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

****

Present: **Shri G. Mohapatra, Chairperson (Offg.)**
Shri S. K. Ray Mohapatra, Member

CASE NO. 105 OF 2021

DATE OF HEARING : 17.02.2022 (at 11:00 A.M.)

DATE OF ORDER : 24.03.2022

IN THE MATTER OF: **An application for approval of Aggregate Revenue Requirement and determination of Transmission Tariff for FY 2022-23 filed by OPTCL under Sections 62, 64 and all other applicable provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Conduct of Business) Regulations, 2004, OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 and other tariff related matters for the year 2022-23.**

ORDER

M/s. Odisha Power Transmission Corporation Limited, Bhubaneswar (for short OPTCL) the present petitioner which carries out Intra- State transmission business in the State has been notified in Clause-10 of the Govt. Notification No.6892 dated 09.06.2005 as the State Transmission Utility (STU) u/S. 39(1) of the Act with effect from 01.04.2005. By virtue of the 2nd Proviso to S.14 of the Electricity Act, 2003 (hereinafter referred to as "the Act") OPTCL has been a deemed Transmission Licensee under the Act. OPTCL is now governed by License Conditions set forth in OERC (Conduct of Business) Regulations, 2004, at Appendix 4B issued u/S.16 of the Act, as modified by Commission's Order dated. 27th October 2006. After completion of the sale process of erstwhile distribution utilities and consequent issuance of vesting orders by the Commission, Bulk Power Transmission and SLDC Agreements have been signed between OPTCL and new distribution companies.

A. PROCEDURAL HISTORY (Para 2 to 9)

2. As per OERC (Conduct of Business) Regulations, 2004 and OERC (Terms and Conditions for Transmission Tariff) Regulations, 2014, licensees/deemed licensees are required to file their Aggregate Revenue Requirement within 30th November in each

year in the prescribed formats. OPTCL as a deemed licensee had submitted its ARR application for 2022-23 before the Commission on 30.11.2021 and the said application was registered as Case No.105 of 2021. After due scrutiny and admission of the matter, the Commission directed OPTCL to publish its ARR & Transmission tariff application for FY 2022-23 in the approved format in the leading and widely circulated in English language in one issue each of a daily English and Odia daily newspaper and in Odia language in one issue of daily Odia newspaper and also the matter was posted in the Commission's website in order to invite objections/views from the intending objectors. The Commission had also directed the applicant to file its rejoinder to the objections filed by the various objectors and to serve copy to them.

3. Accordingly, OPTCL published the said public notice in the leading daily English and Odia newspaper in one issue each. The Commission issued notice to each applicant, objectors and to the Government of Odisha represented by Department of Energy to send their authorized representative to take part in the ensuing tariff proceedings.

4. In response to the aforesaid public notice of the applicant, the Commission received 10 numbers of objections/suggestions from the following persons/ associations/ institutions/ organizations.

(1) Shri Jogendra Behera, M/s. Indian Energy Exchange, Plot No. C-001/A/1, 9th Floor, Max Towers, Sector-16B, Noida, Gautam Buddha Nagar, Uttar Pradesh-201301, (2) Shri Soumya Ranjan Patnaik,S/o-Late Brajabandhu Patnaik, MLA, Khandapada, Plot No. 185, VIP Colony, Nayapalli, Bhubaneswar-15,(3) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour & President, Upobhokta Mahasangha, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012, (4) M/s.Utkal Chamber of Commerce & Industry Ltd. (UCCI), N-6, IRC Village, Nayapalli, Bhubaneswar-751015, (5) Shri Ashok Kumar Nanda, S/o Late Banabihari Nanda, Convener, Odisha Janashakti Manch, Plot No. 196/2282, Mukti Nilay, Khandagiri, Bhubaneswar-751030,(6) Shri R.P.Mahapatra, Retd. Chief Engineer & Member (Gen.) erstwhile OSEB, Plot No-775 (P), Lane-3, Jayadev Vihar, Bhubaneswar-751013,(7)M/s.Grinity Power Tech Pvt. Limited, At-K-8-82, Kalinga Nagar, Ghatikia, Bhubaneswar-751029,(8) Shri K.C.Nanda of TPWODL, Burla, Sambalpur, (9) Shri Alekha Chnadra Malik, S/O-Late Harekrushna Malik, 335, City Garden, Raghunathpur, Bhubaneswar-751024&(10) The Chief Executive Officer, TPSODL, Courtpeta, Berhampur. All the above named objectors/their representatives along with the representative of Dept. of

Energy, GoO were present during tariff hearing through virtual mode except the representative of M/s. Indian Energy Exchange, M/s. Grinity Power Tech Pvt. Limited & Shri Alekh Chandra Mallick and their written submission filed by them were taken on record and also considered by the Commission.

5. The applicant submitted its reply to issues raised by the various objectors who participated in the hearing and also to the queries/suggestions of the Commission made during hearing.

6. In exercise of the power under Section 94(3) of the Electricity Act, 2003 and to protect the interest of the consumers, the Commission appointed World Institute of Sustainable Energy (WISE), Pune as Consumer Counsel for objective analysis of the licensee's Aggregate Revenue Requirement and Determination of Transmission Tariff proposal for FY 2022-23. The Consumer Counsel presented its views in the hearing.

7. The date for hearing of the matter was fixed for 17.02.2022 at 11.00 AM and it was duly notified in the leading newspaper mentioning the list of the objectors. The Commission has also issued individual notice to the objectors and the Department of Energy, Government of Odisha informing them about the date and time of hearing through virtual mode due to COVID-19 pandemic situation in the State and requesting to the applicant, the objectors and the Government's authorized representative to furnish their individual e-mail ID and Whatsapp number in the address oerc.vc@gmail.com on the previous day of hearing to facilitate providing links for hearing. Accordingly, the applicant, objectors and the representative of DoE, GoO have furnished their e-mail IDs and took part during the proceedings and offered the views/suggestion/proposal in the hearing on virtual mode on the date and time fixed by the Commission.

