meter replacement, the detail of capturing all

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information on the filed itself to provide real time update, tracking of workforce and faster services to consumers by updating the record system for correct billing.

f) **OCR enabled SBM Application** – To achieve the accurate reading and thereby billing, we introduce OCR (Optical Character Recognition) linked with our SBM applications to capture the reading through this tool to avoid any kind of manual error and provide satisfaction to consumer with proper bills.

g) **Mobile App for three phase meter reading** – It is very essential that capturing of any reading or data shall be attempted on first instant in the system and to obtain, we introduce the app for capturing reading in app itself from site which is further integrated with billing system to create the bill with proper reading.

h) **New Connections through MO BIDYUT** - New consumer up to 5KW can apply, track & raise complain in this portal. Real time shrinking available with our Billing application for smooth processing of new application.

i) **FCC App (Fuse Call complaint APP)** – Providing reliable electricity is the goal and to capture electricity failure complaints and assigning to our lineman, we introduce mobile app which will register complaints, assign complaints and close the complaints from field through app and intimation to consumer on electricity restoration etc.

j) **SURAKSHA KAVACH 2.0** – A modernized application designed for TPNODL employees for authorizing PTWs at 33kv and 11Kv feeder level has been launched.

k) **Reports & MIS on SAP HANA:** Reports and tracking the performance of various KPI, it is very important to capture the details of various business system and develop the performance score card of various activities, It is required to have a robust platform which can provide facilities to do so. So, SAP HANA is the platform which facilitates to run huge data with different practices of creating reports. In addition to this, it is also essential provide facilities for our employees to create interactives reports and e-KPI using Power BI and Azuure platform.

l) **Integrated Call center:** Call center is meant to provide solution to all queries/complaints/request from consumers which may include through call, mail and social media sites. Collating all channel to get the details from consumers and provide solution. We introduce integrated call center solution which will provide all service to consumers and auto work flow for resolution of complaints.

m) **E-Office Application:** All movements of incoming and outgoing communications to internal as well as external stakeholders are planned to be digitized for proper recording and management to have governance electronically.

n) **BIRD (Invoice Management)** – Bill Inward Recipient Desk is an application which will provide great convenience to our business associates while submission, approval and processing of vendors invoices online, check status of the invoice and track the same. This shall also help to engage out BA staff effectively as their facilities will be timely provided.

o) **SANGAM** – This is a portal for all the employees of TPNODL, where different information can be accessed along with all the repository of applications.

p) **Knowledge Management Portal:** This is the platform to capture and retrieving knowledge documents for enhancing the skill of the TPNODL team.

q) **BAMS Portal** – Services from business associates are being availed and to serve with all the guidelines and convenience to our Business Associates team, it is essential to have platform which will capture all the details of persons associated with us.

r) **BA PASS** - TPNODL Business associates can apply through this application for getting the permit to work to enhance the safety.

s) **SAMADHAN Calculator** – This application assist internal user for faster calculation in case of Bill Revision cases.

t) **Smart Metering:** It is essential to have a connect with customer on real time basis so that information to the consumer can be send timely. So, Smart metering is implemented which will create AMI to have postpaid and prepaid connection with multiple features which will further integrate with CIS/Mobile app to provide up to date information about electricity.

6.25.3 IT Assets and Services to TPNODL Employee

a) **EMAIL ID** - E-mail Ids has been created for pan TPNODL employees. All employees are having email system for faster and effective communication.

b) **Laptop & Desktop** – Laptop and desktop are being provided to the employees to carry out the work faster and engage with various business application to bring digitalization in organization and faster response to the consumers. **Printer & Scanner**– Printer is being provided in each office and concerned employees. Scanner will be used to digitize the received document and make a repository of the same. This digital movement of the paper will help for faster action and resolution.

6.25.4 Cyber Security

At today's condition Cyber Security is the major concern for every organization. To protect TPNODL data and secure each and every TPNODL IT asset and data center devices we have taken multiple steps. We have procured Antivirus for End User system and Servers in data center for protection against malicious virus attack. We are in process of implementing Web Application Firewall and Next generation firewall for protect and filtering cyber threats and virus attack. We are also planning for establishing SEIM and SOAR in our data Center.

6.25.5 Communication and Network Infra

- To make the application cyber secured and redundant connectivity we are connecting offices with IP/MPLS Connectivity.
- Nearby offices and major offices we are connecting with our own underground Optical Fiber better reliability and optimize the monthly cost of individual office internet.
- Switches & Routers: Network is being laid in office to get the system connected through Internet/ Intranet. Intranet is being created in offices to further connect with secured network and access to unwanted site is blocked to mitigate the cyber security risk.
- For better and ease connectivity, we install WiFi deices enabled with security at all major office connected with Central Controller.
- For redundancy of applications in case of any eventuality and business continuity, it is very essential to have DR center of each applications. It is proposed to implement DR center at other seismic zone in Odisha.

6.26 Operation Technology

6.26.1 GIS Implementation and Consumer Indexing

GIS is foundational Technology for electric utility whose assets are spread geographically which covers approx. 27,500 sq. km area for TPNODL. It will help us to have a full control on the assets and further to run various applications on the GIS data which in turn, enable utility to effectively maintain and restore the electricity supply. GIS plays a key role in achieving the committed targets and moreover bring business excellence and consumer delight. We have implemented GIS software and Application for pan TPNODL area. We are at the verge of completing our one Pilot division i.e., BED Division of Balasore Circle which cover 70,000 consumers spread over 110 sq km area

- Through Consumer Indexing GIS will provide vital inputs towards carrying out Energy audit, and it will significantly help to contribute in TPNODL target for reduction of AT&C loss.
- GIS started developing its integration process with SCADA.
- Integration with NEG team initiated for technical analysis on base of connectivity due to Consumer Indexing door-to-door visit GIS will also help in identifying suspected Consumers which will later in co-ordination with Enforcement team will help to book load.
- In FY 22-23, we have processed for covering 2 Circle for Assets, Network and consumer indexing and in FY23-24, it is proposed to carry out the activities for balance 3 circles for data creation to have a full fledge GIS which will be integrated with Network planning, commercial activities, SCADA/ADMS etc.

6.26.2 SCADA & ADMS Implementation

- OpCenEx has been set up with the best of operation technology-SCADA to monitor and control the 33KV/11KV network operations through PSS and GSS.
- In FY 23-24, we plan to initiate for implementation of Advanced Distribution Management System (ADMS), which will be monitoring up to consumers outages through its integration with GIS and CRM and connected with SCADA which is in implementation stage.
- ADMS will initiate the remedial action to restore the supply and trigger to network planner to strengthen the areas to improve reliability and quality of power.

6.27 HR Initiatives

In order to successfully manage the workforce of around 2800 employees on rolls and about 4000 business associates' employees, appropriate technology must be implemented to manage recruitment, payroll administration, statutory compliances, trust management, reward & recognition etc. SAP HR Module apart from few other online platforms like Legatrix (to monitor compliances) and employee portal for internal communication, performance management system has been implemented and few other application are under process for deployment.

Customer care service center, OpCenEx (Operational Centre of Excellence), CmCenEX (Commercial Centre of Excellence), PSC Team have been established to bring the desired excellence in network operation and customer service. The latest addition is the Centre for Maintenance and Engineering at Udyog Bhawan which will further contribute to provide better services.