8. In its consultative process, the Commission conducted a public hearing of the case at its premises on 17.02.2022 and heard the Applicant, Objectors, Consumer Counsel and the Representative of the Department of Energy, Government of Odisha at length.

9. The Commission convened the State Advisory Committee (SAC) meeting through virtual mode on 11.03.2022 at 11.00 A.M at its premises to discuss about the Aggregate Revenue Requirement applications and tariff proposals of licensees for FY 2022-23. The Members of SAC, Special Invitees, the Representative of DoE, Government of Odisha actively participated in the discussion and offered their valuable suggestions and views on the matter for consideration of the Commission.

B. OPTCL's ARR & TARIFF PROPOSAL FOR FY 2022-23 (PARA 10 TO 45)

10. As provided under Regulation 53 (1) at Chapter VIII of OERC (Conduct of Business) Regulations, 2004 and under Clause 19.3 of License Conditions of OPTCL, OPTCL is required to submit its Aggregate Revenue Requirement (ARR) application for the ensuing year before OERC for approval by 30th November each year under Regulation 5.2 of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014. The Commission in its order dated 21.04.2020 in case number 72 of 2019, in exercise of power conferred under Regulation 9.1 of the aforesaid Regulation had extended the applicability of Transmission Tariff Regulations, 2014 until further orders. In compliance to the provisions of OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014, OPTCL has submitted its Aggregate Revenue Requirement & Transmission Tariff application for FY 2022-23 for approval of the Commission.

Categorization of Customers

11. OPTCL owns the transmission system and allows the customer to use it through open access it. All the customers seeking access to OPTCL Transmission System are classified under three categories:

a. Long Term Access Customers (LTA Customers)

A Long-Term Access Customer means the right to use the Intra-State Transmission System for a period of exceeding 7 years but not exceeding 25 years. Based on such premise, four DISCOMs, NALCO, IMFA and BEL happen to be the long-term customers of OPTCL.

b. Medium Term Open Access Customers (MTOA Customers)

Medium Term Open Access means the open access for a period exceeding three (3) months but not exceeding three (3) years.

c. Short Term Open Access Customers (STOA Customers)

Short Term Open Access means open access for a period up to one (1) month at a time. Medium-term open access or short-term open access shall be granted if the resultant power flow can be accommodated in the existing transmission system or the transmission system under execution, provided no augmentation shall be carried out to the transmission system for the sole purpose of granting such open access.

Formulation and Computation of Transmission Charges:

12. The Commission has framed OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 (herein after called “OERC Regulations, 2014”) for determination of Intra-State Transmission Tariff which has been published in Extra Ordinary issue of the Odisha Gazette on 04.12.2014. The said Regulations have been made effective from 04.12.2014 and are to be followed by the Transmission Licensee while formulating its ARR and Transmission Tariff application.

OPTCL has formulated its present ARR & Transmission Tariff application for FY 2022-23 as per the provisions under OERC Regulations, 2014. Regulation 5 of the OERC Regulations, 2014 specifies the Procedure for Tariff Determination and Regulation 8 specifies the Principles for Determination of ARR. As per the Regulation 8.1, the ARR for the Transmission Business for each year shall contain the following items:

(i) Operation and Maintenance expenses;
(ii) Interest and Financial Charges;
(iii) Depreciation;
(iv) Return on Equity;
(v) Income Tax;
(vi) Deposits from Transmission System Users;
(vii) Less: Non-Tariff Income
(viii) Less: Income from Other Business as specified in these Regulations

The various costs involved for carrying out transmission business by OPTCL for FY2022-23 while formulating the ARR and Transmission Tariff have been categorized under the following heads:

I. Fixed Cost

- Operation & Maintenance(O&M) Expenses
- Interest and Financial Charges
- Depreciation
- Return on Equity

II. **Others**:

- Incentive for System Availability

DETAILS OF FIXED COST:

O&M Expenses:

13. Taking into account the proposed expenditure towards Employee Cost including Terminal Benefits, Administrative and General (A&G) Expenses, Repairs & Maintenance (R&M) Expenses, expenses related to auxiliary energy consumption, and other miscellaneous expenses, OPTCL has proposed sum of Rs. 718.10 Cr. under the head of O&M expenses for FY 2022-23 as per the Regulation 8.2 of OERC Regulations, 2014.

Salaries, Wages, Pension Contribution and Other Employee Costs

14. OPTCL submitted that, as on 01.04.2021, the no. of employees of OPTCL was 2577 against the sanctioned strength of 5149 (Executive-1916+Non-Executive-3233). A significant number of posts are lying vacant in different ranks affecting organizational performance. Therefore, it plans to fill up the vacancies in a phased manner and accordingly the recruitment process has been initiated. In the meantime, some additional manpower has been inducted and more will be recruited in coming years.

15. The employee cost details include salaries, dearness allowance, other allowance, stipend, reimbursement of Medical Allowance, house rent allowance, leave travel concession, honorarium, Ex-gratia and misc expenses, staff welfare, wage revision, arrear etc.

16. OPTCL has proposed Rs. 526.53 Cr towards Employee Cost, Terminal Benefits and possible impact of 7thPay Commission including for FY 2022-23. The details are given below:

Table 1
Employee Cost Proposed by OPTCL for FY 2022-23
(Rs. Cr)

Employee cost including Salary, Dearness Allowance etc.	285.65
Terminal Benefit Liability of Employees and Existing Pensioners	228.11
Balance Arrear Salary Payment (50%) to Existing Pensioners	26.01
Less: Capitalization	13.24
Total	**526.53**

Administrative and General (A&G) Expenses

17. OPTCL has proposed Rs. 43.18 Cr towards A&G Expenses for FY 2022-23. The A&G Expenses include property related expenses, communication, professional charges, conveyance and travelling, SLDC charges, licensee fee and material related expenses. OPTCL submitted that the A&G Expenses have shown an increasing trend in recent years due to increase in number of establishments (for smooth operation, maintenance and project execution), price rise, inflation etc. and is on the higher side than the amount approved earlier by the Commission.

Repair and Maintenance (R & M) Expenses

18. The R&M works of OPTCL are taken up in different streams namely O&M, Telecom, Civil Works and Information Technology (IT). The proposed R&M Expenses for FY 2022-23 is Rs.148.04Cr , as shown in the Table below:

Table 2

Repairs and Maintenance Expenses for FY 2022-23(Rs.Cr)

<table>
<tr><th>Particulars</th><th>OERC Approval (FY 2020-21)</th><th>OERC Approval (FY 2021-22)</th><th>Projection (FY 2022-23)</th></tr>
<tr><td>(i) O&M</td><td rowspan="5">115.22</td><td rowspan="5">118.61</td><td>124.53</td></tr>
<tr><td>(ii) Telecom</td><td>4.67</td></tr>
<tr><td>(iii) Civil Works</td><td>14.57</td></tr>
<tr><td>(iv)Information Technology</td><td>4.26</td></tr>
<tr><td>Total R & M Expenses</td><td>Rs. 148.04 Cr.</td></tr>
</table>

19. As on 01.04.2021, OPTCL owns 165 nos. of grid sub-stations of different voltage classes and EHT transmission lines of 14,804.617 ckt. kms. as shown in the Table below. Further, around 27nos of new grid substations are proposed to be commissioned during FY 21-22 and FY 22-23.

Table 3
Sub-station and line details of OPTCL

Sub-Station and Line Details	
400/220/33kV S/S	1
400/220/132/33kV S/S	3
220/132/33kV S/S	23
220/33kV S/S	12
220/132kV S/S	1
132kV Sw. Stn.	22
132/33kV S/S	101
132/33/25kV S/S	1
132/33/11kV S/S	1

Total No. of Sub-Stations	165	
Voltage Level	**Lines (ckt. km.)**	**Bays**
400kV	1196.872	46
220kV	6214.362	378
132kV	7393.383	1051
33kV		1285
25kV		0
11kV		0
TOTAL	**14,804.617**	**2760**

The status of transmission assets of OPTCL as submitted in the Performance Review held during September, 2021 is as follows:

Table 4

	As on 31.03.2016	As on 31.03.2017	As on 31.03.2018	As on 31.03.2019	As on 31.03.2020	As on 31.03.2021	As on 30.09.2021
No. of grid S/S	125	132	140	148	156	165	173
EHT Line ckt. KM	12819	13072	13442	13995	14359.416	14804.617	15316.451
Transformation Capacity (MVA)	15142	16535	17461	19231	20882	22301	22736

Other miscellaneous expenses, statutory levies and taxes (except corporate income tax)

20. **Grid Coordination Committee (GCC) Expenses:** OPTCL proposes Rs. 0.35 Cr towards annual GCC Expenses for FY 2022-23 to deal with the matters specified in the Chapter-11.2 (2) of the Odisha Grid Code (OGC) Regulations 2015.

Interest and Financial Charges

Interest on Loan

21. OPTCL in its ARR application has proposed Rs.149.25 Cr. as interest on loan for FY 2022-23.

Interest on Working Capital

22. As per the Regulation 8.26 of OERC Regulations, 2014, the rate of interest for working capital shall be on normative basis and shall be equal to the SBI Base Rate plus 300 basis points as on 1st January of the preceding year for which tariff is determined. Provided that in case of STU (OPTCL) the Commission shall determine the quantum of working capital if needed depending on the cash flow position of the licensee and shall allow interest on the same. OPTCL submitted that the Working Capital estimated as Rs.

293.47 Cr. The interest on working capital works out to Rs.30.23 Cr considering interest rate of 10.30%.

Rebate

23. OPTCL projected 2% rebate amounting to Rs.24.94 Cr. which is calculated based on the projected ARR for the FY 2022-23.

New projects

24. OPTCL proposes to spend Rs. 1842.63 Cr. during FY 2022-23 towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Civil Works and construction of new transmission projects.

Depreciation

25. OPTCL submitted that as on 31-03-2021, actual Original book value of transmission fixed assets was Rs 3711.71 Cr. [Rs.7237.58 Cr. (total Original) – Rs.512.71 Cr. (up-valuation) – Rs.845.18 Cr. (deposit work) - Rs.605.41 Cr. (grant) – Rs.1562.57 Cr. (fully depreciated)].OPTCL has projected total transmission assets to be added (excluding Grant and Beneficiary Assets) of Rs.877.83 Cr. to be added during the FY 2021-22 and Rs.1095.44 Cr. during FY 2022-23.Considering the same, the original book value of transmission fixed assets of OPTCL will be Rs. 4589.54 Cr. (Rs.3711.71 Cr. + Rs.877.83 Cr.) as on 31-03-2022. Depreciation is estimated as Rs. 263.00 Cr. For FY 2022-23.

Return on Equity

26. At the time of de-merger of GRIDCO effective from 1.4.2005, the equity share capital of OPTCL was stated at Rs. 60.07 Cr. Through infusion of additional capital by the state government, the paid up equity capital of OPTCL has increased to Rs. 1560.99 Cr as on 31.03.2021 as per the Audited Account. Government of Odisha has committed to provide funds of Rs. 340.75 Cr. as equity during FY 2021-22 and Rs 164.76 Cr. during FY 2022-23. During the current year OPTCL has already received Rs. 50 Cr. from the State Govt. towards the scheme Share Capital Investment to OPTCL. The total Equity Capital as on 31.03.2023 will be Rs. 2,076.57 Cr. Accordingly, OPTCL proposes Return on Equity (RoE) of Rs. 312.56 Cr. for FY 2022-23 @ 15.5% as per clause 8.28 of Regulations, 2014 on Rs. 2,016.50 Cr. (2,076.57-60.07).

Income tax

27. As per the Regulation 8.43 of OERC Regulations, 2014, Income tax of the Transmission Licensee shall be recovered from the beneficiaries. As per the Audited Accounts for the FY 2020-21, OPTCL has made provision of Rs.2.16 Cr as Income Tax. The same amount of Rs. 2.16 Cr. has been proposed for FY 2022-23. However, difference if any, as per the Regulation 8.43 and 8.44, shall be adjusted during the true up exercise based on audited accounts.