Continuous up-gradation of competency is the key success factor in this continuously changing business environment and technological revolution. Same is also applicable to TPNODL considering changes in business philosophy, new technology adoption and changing organizational structure.

Competency mapping shall be conducted across all positions and training program has been designed and delivered through in-house development of training centre. The Executives are being made to visit Tata Power (Delhi or Mumbai) under our Training Program to learn about the best practices which can be implemented at TPNODL. Use of online e-learning training module is being encouraged across all category of employees to develop additional skill sets through self-learning modules. Online e-learning module initially covers mostly Behavioural training, Safety, Ethics etc while technical training are being imparted through training centres.

Considering diverse employee demography, capability development strategy at TPNODL has been customized keeping in mind changing business demands. Various types of training is being finalized based on leadership discussions.

During last one year, TPNODL has continuously taken steps not only to improve the knowledge of employees but also to update them with the latest technologies by

imparting training which is highly appreciated by them. The training programmes conducted during this period are given below:

- Training provided to senior officers for Team building intervention to develop common vision, alignment, collaboration & bonhomie as a cohesive team.
- Induction and on-boarding programme conducted for new joinees for driving pride and belongingness and acquainting them new culture of Tata Group and its policies.
- Positivity and motivation programme conducted to inculcate positivity, team building, bonhomie, motivation among employees.
- A workshop on customer service excellence and customer first attitude was conducted for all employees in customer facing roles.
- Success stories, best practices sharing sessions at Division/Circle level conducted for the employees working in Operations/Commercial functions.
- To establish a blended approach towards employees learning & development, e-learning platform i.e. Gyankosh launched to acquire knowledge on technical modules in distribution, commercial, finance, IT and other business requirements at any time at anywhere.
- CEO-Townhalls-Leadership Connect Session, Jan-Sampark Abhyaan-HR Connect Sessions are conducted from time to time to establish a procedure to interact with all employees on scheduled intervals in order to improve inter personal communication and redressal of their personal and work related issues.

To build competent leaders for the organization TPNODL has conducted training programmes for the middle level officers by sending them Tata Power in Delhi and Mumbai and making them familiar with the best practices, culture, values and ethics to meet future requirements.

Further, to inculcate positivity, team building a "Workshop on building resilience" is conducted for all middle management employees.

6.27.1 Safety Capability

Each employee / associate at TPNODL is being compulsory imparted basic safety induction training at the time of joining. E-learning module for safety induction shall be rolled out subsequently to cover 100% employees.

In addition to this for long term training strategy, safety related training needs has been identified for all employees based on job profile and in coordination with Safety

department. Based on Training needs identification (TNI), annual training calendar is being prepared for both employees and associates. Endeavour is to cover maximum safety training through online while specific trainings can be conducted through training centre. Ownership of 100% compliance is be with divisional safety function while HR team is providing adequate support in conducting these training.

6.27.2 Technical Competency Development

Technical competencies are backbone for TPNODL operation since entire value proposition is linked with safe power distribution across 28,000 sq. km of the distribution area. Hence, training needs for technical operation shall be finalized during finalization of annual goal setting process for all employees. At least one such need on safety must be identified for each employee. Based on TNI, annual training plan shall be made, and faculties would be identified internally within TPNODL or from T&D cluster in Tata Power (Mumbai & Delhi). External faculties also can be invited based on critical requirement.

6.27.3 Behavioral Competency Development

TPNODL being consumer driven business, behavioral competencies are also equally important for TPNODL employees. Depending on job profile and goal for the year, one or two behavioral training needs shall be identified for each employee during annual goal setting process. Tata Power competency framework could be used as a reference to assess behavioral competency gaps among executives, basis which training needs could be finalized.

Divisional HR Team shall ensure completion of maximum behavioral training by assigning courses to executives on e-learning platform. The online training platform will have complete flexibility for the learner to learn at his convenience irrespective of time and location. Only in case of specific behavioral training and/or OD interventions, services of external trainer of repute may be utilized.

6.27.4 Organizational Training Needs & Focus Group Training (FGT)

TPNODL being part of Tata Group, is also responsible to uphold Tata values and implement various Tata management philosophies towards making it a consumer driven and performance-oriented organization apart from maintaining governance standard of

Tata Group. In this context, various organizational capabilities are required to be developed for its managers and employees in areas like TCOC / POSH / SAP / IMS / Risk Management System / TBEM etc. Apart from this, various groups and departments in TPNODL may require certain training specific to their group/ department for which focus group training would be imparted for the group depending on group's need.

6.27.5 Leadership Competency Development

Leadership in pipeline is always critical agenda keeping in mind growth aspect of TPNODL and to take care of superannuation & separation of experienced employees and also creation of various new functions. Hence, keeping in mind broad manpower plan, opportunity for junior employees and to ensure manpower cost within desired limit, TPNODL must strategize in developing successors for critical positions to meet future requirements. Succession Planning Process would comprise of identification of critical positions and prospective successors at the beginning of each year, identifying gaps in competencies and intervention for effective training program.

Keeping in mind continuous learning and acquiring of niche skills, TPNODL shall implement training & development policy for continuous competency enhancement of existing workforce. Use of online e-learning module shall be encouraged to ensure maximum participation of its employees.

6.27.6 High Performance & Talent Management

Building a culture of high performance is a need of survival in this competitive business world. Financial model of TPNODL has further necessitated higher productivity level and increasing bar of performance. Hence, performance management at TPNODL shall be conducted through online and annual increment / promotion of employees shall affected through annual assessment of Key result areas and Key Behaviour Attributes. Regular monitoring of performance shall be conducted for feedback to help improved performance. High performers shall be recognized during annual increment or career progression.

Identification and nurturing of high potential employees is key to leadership development in TPNODL Potential of every employee shall be assessed, and training needs shall be

identified through gap analysis. Training plan shall be prepared and executed during the year. Effort shall also be made to nurture talent of such identified potential employees. Employees shall be exposed to different job profile through internal job rotation policy.

6.27.7 Business Excellence

Tata Power always believe in excellence in its every operation. TPNODL shall adopt Tata Business Excellence Model (TBEM) at an appropriate time once the business processes are established and stabilized. TPNODL will review all its processes and execute towards ensuring a higher level of consumer delight and achieving other business results .

6.27.8 Volunteering

Care for community is one of the core values of Tata Power and TPNODL also wish to initiate various community service-related initiatives in areas of education, health, livelihood, women empowerment etc. These initiatives will give opportunity to employees to contribute to society.

6.27.9 Employee Engagement

Creating an enabling workplace environment and facilitating full utilization of employee potential are key strategic advantage of Tata Power. Hence, TPNODL is committed to create such working environment so that employees / associates' engagement level reach to benchmark level. TPNODL wish to implement an engagement model and drive various engagement initiatives. With a view to ensure all its employees work at highest level of engagement.

6.27.10 HR Training Plan for FY 2023-24 to FY 2027-28

Table 70: Training Plan FY 24 to FY 28

Types of Training	FY-23-24		FY-24-25		FY-25-26		FY-26-27		FY-27-28	
	Batches	% Coverage	Batches	% Coverage	Batches	% Coverage	Batches	% Coverage	Batches	% Coverage
Pehchaan	30 Batches	100%	25 Batches	100%	20 Batches	100%	15 Batches	100%	10 Batches	
Pratigya	40 Batches	85%	40 Batches	85%	40 Batches	85%	40 Batches	85%	40 B[illegible]	[illegible]%
Prarambh	6 Batches	100%	6 Batches	100%	6 Batches	100%	6 Batches	100%	6 Batche[illegible]	
Prayaas	10 Batches	100%	10 Batches	100%	10 Batches	100%	10 Batches	100%	10 Ba[illegible]es	00%

Prerna		25% Of total Executives		25% Of total Executives		25% Of total Executives		25% Of total Executives		25% Of total Executives
Gyankosh-LinkedIn		100%		100%		100%		100%		100%
Safety Training Programs	75 batches	100%	75 batches	100%	75 batches	100%	75 batches	100%	75 batches	100%
Functional Training	10 batches	100%	10 batches	100%	10 batches	100%	10 batches	100%	10 batches	100%
Behavioural Training	50 batches	85%	30 batches	85%	30 batches	85%	30 batches	85%	30 batches	85%
Organisational Training	2 batches	85%	2 batches	85%	2 batches	85%	2 batches	85%	2 batches	85%
SAP Modules	As per Requirement		As per Requirement		As per Requirement		As per Requirement		As per Requirement	
Tech Skills	As per Requirement		As per Requirement		As per Requirement		As per Requirement		As per Requirement	
Mentor Mentee Program	10 group		10 group		10 group		10 group		10 group	
Train the Trainer(Internal Trainer certification)	20 nos		10 nos		10 nos		10 nos		10 nos	

7. Allocation of Wheeling and Retail Supply Cost

As per OERC (Determination of Wheeling and Retail Supply Tariff) Regulation, 2022, the distribution licensee shall segregate the accounts of the Licensed business into Wheeling business and Retail Supply Business within one year of notification of the regulation and till the time the Distribution licensee submits audited and certified separate accounts for Wheeling Business and Retail Supply Business, the allocation matrix provided under regulation 2.5.2 shall be applicable.

In line with the Regulation 2.5.1 and 2.5.2 of the Tariff Regulation, the DISCOM has prepared an allocation statement apportioning cost and revenues to Wheeling and Retail supply business and the details are submitted under Annexure BPF9_Allocation.

8. Prayer

The applicant most humbly prays before the Hon'ble Commission to kindly:

(1) Consider the projections made by the licensee and approve the Business Plan for the period from FY 2024-25 to FY 2027-28

(2) Allow the licensee to submit additional documents, modify the present petition ,if so required, during the course of proceeding.

(5) Grant any other relief, order or direction which the Hon'ble Commission deems fit

Dated: 31.05.2023

Place: Balasore

BHASKAR SARKAR

CHIEF EXECUTIVE OFFICER

TP Northern Odisha Distribution Limited

NOTARY STATE OF ODISHA (INDIA)

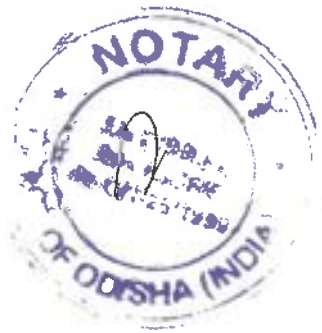
TPNODL

EMPLOYEES COST

ANNEXURE-BPF1

	Employee Cost	FY24	FY25	FY26	FY27	FY28
	EMPLOYEES COST (Erstwhile Employees)					
A	**Number of employees**					
1	Basic Pay	114.48	118.15	121.56	125.21	128.97
2	Grade Pay	0.00				
3	Dearness Allowance	51.52	53.16	64.42	74.48	88.91
4	Reimbursement of House Rent	0.00				
5	Other Allowance	27.10	29.54	30.39	31.30	32.24
6	Over Time	0.14	0.17	0.19	0.19	0.19
7	Bonus	0.00				
8	**Sub Total (1 to 7)**	**193.24**	**201.02**	**216.56**	**231.18**	**250.31**
9	**Additional Employee Cost**					
10	Contractual Obligation	0.00	0.00	0.00	0.00	0.00
11	Out Source Obligation	0.00	0.00	0.00	0.00	0.00
12	Others, If any	0.00	0.00	0.00	0.00	0.00
13	**Total Addl.Emp. Cost (9 to 11)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
14	**Other Staff Cost**					
15	Reimbursement of Medical Expenses	0.00	0.00	0.00	0.00	0.00
16	Leave Travel Concession	0.00	0.7	0.8	1.2	1.3
17	Interim Relief to Staff	0.00	0.00	0.00	0.00	0.00
18	Encashment of Earned Leave (UL)	2.75	2.8	1.75	1.6	1.3
19	Honorarium	0.00	0.00	0.00	0.00	0.00
20	Payment under Workmen compensation Act	0.00	0.00	0.00	0.00	0.00
21	Ex-gratia	5.00	5.00	5.00	5.00	5.00
22	Miscellaneous	0.36	0.5	0.5	0.5	0.5
23	**Total other Staff Cost (13 to 20)**	**8.11**	**9**	**8.05**	**8.3**	**8.1**
24	Staff Welfare Expenses	4.08	5.5	5.5	5.5	5.5
25	Terminal Benefits	211.73	228.26	246.88	267.20	289.53
26	**Total (8+12+21+22+23)**	**417.16**	443.78	476.99	512.18	553.44
27	**Less:-Employee cost Capitalised**	**2.76**	3.02	3.24	3.48	3.76
28	**Net Employee Cost**	**414.39**	**440.76**	**473.74**	**508.70**	**549.68**
	EMPLOYEES COST (CTC Employees)					
B	**Number of employees**					
1	CTC					
2	**Fixed Pay**					
3	Variable pay					
4	**Total (2+3)**	**83.10**	**96.83**	**114.08**	**133.66**	**155.80**
5	**Less:-Employee cost Capitalised**	13.82	16.10	18.97	22.22	25.90
6	**Net Employee Cost**	**69.28**	**80.73**	**95.11**	**111.44**	**129.89**
C=(A+B)	**Total Net Employee Cost (Erstwhile + Newly formed Discoms)**	483.67	521.49	568.86	620.14	679.57

	ADDITIONAL INFORMATION (For Total Employee strength)	FY24	FY25	FY26	FY27	FY28
	Initial manpower as on 1st April	3025	3220	3266	3397	3549
1	No. of Employees as on 31st March of FY	3220	3266	3397	3549	3727
2	No. of Employees added during the year :	277	114	186	206	226
3	Employees Retd./Expired/resigned/ separated during the year	82	68	55	53	48
4	Average no. of Employees for the year	3123	3243	3331	3473	3638
5	No. of Million Units Sold	6246.64	6634.51	7112.68	7613.58	7934.56
6	No. of Employees per MKWh sold	0.52	0.49	0.48	0.47	0.47
7	No. of consumer for the year:	2166718	2332857	2426178	2535356	2662142
8	No. of employees per 1000 consumers	1.49	1.4	1.4	1.4	1.4