Transmission cost

28. Considering the proposed cost / expenses under different heads, the Transmission Cost of OPTCL for FY 2022-23 is worked out as Rs. 1500.24 Cr.

Other Costs & Receipts

Incentive for system availability:

29. The Regulation 6.4 of OERC Regulations, 2014 specifies the "Operational Norm" applicable for transmission system for recovery of full annual transmission charge by the Transmission Licensee. The Normative Annual Transmission System Availability Factor (NATAF) shall be 98.50% for AC system for recovery of full Annual Transmission Charges. OPTCL has filed the calculation of Transmission System Availability Factor (TAFY) for the year 2020-21 as 99.98%. The computation and the TAFY figure have been verified and certified by SLDC. In accordance with the formula prescribed in Regulation 6.5, OPTCL has worked out incentive of Rs. 10.73 Cr. towards system availability for the year 2020-21. Hence, OPTCL proposed Rs. 10.73 Cr towards Incentive for System Availability.

Miscellaneous receipt:

30. OPTCL submitted that compared to earlier years, the earning from Supervision Charge is drastically reduced. The number of applicant industries is very less for which revenue from Supervision Charge during the balance period of FY 2021-22 would not be appreciable. Hence, in line with the trend of revenue earning during first six month of FY 2021-22, OPTCL proposed Rs. 263.83 Cr. under the Miscellaneous Receipt from different sources such as inter-State wheeling, STOA and STU charges, Bank interest, supervision charge, other Miscellaneous receipts etc. for the FY 2022-23.

Summary of ARR proposed by OPTCL for FY 2022-23

31. Considering all the proposed expenses and receipts as explained in foregoing paragraphs, OPTCL has filed its Aggregate Revenue Requirement of **Rs.1247.14 Cr** for FY 2022-23 for approval of the Commission. Details are shown in the table below:

Table 5

Summary of Aggregate Revenue Requirement of OPTCL for FY 2022-23

ITEMS	**Proposal of OPTCL for FY 2022-23**	
A) FIXED COST		
1. O&M Expenses		**718.10**
(i) Employees Cost including Terminal Benefits	526.53	
(ii) A&G Cost	43.18	
(iii) R&M Cost	148.04	
(iv) Expenses related to auxiliary energy consumption	0.00	
(v) Other misc. expenses, statutory levies and taxes (GCC)	0.35	
2. Interest & Financial Charges		**204.42**
(i) Interest on Loan Capital	149.25	
(ii) Interest on Working Capital	30.23	
(iii) Rebate	24.94	
3. Depreciation		**263.00**
4. Return on Equity		**312.56**
5. Income Tax		**2.16**
Sub-Total (A)		**1500.24**
B) Others		
Incentive for system availability		**10.73**
Total Trans. Cost (A+B)		**1510.97**
C) Less Misc. Receipts		**263.83**
D) ARR to be recovered from LTOA Customers i.e. **OPTCL's Aggregate Revenue Requirement**		**1247.14**

Transmission loss

32. OPTCL submitted that the transmission loss is purely a technical loss and dependant on the location of the generation sources, system configuration and power flow at different load centres. Further, the expected increase in power flow in its transmission network due to implementation of various Central & State sponsored projects will contribute to increase in the transmission loss. OPTCL has been able to reduce the transmission loss year over year by commissioning a number of new transmission projects and adopting innovative schemes under Master Maintenance Plan during last few years. The actual

transmission loss in the OPTCL's transmission system from April'21 to September'21 is 3.13% against Commission's approval of 3.00% for FY 2021-22. OPTCL expects the loss level to remain around 3.15% in the current year. Accordingly, OPTCL proposes 3.10% transmission loss during FY 2022-23.

OPTCL revenue receipt and deficit in the proposed ARR for FY 2022-23

33. OPTCL, on the receipt of recent communication from DISCOMs, has taken realistic demand projection of all four DISCOMs totalling 28397MU (3241.67MW) for FY 2022-23 which is different from Commission approval figure in LTDF order dated 15.01.2019. OPTCL envisages 330MU energy to be transacted in DISCOMs 33kV & 11kV network for which OPTCL is not entitled to receive any transmission charge as per Commission's order. Hence, total MU to be transmitted in OPTCL network gets reduced to 28067 MU (28397-330) from the total demand projection of DISCOMs and Railways.

During FY 2022-23, OPTCL will earn revenue from the LTOA Customers in the following manner:

i. By charging the rate applicable on DISCOMs of 28067 MU (3204.00MW).

ii. By charging the rate applicable on LTOA customers like IMFA, NALCO & BEL for supply of 450 MU (51.37 MW) as Emergency Power & Back-up Power.

The revenue to be earned by OPTCL from wheeling of 28517 MU (28067+450) at the existing transmission tariff of 28 P/U will be Rs. 798.48 Cr.

34. **Excess/Deficit of Revenue Requirement:**

OPTCL has projected revenue deficit of Rs.448.66 Cr. considering the ARR proposed and the revenue to be earned from wheeling of 28517 MU at the existing transmission tariff of 28 P/U.

Proposal for revision of Transmission Tariff/ Wheeling Charges

35. OPTCL submitted that as the same cannot be met from the existing transmission tariff of 28 P/U; Therefore, OPTCL has requested to the Commission for approval of:

1. Aggregate Revenue Requirement of Rs.1247.14Cr.

2. Recovery of Transmission Charge @ 10,495.93Rs/MW-Dayi.e. 43.73P/U.

3. Transmission Loss for wheeling as 3.10% on energy drawl

Open Access Charges

36. The new regulation “OERC (Terms and conditions of Intra state open access) Regulations 2020” has been published by OERC vide Odisha Gazette on dated 02.11.2020 in which Para 20 (2) of Chapter 5 specifies the details of Open Access Charges. Provided that transmission charges shall be payable on the basis of contracted capacity in case of long-term and medium-term open access consumers and on the basis of scheduled load in case of short-term open access consumers.

37. The Commission vide Letter No. DIR (T)-332/2008/77 dated 01.02.2021 clarified that the DISCOMs do not come under the new regulation “OERC (Terms and conditions of Intra state open access) Regulations 2020” and they are governed under OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014. Therefore, the transmission charges for the LTOA customers are to be recovered as under:-

(i) From four DISCOMs (i.e. TPCODL, TPWODL, TPNODL & TPSODL) as per the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014

[For FY 2022-23, the DISCOMs projection 28067MU (3204MW)]

and

(ii) From other LTOA customers (i.e. NALCO, IMFA & BEL) as per OERC (Terms and conditions of Intra state open access) Regulations 2020.

[For FY 2022-23, NALCO, IMFA & BEL have projected their respective demands as 80 MU (9 MW), 360 MU (41 MW) and 10MU (1MW).

38. OPTCL has proposed that the Open Access charges for FY 2022-23 as shown in table below.

Table 6

Open Access Charges Proposed by OPTCL for FY 2022-23

DETAILS	In Rs. Per MW approach
Net Aggregate Revenue Requirement (Rs. Cr.)	1247.14
Proposed Energy to be transmitted in OPTCL Network (MU)	28517
Power Flow (Equivalent of 28517 MU) in MWs	3255
Proposed Transmission Tariff (Rs/MW-Day)	10,495.93
Proposed Transmission Charges (Paise/unit)	43.73

Reactive energy charges

39. The Commission in Para 16 (page 5) of the order dated 05.02.2019 in Case No. 50/2017 has inter alia viewed that the provisional reactive energy charges of 3 paise/kVARh as allowed in ARR 2018-19 order continue for time being till a final justification is submitted by OPTCL in consultation with the stakeholder. Accordingly, OPTCL is holding consultation with the stakeholders at regular intervals and some more time is required in this regard. Therefore, OPTCL proposes that 3paise/ kVARh may be approved provisionally as Reactive Energy Charges FY 2022-23.

Levy of Grid Support Charges (GSC):

40. An application has been filed before the Commission on 23.09.2020 for determination and approval for levy of Grid Support Charges for industries having Captive Generating / Cogeneration plants and running in parallel with the Grids of OPTCL. The same is registered as Case No.-52/2020 and presently under consideration of the Commission. If the same is decided in favour of OPTCL, the major portion of accrual from GSC shall be passed on to the end users resulting further reduction in transmission cost. However, the same is subjected to necessary clearance by the Hon'ble Orissa High Court in W.P(C) No-2220 of 2021 & W.P(C) No-16513 of 2021 filed by M/s Vedant Limited and M/s CCPPO Odisha respectively.

True Up Application for FY 2020-21:

41. As per Regulation 7.1 (Truing up of Capital Expenditure and Tariff) of OERC Regulations, 2014, OPTCL may file an application each year for truing up along with the tariff petition filed for the next tariff period and the Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period. OPTCL submitted that the annual accounts for FY 2020-21 has been duly audited. OPTCL will file the true up application for FY 2020-21 separately.

Rebate

42. On payment of monthly bill, the Open Access Customer shall be entitled to a rebate of 2% of the amount of the monthly bill (excluding arrears), if full payment is made within two working days (excluding holidays under N.I. Act) of the presentation of the bill and 1% of the amount if paid within 30 days of the presentation of the bill.

Delayed Payment Surcharge

43. The monthly charges as calculated above together with other charges and surcharge on account of delayed payments, if any, shall be payable within 30 days from the date of bill. If payment is not made within the said period of 30 days, delayed payment surcharge at the rate of 1.25% per month shall be levied pro-rata for the period of delay from the due date, i.e. from the 31st day of the bill, on the amount remaining unpaid (excluding arrears on account of delayed payment surcharge).

Duties and Taxes

44. The Electricity Duty levied by the Government of Odisha and any other statutory levy/ duty/ tax/ cess/ toll imposed under any law from time to time shall be charged over and above the tariff.

CAPEX for New projects

45. OPTCL proposes to spend **Rs.1842.63 Cr.** during FY 2022-23 towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works and construction. The summary of proposed CAPEX under various wings is furnished in the Table below:

Table 7
Projected CAPEX for new projects - FY 2022-23

Particulars	Amount (Rs. Cr.)
(i) Telecom Wing	**29.30**
(ii) Existing Assets (O&M Wing)	**169.12**
(iii) Information Technology (IT Wing)	**25.34**
(iv) Civil Wing	**57.99**
(v) New Transmission Projects (Construction Wing)	**1560.88**
Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)]	**Rs.1842.63 Cr.**

C. VIEWS OF CONSUMER COUNSEL, ON TRANSMISSION TARIFF PROPOSAL OF OPTCL FOR 2022-23 (PARA 46 TO 49)

46. In the beginning of the hearing, the Licensee was allowed to give a power point presentation regarding its ARR and tariff application for the FY 2022-23. World Institute of Sustainable Energy (WISE), Pune appointed by Commission as Consumer Counsel presented its analysis and put-up queries & objections regarding ARR and tariff filing of OPTCL.

Analysis of the Proposal by Consumer Counsel

47. WISE acting as Consumer Counsel had analysed the application of the licensee and important observations are presented below.

Annual Revenue Requirement

48. OPTCL has projected its revenue requirement for FY 2022-23 at about 57.28% more than that approved for FY 2021-22. In FY 2021-22, the total ARR was increased by 11.08% from approved ARR of FY 2020-21. It includes the increase in Employee Cost (14.99%) R&M Cost (24.81%), A&G cost (42.27%), interest on loan capital (57.94%), depreciation (12.9%) and incentive (114.6%). The comparative figures of components of ARR are given in the table below.