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ADMINISTRATION & GENERAL EXPENSES (IN LAKH)

ANNEXURE- BPF2

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28
	Approved	Projection			
PROPERTY RELATED EXPENSES					
Licence Fees	250.00	250.00	250.00	250.00	250.00
Lease Rent	215.14	230.20	246.32	263.56	282.01
Insurance	307.86	329.41	352.47	377.15	403.55
Sub total :	**773.01**	**809.62**	**848.79**	**890.71**	**935.56**
COMMUNICATION		0.00	0.00	0.00	0.00
Telephone & Trunk Call	20.00	21.40	22.90	24.50	26.22
Postage & Telegram	4.00	4.28	4.58	4.90	5.24
Sub total :	**24.00**	**25.68**	**27.48**	**29.40**	**31.46**
PROFESSIONAL CHARGES		0.00	0.00	0.00	0.00
Legal expenses	76.08	81.41	87.11	93.20	99.73
Expenditure for Energy Audit	7.62	8.16	8.73	9.34	9.99
Consultancy charges	658.35	704.44	753.75	806.51	862.96
Audit fees	122.32	130.88	140.04	149.85	160.33
Sub total :	**864.38**	**924.88**	**989.62**	**1058.90**	**1133.02**
CONVEYANCE & TRAVELLING		0.00	0.00	0.00	0.00
Travelling & Conveyance expenses	601.62	643.74	688.80	737.02	788.61
Hire charges of vehicle	1011.26	1082.05	1157.79	1238.84	1325.56
Sub total :	**1612.88**	**1725.79**	**1846.59**	**1975.85**	**2114.16**
OTHER EXPENSES		0.00	0.00	0.00	0.00
Fees & Subscription	18.63	19.94	21.33	22.83	24.42
Books & Periodicals	1.72	1.84	1.97	2.10	2.25
Printing & Stationery	18.00	19.26	20.61	22.05	23.59
Advertisement, events & media campaign	345.85	370.06	395.96	423.68	453.34
Watch & Ward/Security & Surveillance	589.77	631.05	675.23	722.49	773.07
Metering, billing & collection	9100.59	9737.63	10419.27	11148.62	11929.02
Electricity Expenses	393.00	420.51	449.95	481.44	515.14
Disconnection Squad Expenses/Enforcemen	553.82	592.59	634.07	678.46	725.95
Office Up-Keep Expenses/Facility Manageme	525.33	562.10	601.45	643.55	688.60
Data Entry Expenses	35.00	37.45	40.07	42.88	45.88
Consumer Care Center & Call Center Exp	441.12	471.99	505.03	540.38	578.21
Compensation Expenses to Outsiders & Emp	250.00	267.50	286.23	306.26	327.70
Training	393.42	420.96	450.42	481.95	515.69
Expenditure on IT - Automation	839.90	898.70	961.61	1028.92	1100.94
Employee welfare expense	830.59	888.73	950.95	1017.51	1088.74
Miscellaneous	316.45	338.60	362.30	387.66	414.80
Expenditure towards DSM		108.90	116.52	124.68	133.41
Sub total :	**14653.20**	**15787.82**	**16892.97**	**18075.47**	**19340.76**
TOTAL	**17927.46**	**19273.79**	**20605.45**	**22030.33**	**23554.96**

TPNODL

REPAIR AND MAINTENANCE EXPENSES (IN CRS.)

ANNEXURE-BPF3

Repair and Maintenance (Own)						
Sl. No.	Particulars (Own)	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
1	Civil repairs & maintenance	1.92	2.05	2.20	2.35	2.52
2	Distribution line repairs & maintenance	32.63	36.23	38.97	41.92	45.10
3	Consumer service maintenance	0.00	0.00	0.00	0.00	0.00
4	Street lighting maintenance	0.00	0.00	0.00	0.00	0.00
5	Transformer maintenance	17.89	18.95	20.06	21.25	22.50
6	Other repairs & maintenance	0.25	0.26	0.28	0.30	0.31
8	Additional Repair & Maintenance towards RGGVY & BGJY	0.00	0.00	0.00	0.00	0.00
9	**TOTAL**	**52.69**	**57.49**	**61.51**	**65.82**	**70.43**
Repair and Maintenance (Outsourced)						
Sl. No.	Particulars (Outsource agencies)	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
1	Civil repairs & maintenance	0.00	0.00	0.00	0.00	0.00
2	Distribution line repairs & maintenance	204.50	218.82	234.14	250.53	268.07
3	Consumer service maintenance	0.00	0.00	0.00	0.00	0.00
4	Street lighting maintenance	0.00	0.00	0.00	0.00	0.00
5	Transformer maintenance	0.00	0.00	0.00	0.00	0.00
6	Other repairs & maintenance	0.00	0.00	0.00	0.00	0.00
7	Additional Repair & Maintenance towards RGGVY & BGJY	0.00	0.00	0.00	0.00	0.00
8	**TOTAL**	**204.50**	**218.82**	**234.14**	**250.53**	**268.07**
9	**Grand Total**	**257.19**	**276.31**	**295.65**	**316.35**	**338.49**

NOTARY

TPNODL

GAP ANALYSIS

ANNEXURE-BPF4

Expenditure					
	FY24 (Projected)	FY25 (Projected)	FY26 (Projected)	FY27 (Projected)	FY 28 (Projected)
Power Purchase(MU)					
Power Purchase Cost (A)					
Cost of Power	2,525.36	2,626.32	2,809.90	2,973.92	3,064.83
Transmission Charges	180.92	188.15	201.31	213.06	219.57
SLDC Charges	1.16	1.16	1.16	1.16	1.16
Total Power Purchase Cost	**2,707.44**	**2,815.64**	**3,012.37**	**3,188.14**	**3,285.56**
Distribution Cost (B)					
Employees cost	483.67	521.49	568.86	620.14	679.57
Repair & Maintenace Cost	257.19	276.31	295.65	316.35	338.49
Administrative & General Expenses	179.27	192.74	206.05	220.30	235.55
Bad & Doubtful Debt including rebate	37.17	39.63	42.98	46.08	47.99
Depreciation	67.22	106.75	125.71	138.56	152.19
Interest on loans	74.81	102.22	115.94	124.28	129.96
Interest on Security Deposits	59.12	64.88	71.12	77.81	84.79
Return on Equity	79.51	104.31	119.97	132.73	144.87
Tax on Return on Equity	26.74	35.09	40.35	44.65	48.73
Total Distribution Cost	**1,264.71**	**1,443.41**	**1,586.63**	**1,720.90**	**1,862.14**
Special Appropriation (C)					
Carrying Cost @ 7.45%	5.17	15.88	16.72	15.27	16.90
True Up					
DSM		-	-	-	-
Other, if any - contingency and prior period					
Prior Period Item					
Total Special Appropriation	5.17	15.88	16.72	15.27	16.90
Total cost (A+B+C)	3,977.32	4,274.93	4,615.73	4,924.31	5,164.60
Less: Miscellaneous Receipt	154.99	188.25	200.82	213.35	225.33
Total Revenue Requirement	3,822.33	4,086.68	4,414.91	4,710.95	4,939.27
Revenue from Tariffs (at Existing Rate)	3,717.23	3,962.69	4,297.69	4,607.96	4,798.54
(Deficit)/ Surplus	**(105.10)**	**(123.99)**	**(117.22)**	**(103.00)**	**(140.72)**
Deficit/Surplus without carrying cost	(99.93)	(108.11)	(100.49)	(87.73)	(123.83)