Table 8
Comparative Annual Revenue Requirement of OPTCL (Rs. Crore)

	Approved (FY 2020-21)	**Approved (FY 2021-22)**	**Proposed (FY 2022-23)**	**Increase (2021-22 vs 2020-21)**	**Increase (2022-23 vs 2021-22)**
Employees Cost incl. Terminal Benefits	415.87	457.88	526.53	10.10%	14.99%
A&G Cost	28.72	30.35	43.18	5.68%	42.27%
R&M Cost	115.22	118.61	148.04	2.94%	24.81%
Other misc. expenses, statutory levies and taxes(GCC)	0.5	0.35	0.35	-30.00%	0.00%
Interest on Loan Capital	26.28	94.50	149.25	259.59%	57.94%
Interest on Working Capital	0	0	30.23		
Rebate	14.28	15.86	24.94	11.06%	57.25%
Depreciation	195.59	232.95	263.00	19.10%	12.90%
Return on Equity	123.95	131.70	312.56	6.25%	137.33%
Income Tax	0.13	0	2.16		
Incentive for system availability	5.00	5.00	10.73	0.00%	114.60%
Total	925.54	1087.20	1510.97	17.47%	38.98%
Less Misc. Receipts	211.70	243.28	263.83	14.92%	8.45%
Less Surplus True up	0	51.00	0		
ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement	713.84	792.93	1247.14	11.08%	57.28%
Transmission Charges (P/U)	25	28	43.73	12.00%	56.17%

49. The significant increase in all expenses as mentioned above would impose excessive burden on the general consumers of the state, as this would be passed on to the ultimate users through GRIDCO and DISCOMs. Transmission loss should be fixed at a reasonable level. Therefore, there is need to review the following expenses for the benefit of the consumers:

- Employee cost including terminal benefits and pension,
- R&M expenses specifically on engagement of Security personnel (26.8% of O&M wing's R&M expenses),
- A&G expenses,
- Interest on new loan to be disbursed to OPTCL and old State Government Loans,
- Depreciation on addition in capex proposed for FY 2022-23,
- RoE on equity not received, Interest on working capital, and
- Incentive.

D. VIEWS OF OBJECTORS AND REJOINDER BY OPTCL ON TRANSMISSION TARIFF APPLICATION OF OPTCL FOR FY 2022-23 (PARA 50 TO 206)

The issue wise views of the objectors and rejoinder by OPTCL placed before the Commission are summarised below:

Applicable Regulations and Methodology

Views of Objectors

50. OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 was notified by OERC for the first control period of five years and that expired on 31st March 2019. So without any valid new Regulations, the transmission tariff and SLDC charges have been determined based on the above expired regulations without any consideration to the realities, events, errors, and deficiencies occurred and recorded since then. Though there are certain deficiencies in the aforesaid Regulations which are proved incapacitated to redress the burning issues raised by the Stakeholders, the Commission without taking any remedial actions have extended the validity period since then and the same is being followed. The Objector requested to notify the required Transmission Tariff Regulations for the current tariff period; so that, the deficiencies of previous regulations could be rectified.

51. CERC has scrapped the Postage Stamp Method to determine transmission charges and notified the application of the hybrid method in its Regulations to determine transmission charges; whereas, OERC is under obligation of Section 61(a) of the Act to follow the method adopted by CERC. The hybrid methodology is nothing but a hybrid of Marginal Participation Method and Average Participation Method. The Commission does not apply the hybrid method as approved and adopted by CERC and hence a clear violation of the Act and Regulations no 3.1. The Commission should direct the

Transmission Licensee to submit the details of the ARR required for the implementation of the hybrid method of determination transmission tariff of OPTCL.

52. The transmission charges determined by CERC varies in between the line segments of CTU whereas special consideration is given to the capital investment and O&M and other costs done for the specific line segment. Transmission charges determined by CERC are shared by the users of the line segment according to their reserved / used capacity. Most surprisingly, GRIDCO is paying transmission charges to Central Transmission Utility (CTU) on the basis of hybrid method; whereas, the same is higher than the postage stamp method but subject to vary as per the line segment. It is requested to adopt the hybrid method of pricing transmission charges.

53. The present method does not consider the factors like capacity of the transmission lines both utilised and unutilised, line voltage, distance and direction of power flow and investment in the particular line segment. The transmission tariff framework should be sensitive to distance, direction, capacity of the line segment and related quantum of power flow as per the Clause No. 7.1 of the National Electricity Policy (NEP) under heading "Transmission Pricing". Sharing of transmission charges shall be done in accordance with such tariff mechanism. Further, the Tariff Policy requires that transmission charges, under these broad guidelines, can be determined on MW per circuit kilometre basis, zonal postage stamp basis or some other pragmatic variant; the ultimate objective being to get the transmission system users to share the total transmission cost in proportion to their respective utilization of the transmission system.

54. The Petitioner - OPTCL is losing huge revenue due to the primitive Postage Stamp Method considered by the Commission. The application of the said method is not only illegal but also causing huge revenue loss for OPTCL. The revenue loss due to unlawful approach compels the DISCOM and customers to pay the cost for above laxities. Therefore, hybrid method on the instant proceeding may be adopted to determine transmission tariff of OPTCL.

55. The Act, Policy and Regulations have laid down necessary provisions to make the tariff. The exercise like truing up and performance review based on audited / provisional financial statement must be carried out by SERCs prior to proceeding to determine the tariff for ensuring year. The Commission while determining transmission tariff and SLDC charges is giving high weightage to the estimated and projected figure than the

actual cost and revenue incurred by the licensee. The prudent and realistic approach to tariff requires the Commission to ask the Licensee to submit the actual data of previous year in view of Section 62(2) of the Act.

56. The provisions of the Act and the National Tariff Policy give emphasis for determination of multiyear tariff for the licensed power utilities and generation companies. The multiyear tariff approach was done by OERC in the first decade but in the second decade of this century the same was discontinued despite notification of required Tariff Regulations, 2014 for the first control period of 2014-19. Regulations 4 of the Tariff Regulations, 2014 speaks about business plan for the control period 2014-19. The instant tariff proceeding is carried out for the second control period of 2019-24 for which nothing long term business plan is either approved by OERC or nothing parameters of the approved business plan is cited. The above provisions of the expired Tariff Regulations, 2014 is grossly unattended by the Commission in the instant proceeding, though expired and extended. The true intent behind passing out multiyear tariff principles in Section 61(f) of the Act and in National Tariff Policy is grossly defeated in the regulatory regime of electricity in Odisha. Neither the control period approved data and nor the control period actual data is taken into consideration in the proceedings of OERC.

Submission by OPTCL

57. OPTCL has not submitted any specific comments in this regard.

Transmission Loss & Energy Audit

Views of Objectors

58. In conformity with the power sector reform, OPTCL need to reduce the transmission loss significantly from the proposed level of 3.1%. One of the Objector has proposed to approve transmission loss of 2.5%.

59. An objector submitted that in spite of the substantial investment made in construction of new transmission lines and substations etc., OPTCL has projected transmission loss at a higher level without any proper study and therefore, same should be fixed at 2.75%. The consumers cannot be burdened with high transmission loss on account of the inefficiency of OPTCL particularly due to construction of a very large number of under loaded grid sub-stations and failing in proper distribution of load in its transmission lines. Under loaded grid sub-stations and transmission lines results in high transmission

loss, due to the fixed losses in Power Transformers, CTs and PTs. The construction of large number of under loaded grid sub-stations without any considerations of technical requirements is the root cause of non-reduction of the high transmission losses.

60. The transmission charges and losses which were in declining trend are now on increasing trend, which shows that OPTCL has taken some unwise decisions in the recent past. A comparative table of transmission charges and losses with neighbouring states may please be furnished.

Submission by OPTCL

61. The actual transmission loss for the period April to September 2021 has been calculated to be 3.13% as shown in OERC approved T-6 format of the ARR & Tariff application for FY 2022-23. This figure is less than the actual transmission loss of 3.22% that has occurred during last year i.e. FY 2020-21. In fact, the Commission had set a target of 3.00% as Transmission loss against 3.15% projected by OPTCL for FY 2021-22. OPTCL could not achieved the loss target set by the Commission yet.

62. In OPTCL system, the transmission loss is purely technical loss and a function of real time injection of power by a number of generators, system configuration and power flow requirements at different load centres. It depends on many parameters / factors such as distance and mismatch between generation and load centres, types of load, reactive power compensation, voltage profile, seasonal variation of demand load etc. Thus, OPTCL does not have much control over the same at any point of time. The transmission system of OPTCL operates as an integral part of the Eastern Region Grid to serve the internal demand of the State as well as to carry out import and export of power depending upon the system demand.

63. As a matter of fact, some grid s/s and lines are being constructed in many remote and deprived areas funded under Central & State Government schemes in the interest of public. Additional length in EHT lines and Sub-stations thus created in such areas remain under-loaded which are also responsible for increase in transmission loss.

64. In spite of the above, the Transmission Loss in OPTCL network is in a gradually reducing trend over the years i.e. from 3.73% during 2014-15 to 3.22% in 2020-21 and has remained 3.13% within 1st six months of FY 2021-22 mainly due to addition of infrastructure and various system strengthening works taken up by OPTCL. The actual losses incurred over the years by OPTCL have been within the margin allowed by the

Commission up to the year FY 2017-18. However, in the FY 2018-19, the Commission set the loss at 3.00% though the projected transmission loss was at 3.25% and thereafter the commission has been pegging the transmission loss at the same level though loss projected by OPTCL remained in a downward trend. The approved and actual loss data is given below.

Table 9
Actual and approved transmission loss of OPTCL of past years

Year	Tr. Loss proposed	OERC Approval	Actual
2014-15	3.75%	3.75%	3.73%
2015-16	3.75%	3.75%	3.67%
2016-17	3.70%	3.70%	3.58%
2017-18	3.50%	3.50%	3.34%
2018-19	3.25%	3.00%	3.28%
2019-20	3.25%	3.00%	3.25%
2020-21	3.20%	3.00%	3.22%
2021-22	3.15%	3.00%	3.13% (Apr-Sep' 21)

65. From the table given above, it is also clear that each year upto FY 2017-18, the transmission loss achieved by OPTCL has remained at a level lower than the approved figures by the Commission and from FY 2018-19 the target set by OERC appears to be very stiff which was hard to achieve though the trend of lesser transmission loss year after year has been achieved.

66. OPTCL submitted that the transmission losses depend upon the voltage level at which the power is transmitted. The transmission losses are higher where the percentage of lower voltage (132kV or below) transmission system is higher. A comparison of the average transmission losses of a few state transmission licensees and their corresponding transmission assets at low voltage level (132 kV) is shown below.

Table 10
Transmission Loss (%) Of Other States of Low Voltage Lines Upto 132kV For FY 2019-20

States	% of Low voltage Lines (up to 132 kV)			
	Transmission Lines up to 132kV (Ckm)	Total Transmission Lines (Ckm)	% of Transmission Lines up to 132kV	Actual Transmission Losses for FY 2019-20 (%)
Andhra Pradesh	11,435	28,432	40%	2.91
Maharashtra	19,936	48,321	41%	3.17
Rajasthan	17,852	40,203	44%	3.33

States	% of Low voltage Lines (up to 132 kV)			
	Transmission Lines up to 132kV (Ckm)	Total Transmission Lines (Ckm)	% of Transmission Lines up to 132kV	Actual Transmission Losses for FY 2019-20 (%)
Odisha (OPTCL)	6,979	14,359	49%	3.25
Uttar Pradesh	23,732	44,044	54%	3.43
Gujarat	39,034	65,608	59%	3.72

67. OPTCL submitted that the transmission loss (technical) is bound to happen as per law of physics and is very difficult to reduce after a certain level. Also, at all India level, the transmission loss of utilities has remained at more than 3.00% and state wise data is given below for kind appreciation of the commission.

Table 11

Approved Transmission Loss of different states during FY 2021-22

Name of states	Tr. loss proposed by Utility	Tr. loss approved by State Commission
Uttar Pradesh (UPPTCL)	3.33%	3.33 %(UERC)
Assam (AEGCL)	3.35%	3.29% (AERC)
Andhra Pradesh (APTRANSCO)	3.08%	3.06% (APERC)

68. OPTCL, as a responsible State Transmission Utility (STU) is making all-out effort to reduce the transmission loss further by undertaking various system operation and loss reduction measures by implementing the emerging technologies like system Automation, load bifurcation, modification in system configuration, procurement of more efficient equipment, Digitalization of grids by using Bay Control units, Protection system improvement using Busbar protection and Event Logger, Conversion of Radial to Ring system, Advanced Metering Infrastructure etc. to bring it to 3.10% by FY 2023-24 as proposed in Business plan of OPTCL for the FY 2019-20 to 2023-24.