NOTARY
OF ODISHA (INDIA)

TPNODL

INTEREST EXPENSES

ANNEXURE-BPF5

Interest on capex loan					
Particulars	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**
Opening Balance	237.47	641.56	807.66	886.63	936.36
Capitalisation considered	658.48	374.98	277.58	254.18	251.57
Loan	460.93	262.49	194.30	177.92	176.10
Repayment (considered equivalent of depreciation)	56.85	96.38	115.34	128.19	141.82
Closing balance-Loan	641.56	807.66	886.63	936.36	970.64
Average loan balance	439.51	724.61	847.15	911.50	953.50
Interest	39.56	65.21	76.24	82.03	85.82
Interest rate applicable	9.00%	9.00%	9.00%	9.00%	9.00%

Interest on Security Deposit					
Particulars	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**
Opening Balance	795.83	875.83	961.12	1,053.64	1,152.77
Addition during the year	80.00	85.30	92.51	99.13	103.32
Security deposit refunded/paid to consumers	-	-	-	-	-
Closing Balance	875.83	961.12	1,053.64	1,152.77	1,256.09
Rate of Interest	6.75%	6.75%	6.75%	6.75%	6.75%
Interest Amount	59.12	64.88	71.12	77.81	84.79

Interest on working capital

Particulars	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
Operation & Maintenance	69.98	76.68	82.55	89.21	96.40	104.47
Power Purchase Cost for one month	256.82	225.62	234.64	251.03	265.68	273.80
Spares (20% of R&M expense for one month)	8.18	4.29	4.61	4.93	5.27	5.64
Total	**334.98**	**306.58**	**321.79**	**345.17**	**367.35**	**383.91**
Interest rate applicable (SBI base rate as on 1.4 plus 300 points)	10.55%	11.50%	11.50%	11.50%	11.50%	11.50%
Interest on working capital	35.34	35.26	37.01	39.69	42.25	44.15

Return on equity						
Particulars	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
Opening equity	294.94	398.14	595.68	708.18	791.45	867.70
Capitalisation considered	411.12	658.48	374.98	277.58	254.18	251.57
Equity addition	103.20	197.54	112.50	83.27	76.25	75.47
Closing equity	398.14	595.68	708.18	791.45	867.70	943.18
RoE (opening)	47.19	63.70	95.31	113.31	126.63	138.83
RoE (addition)**	5.79	15.80	9.00	6.66	6.10	6.04
Total RoE	52.98	79.51	104.31	119.97	132.73	144.87

NOTARY

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NON-TARIFF INCOME

ANNEXURE-BPF6

Other Income /Miscellaneous Receipt

Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
	Approved	Projection			
Recovery of meter rent	0.00	0.00	0.00	0.00	0.00
Overdrwal penalty	7.96	8.52	9.11	9.75	10.43
Reliability	0.01	0	0	0	0
OA - cross subsidy	45.31	35.00	36.75	38.59	40.52
Supervision-application fees	1.06	1.11	1.17	1.23	1.29
Inspection fees	7.17	7.53	7.90	8.30	8.72
Other	**2.66**	**2.53**	**2.40**	**2.28**	**2.17**
Pole rentals	0.16	0.17	0.18	0.20	0.21
Meter testing fee	0.15	0.16	0.17	0.18	0.20
DC,RC & Dismantle fee	0.46	0.49	0.53	0.56	0.60
Meter box charges	1.05	0.00	0.00	0.00	0.00
Service connection fees	0.33	0.35	0.38	0.40	0.43
Recovery-power theft	0.51	0.55	0.58	0.62	0.67
Other misc operating income	0.00	10.00	10.00	10.00	10.00
Total	**64.17**	**66.41**	71.06	76.03	81.35
	0.00				
Interest on FD	47.10	64.88	71.12	77.81	84.79
Delayed payment surcharge	7.22	6.86	6.52	6.19	5.88
Meter testing fees	0.01	0.01	0.01	0.01	0.01
PLM charges	0.00	0.00	0.00	0.00	0.00
Rent-staff quarters	0.00	0.00	0.00	0.00	0.00
Water rates-Staff qtr	0.00	0.00	0.00	0.00	0.00
Sale of tender forms	0.30	0.30	0.30	0.30	0.30
Other misc receipts	0.15	0.14	0.14	0.14	0.14
Sale proceeds-scrap	10.02	6.5	5.5	4	2.5
Total	**64.80**	**78.68**	**83.59**	**88.45**	**93.62**
Grand Total	**128.97**	**145.09**	**154.64**	**164.48**	**174.97**
Rebate on BSP prompt pymnt	26.02	43	46	49	50
Total	**154.99**	**188.25**	**200.82**	**213.35**	**225.33**

TPNODL

CASH FLOW

ANNEXURE-BPF8

Particulars	FY24	FY25	FY26	FY27	FY28
Opening Cash balance	315	92	100	150	225
Opening Fixed Deposits	1,248	1,328	1,025	1,117	1,216
SOURCE/INFLOW					
Revenue collection	3,680	3,923	4,255	4,562	4,751
Past arrear collection	72	72	72	72	72
Security Deposit from Consumers	80	85	93	99	103
Consumer deposit works	187	187	187	187	187
Equity - Addition	198	112	83	76	75
Capex- Borrowings	461	262	194	178	176
Government Grant	296	30	-	-	-
Short Term Loans from Bank	118	15	23	22	17
Non-Tariff Income	155	188	201	213	225
Total	**6,811**	**6,296**	**6,233**	**6,677**	**7,047**
APPLICATION/OUTFLOW					
Payment against purchase of power	2,707	2,816	3,012	3,188	3,286
Refund of Security Deposit	-	-	-	-	-
Employee cost	484	521	569	620	680
Adminstrative & General Exp	179	193	206	220	236
Repair & Maintenance	257	276	296	316	338
Capital Expenditure	1,407	1,003	477	452	439
Repayment Capex- Borrowings	57	96	115	128	142
Interest & Finance Charges	130	167	187	202	215
Repayment of short term loan	-	-	-	-	-
Advance Income Tax	27	35	40	45	49
Payment to GRIDCO	142	64	64	64	64
Total	**5,390**	**5,171**	**4,966**	**5,236**	**5,447**
Closing Cash balance	92	100	150	225	281
Closing Fixed Deposits	1,328	1,025	1,117	1,216	1,320
	1,420	1,125	1,267	1,441	1,601

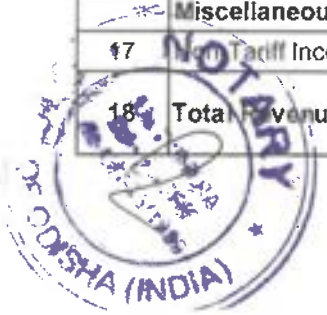
NOTARY
GOVT. OF ODISHA (INDIA)

Cost Allocation_ Wheeling

Annexure-BPF-9(a)

(In Rs. Crs)

Sl. No.	Cost/Income Component	Assumption Ratio for consideration in Wheeling Business	Assumption Ratio for consideration in Retail Supply Business	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
				Wheeling cost	Wheeling cost	Wheeling cost	Wheeling cost
1	Cost of Power	0%	100%	0.00	0.00	0.00	0.00
2	Transmission Charges	0%	100%	0.00	0.00	0.00	0.00
3	SLDC Charges	0%	100%	0.00	0.00	0.00	0.00
	Total power purchase cost *			0.00	0.00	0.00	0.00
	O&M						
4	Employee Cost	60%	40%	312.89	341.31	372.08	407.74
5	Repair & Maintenance Cost	90%	10%	248.68	266.09	284.71	304.64
6	Administrative & General Expenses	50%	50%	96.37	103.03	110.15	117.77
7	Bad & Doubtful Debt including Rebate	0%	100%	0.00	0.00	0.00	0.00
8	Depreciation	90%	10%	96.08	113.14	124.71	136.98
	Interest on Loans						
9	for Capital loan	90%	10%	58.69	68.62	73.83	77.23
10	for Working capital	10%	90%	3.70	3.97	4.22	4.41
11	Interest on Security Deposits	0%	100%	0.00	0.00	0.00	0.00
12	Return on Equity	90%	10%	93.88	107.97	119.46	130.38
13	Tax on RoE	90%	10%	31.58	36.32	40.18	43.86
	Special Appropriation						
14	Carrying Cost	10%	90%	1.59	1.67	1.53	1.69
	Grand Total			943.46	1042.12	1130.88	1224.71
	Miscellaneous Receipt						
17	Non Tariff Income - Wheeling	10%	90%	18.83	20.08	21.34	22.53
18	**Total Revenue Requirement**			**924.63**	**1022.04**	**1109.54**	**1202.18**



Cost Allocation_ Retail Supply Business

Annexure-BPF-9(b)

(In Rs. Crs)

Sl. No.	Cost/Income Component	Assumption Ratio for consideration in Wheeling Business	Assumption Ratio for consideration in Retail Supply Business	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
				Retail supply Cost	Retail supply Cost	Retail supply Cost	Retail supply Cost
1	Cost of Power	0%	100%	2626.32	2809.90	2973.92	3064.83
2	Transmission Charges	0%	100%	188.15	201.31	213.06	219.57
3	SLDC Charges	0%	100%	1.16	1.16	1.16	1.16
	Total power purchase cost *			2815.64	3012.37	3188.14	3285.56
	O&M						
4	Employee Cost	60%	40%	208.60	227.54	248.06	271.83
5	Repair & Maintenance Cost	90%	10%	27.63	29.57	31.63	33.85
6	Administrative & General Expenses	50%	50%	96.37	103.03	110.15	117.77
7	Bad & Doubtful Debt including Rebate	0%	100%	39.63	42.98	46.08	47.99
8	Depreciation	90%	10%	10.68	12.57	13.86	15.22
	Interest on Loans						
9	for Capital loan	90%	10%	6.52	7.62	8.20	8.58
10	for Working capital	10%	90%	33.30	35.73	38.02	39.73
11	Interest on Security Deposits	0%	100%	64.88	71.12	77.81	84.79
12	Return on Equity	90%	10%	10.43	12.00	13.27	14.49
13	Tax on RoE	90%	10%	3.51	4.04	4.46	4.87
	Special Appropriation						
14	Carrying Cost	10%	90%	14.30	15.05	13.74	15.21
	Grand Total			3331.47	3573.61	3793.43	3939.89
	Miscellaneous Receipt						
17	Non-Tariff Income - Wheeling	10%	90%	169.43	180.74	192.02	202.80
18	**Total Revenue Requirement**			3162.05	3392.87	3601.41	3737.09

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PROFIT & LOSS ACCOUNT (Rs. In Crs.) ANNEXURE-BPF10

	FY24	FY25	FY26	FY27	FY28
INCOME					
Revenue from Sale of Power (Net of Rebate)	3717	3963	4298	4608	4799
Other Revenue	155	188	201	213	225
Income to be recovered in future tariff determination	0				
Total	**3872**	**4151**	**4499**	**4821**	**5024**
EXPENDITURE	0				
Purchase of Power	2707	2816	3012	3188	3286
Power Purchase Contingencies	0				
Operation Maintenance, Administration General and other expenses	957	1030	1114	1203	1302
Depreciation	67	107	126	139	152
Sub-Total	**3732**	**3953**	**4252**	**4530**	**4739**
Profit (before interest & finance charges)	140	198	247	292	285
Interest & Finance Charges	139	183	204	217	232
Less Transferred to Capital Work-in-Progress	-	-	-	-	-
Net Interest & Finace charges	139	183	204	217	232
Expenses to be recovered in future tariff determination	105	124	117	103	141
Profit before tax for the year	106	139	160	177	194
Provision for Taxation(FBT)	27	35	40	45	49
Profit After Tax	80	104	120	133	145
Net prior period (credit)/charges	0				
Balance of profit and loss account brought forward from last year	190	269	373	493	626
Statutory reserves and Appropriations					
Amount available for distribution & transfer to general reserve					
Proposed Dividend					
Corporate Tax on Dividend					
Transitional provision					
Transfer to General Reserve					
Balance carried to Balance Sheet	**269**	**373**	**493**	**626**	**771**

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BALANCE SHEET **ANNEXURE-BPF11**

Sl. No.	Particulars	As at 31.03.2024	As at 31.03.2025	As at 31.03.2026	As at 31.03.2027	As at 31.03.2028
I.	**SOURCES OF FUNDS**					
	Shareholders' Funds					
	Share Capital - Equity	398	596	708	791	868
	Add : Equity	198	112	83	76	75
	Closing - Equity	**596**	**708**	**791**	**868**	**943**
	Reserves and Surplus	269	373	493	626	771
	Capital Subsidy/Grants	797	827	827	827	827
	Loan Funds					
	Term loan-Capex	642	808	887	936	971
	Short term working capital loan	306	321	345	367	383
	Other Funds					
	Consumers' Security Deposits	876	961	1,054	1,153	1,256
	Capital contributions from consumers	1,251	1,438	1,625	1,812	1,999
	Total	**4,736**	**5,436**	**6,021**	**6,589**	**7,150**
II.	**APPLICATION OF FUNDS**					
	Fixed Assets					
	Gross Block	4,407	5,394	5,858	6,299	6,738
	Less: Accumulated Depreciation	981	1,088	1,214	1,352	1,504
	Net Block	**3,426**	**4,306**	**4,644**	**4,947**	**5,233**
	Capital Work in Progress	445	462	474	485	485
	Capital Stock					
	Total C.W.I.P.	**445**	**462**	**474**	**485**	**485**
	Additional Capitalisation as per Vesting Order	-				
	Less : Depreciation on the Additional Capitalisation	-				
	Net Additional Assets	**3,871**	**4,767**	**5,118**	**5,432**	**5,719**
	Regulatory Deferral Account - Asset	**97**	**221**	**338**	**441**	**582**
	Current Assets, Loans and Advances					
	Sundry Debtors	556	556	556	556	556
	Inventories	48	53	63	68	66
	Cash and Bank Balances	1,420	1,125	1,267	1,441	1,601
	Loans and Advances and other current assets	162	198	238	283	331
	Less: Current Liabilities and Provisions					
	Accounts Payable	603	603	603	603	603
	Current Liabilities	615	644	679	708	731
	Other current liabilities					
	Provisions	201	236	276	321	369
	NET CURRENT ASSETS	**768**	**448**	**565**	**715**	**850**
	Miscellaneous Expenditure to the extent not written off or adjusted					
	Profit & Loss Account Debit Balance	-				
	Total Application	**4,736**	**5,436**	**6,021**	**6,589**	**7,150**

TPNODL

ASSESSMENT OF CONSUMPTION FOR THE CONTROL PERIOD

ANNEXURE-BPC-1

SL. NO	CATEGORY OF CONSUMERS	FY 23-24 No of cosumers as on 1st April of the Ensuing Year	FY 23-24 Connected Load/Contract Demand	FY 23-24 Consumption (MU)	FY 23-24 Annual Percentage Rise (%)	FY 24-25 No of cosumers as on 1st April of the Ensuing Year	FY 24-25 Connected Load/Contract Demand	FY 24-25 Consumption (MU)	FY 24-25 Annual Percentage Rise (%)	FY 25-26 No of cosumers as on 1st April of the Ensuing Year	FY 25-26 Connected Load/Contract Demand	FY 25-26 Consumption (MU)	FY 25-26 Annual Percentage Rise (%)	FY 26-27 No of cosumers as on 1st April of the Ensuing Year	FY 26-27 Connected Load/Contract Demand	FY 26-27 Consumption (MU)	FY 26-27 Annual Percentage Rise (%)	FY 27-28 No of cosumers as on 1st April of the Ensuing Year	FY 27-28 Connected Load/Contract Demand (KVA)	FY 27-28 Consumption (MU)	FY 27-28 Annual Percentage Rise (%)
1	2	13	14	15	[illegible]	19	20	21	22	13	14	25	[illegible]	[illegible]	28	[illegible]	30	31	32	33	34
	LT CATEGORY																				
1	DOMESTIC																				
	Kutirjyoti<=30KWH	42329	12984	23.941	303%	65504	11876	22.146	273%	56528	10095	19.333	-13%	50875	9085	17.857	-8%	48331	8631	17.225	-4%
	Others	1830722	1926410	1649.947	14%	1907348	1971759	1719.007	19%	2065448	2135198	1861.495	8%	2144832	2217262	1933.040	4%	2235543	2311036	2014.794	4%
	0<=50KWH			776.255				808.746				875.783				909.443				947.906	
	>50<=200			621.471				647.483				701.153				728.101				758.894	
	>200<=400			182.820				190.472				206.260				214.187				223.246	
	More than 400 KWH (SLAB)			69.401				72.306				78.299				81.309				84.748	
	Total	1873051	1939394	1673.888	16%	1973852	1983635	1741.153	4%	2121976	2145293	1880.828	8%	2195707	2226347	1950.897	4%	2283874	2319667	2032.019	4%
2	General Purpose <100 KVA	108910	309467	435.590	13%	127945	360428	511.721	17%	140740	396472	562.895	10%	154814	436119	619.185	10%	170295	479730	681.102	10%
	0-100 KWH			86.408				101.510				111.661				122.827				135.110	
	>100<=300			71.065				83.485				91.834				101.017				111.119	
	More than 300 KWH(SLAB)			278.118				326.726				359.400				395.340				434.873	
	Total	108910	309467	435.590	13%	127945	360428	511.721	17%	140740	396472	562.895	10%	154814	436119	619.185	10%	170295	479730	681.102	10%
3	Irrigation Pumping & Agriculture	28815	123741	141.726	68%	31215	126315	153.530	8%	33712	136419	165.811	8%	36409	147333	179.076	8%	39322	159121	193.403	8%
4	Allied agricultural activities	2603	38155	41.094	7%	3353	40905	52.934	29%	3856	47041	60.875	15%	4434	54092	70.080	15%	4966	60582	78.399	12%
5	Allied Agro-Industrial Activities	57	892	1.266	31%	67	1009	1.488	18%	77	1160	1.710	15%	89	1341	1.976	16%	100	1507	2.220	12%
6	Public Lighting	1421	7182	25.146	5%	1871	9246	33.109	32%	2245	11094	39.727	20%	2582	12759	45.690	15%	2892	14291	51.176	12%
7	LT Industrial (S) Supply < 22KVA	4357	40945	21.476	9%	4442	41320	21.895	2%	4531	42148	22.334	2%	4622	42994	22.783	2%	4714	43850	23.236	2%
8	LT Industrial (M) Supply >= 22KVA	1132	50279	41.376	10%	1197	52065	43.752	6%	1257	54675	45.945	5%	1320	57415	48.248	5%	1373	59720	50.185	4%
9	Specified Public Purpose	16052	33200	45.734	9%	17152	36381	48.868	7%	18353	38928	52.290	7%	19638	41654	55.951	7%	20816	44153	59.307	6%
10	Public Water Works <100 KW	4490	29853	55.290	5%	4850	31546	59.723	8%	5238	34070	64.501	8%	5657	36795	69.661	8%	6053	39371	74.537	7%
11	Public Water Works >=100 KW																				
12	General Purpose >=110KVA																				
13	Large Industry																				
	Sub Total---->	2040888	2573108	2482.588	16%	2165944	2682850	2668.173	7%	2331985	2907300	2896.916	9%	2425272	3056849	3063.467	6%	2534405	3221992	3245.584	6%

NOTARY
GOVT. OF ODISHA (INDIA)

SL. NO	CATEGORY OF CONSUMERS	FY 23-24				FY 24-25				FY 25-26				FY 26-27				FY 27-28			
		No of cosumers as on 1st April of the Ensuing Year	Connected Load/Contract Demand (KW/KVA)	Consumption (MU)	Annual Percentage Rise (%)	No of cosumers as on 1st April of the Ensuing Year	Connected Load/Contract Demand	Consumption (MU)	Annual Percentage Rise (%)	No of cosumers as on 1st April of the Ensuing Year	Connected Load/Contract Demand (KW/	Consumption (MU)	Annual Percentage Rise (%)	No of cosumers as on 1st April of the Ensuing Year	Connected Load/Contract Demand (KW/	Consumption (MU)	Annual Percentage Rise (%)	No of cosumers as on 1st April of the Ensuing Year	Connected Load/Contract Demand	Consumption (MU)	Annual Percentage Rise (%)
1	2	13	14	15	16	19	20	21	22	23	24	25	26	17	28	29	30	31	32	33	34
	HT Category																				
14	Bulk Supply - Domestic	26	9826	19.747	15%	28	10415	21.722	10%	30	10988	23.894	10%	32	11537	26.283	10%	34	12114	28.911	10%
15	Irrigation Pumping & Agriculture	9	35524	4.843	488%	9	31323	5.327	10%	11	37449	5.860	10%	12	39321	6.446	10%	13	41287	7.091	10%
16	Allied agricultural activities	73	18523	24.838	43%	78	19177	27.322	10%	83	20299	30.054	10%	87	21314	33.059	10%	91	22380	36.365	10%
17	Allied Agro-Industrial Activities	13	8895	43.364	36%	15	9980	47.7	10%	16	10113	52.47	10%	17	10619	57.717	10%	18	11150	57.717	0%
18	Specfied Public Purpose	46	12667	16.256	34%	58	14697	17.069	5%	71	17066	17.922	5%	76	31713	18.818	5%	80	33299	19.759	5%
19	General Purpose 70> KVA<110KVA																	0	0		
20	General Purpose >=110KVA	127	33547	64.886	19%	140	40135	70.077	8%	166	50125	75.683	8%	174	52631	81.738	8%	183	55263	88.277	8%
21	HT Industrial (M) Supply																				
22	Public Water Works	20	7046	14.518	38%	32	11053	17.422	20%	54	18632	20.906	20%	57	19564	22.997	10%	60	20542	25.297	10%
23	Large Industry	342	184991	475.680	1%	368	204255	510.680	7%	394	220801	547.680	7%	402	248158	571.680	4%	422	260566	597.680	5%
24	Power Intensive Industry	1	555	21.439	102%	1	555	35	63%	1	10700	40	14%	1	555	43	8%	1	555	45	5%
25	Mini Steel Plant																				
26	Railway Traction																				
27	Emerg. Supply to CGP	2	3100	0.013	-91%	2	3100	0.05	285%	2	3100	0.05	0%	2	3100	0.05	0%	2	3100	0.05	0%
28	Colony Consumption																				
	Sub Total--->	659	314674	685.584	10%	731	344690	752.369	10%	828	399273	814.519	8%	860	438512	861.788	6%	904	460256	906.147	5%
	EHT Category																				
29	General Purpose	1	20000	73.000	-15%	1	20000	77.000	5%	1	20000	92.000	19%	1	20000	96.600	5%	1	20000	101.430	5%
30	Large Industry	26	495667	2109.109	20%	28	595167	2231.209	6%	28	699667	2454.509	10%	30	834111	2716.309	11%	31	972111	2771.309	2%
31	Railway Traction	8	151000	495.339	7%	8	149000	520.000	5%	9	152500	546.000	5%	9	152500	573.000	5%	9	152500	602.000	5%
32	Heavy Industry	1	16667	210.855	51%	1	16677	217.181	3%	1	16677	223.696	3%	1	16677	230.407	3%	1	16677	237.319	3%
33	Power Intensive Industry	3	35000	256.491	26%	3	35000	264.186	3%	3	35000	272.111	3%	3	35000	280.275	3%	3	35000	288.683	3%
34	Mini Steel Plant																				
35	Emerg. Supply to CPP	2	13333	0.243	-79%	2	13333	1.000	312%	2	13333	1.000	0%	2	13333	1.000	0%	2	13333	1.000	0%
36	Colony Consumption																				
	Sub Total--->	41	731667	3145.037	19%	43	829177	3310.576	5%	44	937177	3589.317	8%	46	1071621	3897.591	9%	47	1209621	4001.741	3%
	GRAND TOTAL	2041588	3619449	6313.207	17%	2166718	3856717	6731.118	7%	2332857	4243750	7300.752	8%	2426178	4566982	7822.846	7%	2535356	4891869	8153.472	4%
36	POWER PURCHASED FROM GRIDCO			7538.39				7839.77				8387.77				8877.37				9148.74	
37	LOST UNITS (MU)			1225.178				1108.65				1087.02				1054.52				995.27	
38	% DISTRIBUTION LOSS			16.25%				14.14%				12.96%				11.88%				10.88%	
39	COLLECTION EFFICIENCY (%)			99.00%				99.00%				99.00%				99.00%				99.00%	
40	AT & C LOSS (%)			17.09%				15.00%				13.83%				12.76%				11.77%	

NOTARY ODISHA (INDIA)

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PERFORMANCE PARAMETRS- FY 2024 TO FY 2028

ANNEXURE-BPC-2

Sl. No	Particulars	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
		Projection				
A	No. of Consumer					
1	LT	2165944	2331985	2425272	2534405	2661143
2	HT	731	828	860	904	950
3	EHT	43	44	46	47	49
4	Total	2166718	2332857	2426178	2535356	2662142
B	Energy Sales (MU)					
5	LT	2482.59	2668.17	2896.92	3063.47	3245.58
6	HT	685.58	752.37	814.52	861.79	906.15
7	EHT	3145.04	3310.58	3589.32	3897.59	4001.74
8	Total	**6313.21**	**6731.12**	**7300.75**	**7822.85**	**8153.47**
9	Total Input (MU)	**7538.39**	**7839.77**	**8387.77**	**8877.37**	**9148.74**
10	Input for LT&HT	4393.35	4529.20	4798.46	4979.78	5147.00
11	Input for LT	3356.30	3414.49	3600.06	3719.61	3829.10
12	LT Loss	26%	22%	20%	18%	15%
13	LT & HT Loss	28%	24%	23%	21%	19%
14	Distribution Loss (MU)	1225	1109	1087	1055	995
15	Distribution Loss (%)	**16.25%**	**14.14%**	**12.96%**	**11.88%**	**10.88%**
16	Collection Efficiency	99%	99%	99%	99%	99%
17	AT&C Loss	**17.09%**	**15.00%**	**13.83%**	**12.76%**	**11.77%**
C	Sales Value (Rs. In Crs)					
18	LT	1,313.29	1,411.46	1,532.47	1,620.57	1,716.91
19	HT	463.45	508.60	550.61	582.57	612.56
20	EHT	1,940.49	2,042.63	2,214.61	2,404.81	2,469.07
21	Total	**3,717.23**	**3,962.69**	**4,297.69**	**4,607.96**	**4,798.54**
D	Average Rate (paise per unit)					
22	LT	5.29	5.29	5.29	5.29	5.29
23	HT	6.76	6.76	6.76	6.76	6.76
24	EHT	6.17	6.17	6.17	6.17	6.17
25	Total	**5.89**	**5.89**	**5.89**	**5.89**	**5.89**
26	Collection (Rs In Crs.)					
27	LT	1276	1372	1489	1574	1669
28	HT	463	509	551	583	613
29	EHT	1940	2043	2215	2405	2469
30	Collection (Rs in Crs.)	**3680**	**3923**	**4255**	**4562**	**4751**
31	Collection Efficiency					
32	LT	97%	97%	97%	97%	97%
33	HT	100%	100%	100%	100%	100%
34	EHT	100%	100%	100%	100%	100%
35	Collection Efficiency	**99%**	**99%**	**99%**	**99%**	**99%**
E	Power Purchase Cost					
36	Cost of Power	2525.36	2626.32	2809.90	2973.92	3064.[illegible]
37	Transmission Charges	180.92	188.15	201.31	213.06	219.5[illegible]
38	SLDC Charges	1.16	1.16	1.16	1.16	1.1[illegible]
39	Total Power Purchase Cost	2707.44	2815.64	3012.37	3188.14	3285.[illegible]
40	Rebate on Power Purchase	41.5	43.2	46.2	48.9	[illegible].4
41	Total Power Purchase Cost Net of Rebate	2665.9	2772.5	2966.2	3139.3	[illegible].2