Steps taken for Energy Audit

Views of Objectors

69. OPTCL has not yet identified the areas where loss is maximum to formulate action for reduction of loss. OPTCL should have under taken energy Audit to ascertain the exact quantum of loss. Proposing the transmission loss arbitrarily without giving the breakup

of the losses in different components of transmission system is not appropriate for the S.T.U. The standard performance of STU should be monitored by third party auditor.

Submission by OPTCL

70. OPTCL has already installed 2141 nos. of 0.2s accuracy class, ABT Compliant Energy Meters at identified points to meet the requirement for Energy Auditing as well as Billing. Monthly data enables OPTCL for assessing the individual transmission element wise losses (i.e. across Power Transformers, Auto Transformers & EHT lines etc.). Sub-station wise energy flow calculations are carried out and accordingly remedial action is being taken. However, discrepancies in respect of Metering Convention & Accuracy Class of Instrument Transformers are identified at certain locations and are being sorted out. By measuring the quantum of flow of energy in lines and substations, improvement in the system is monitored on monthly basis with respect to previous baseline data acquisitioned. In view of the reducing trend of transmission loss level, OPTCL expects the loss level to remain around 3.15% in the current year. Accordingly, OPTCL has proposed transmission loss of 3.10% during FY 2022-23. However, OPTCL expects the transmission loss will be further reduced with the successful implementation of all the ongoing projects.

Human Resource Expenses/ Employee Cost

Views of Objectors

71. While proposing net employee cost, OPTCL planned for induction and regularization of 397 employees and estimated retirement of 126 employees. The growth of basic salary over previous year has been considered with average no of employees of both existing and new recruits. As a result, projected basic salary has been inflated by Rs.7.54 Cr. due to prorating/averaging the existing employee who have higher salary with newly recruited employees having less salary.

72. OPTCL has projected HRA @ 19%; however, from the actual expenses of FY 2020-21, it can be seen that HRA is only 8% of basic (Rs.14.21 Cr. against Basic of Rs.177.59 Cr.). So, HRA for FY 2022-23 needs to be corrected in line with actual expenses of FY 2020-21.

73. OPTCL has estimated 281 nos. (155 nos. for FY 21-22 & 126 nos. in FY 22-23) of employees would be retiring during FY 21-22 & 22-23. Considering the above retirement plan of OPTCL, the projected terminal benefit expenditure seems to be in

much higher side. Considering average monthly pension of Rs.40000 per month, the additional expenditure on pension would be Rs.10.46 Cr. (155 employees for 12 months and 126 employees for 6 months). Considering actual payment of Rs 138.17Cr during FY 2020-21, the pension or terminal benefit disbursement for FY 22-23 would be around Rs.148.63 Cr.

74. Considering retirement of 126 nos. of employee in FY 22-23 and average basic salary of Rs.60000/- p.m. of an employee, total leave salary expenditure for 300 days (i.e. 10 month) would be Rs. 7.56 Cr.

75. OPTCL has capitalised employee cost of Rs. 13.24 Cr., which seems to be in lower side against total projected capex of Rs. 1842.63 Cr. So, if 5% of the employee cost would be capitalised, then it would be Rs.22.34 Cr. So, as per TPWODL, employee cost should be considered as Rs.424.39 Cr.

76. An Objector requested OPTCL to submit reasons of non-utilisation of funds allocated for O&M work. Proper maintenance has not been carried out by OPTCL since 58% of regular posts are lying vacant. OPTCL management have not yet prepared a regulation for regularise the contractual / outsource workers and not even prepared the yardstick as per the increase in its system. The Objector requested OPTCL to produce the list of outsource workers - category wise and division wise with the name of contactor engaged in OPTCL. Further, OPTCL has to produce the detailed expenditure incurred in O&M work – (i) O&M, (ii) Telecom, (iii) Civil, (iv) Technical, since 2010 to 2021.

Submission by OPTCL

77. OPTCL has projected Rs.526.53 Cr. as Employee Cost for FY 2022-23. for FY 2022-23, which includes Rs.26.01 Cr. towards balance 50% of 7th Pay Commission arrear for existing employees. Apart from that, in line with the notification of GoO in the budget provision for F.Y-2022-23, OPTCL has proposed the Dearness Allowance (DA) of 38% against approved 29% for FY 2021-22. With annual increment of the existing employees and induction of new employees, the corresponding expenditures related to the Basic Pay, DA, HRA etc. will increase proportionately. Therefore, the proposal of OPTCL is quite realistic and justified.

78. It is observed that the objector M/S TPWODL is not consistence with the figures. In one instance they have considered the average monthly salary as Rs.80,000/- per employee and in other instance they considered Rs.60,000/- per employee. Therefore, the

assumption considered by the objector is confusing and has no merit. Hence, the query of TPWODL is not be considered.

79. At present OPTCL does not have any contractual appointment for Group-B. The lists of outsourced workers engaged in OPTCL are given in table below.

Table 12

Category wise Outsourced workers

Sl No	Name of Contractor / Agency	Jhulla	Tower Climber
1	Alekh Bharati Construction Pvt. Ltd. BBSR	25	37
2	M/s ASB Energy System & Construction Pvt. Ltd.	47	79
3	M/s Jagamohan Pradhan	11	15
4	M/s KBS El-Cons & Consultants Pvt. Ltd.	10	14

Table 13

Outsourced Personnel engaged through M.K. Routray

Sl No.	Category	Total No.
1	GTRP (Electrical & Telecom)	20
2	JTRP (Electrical & Telecom)	21
3	Data Entry Operator	29
4	Nurse (Female)	01
5	CUG Asst.	01
6	Driver	03
7	Receptionist-cum-Care Taker	02
8	Caretaker	01
9	Gardener	04
10	Attendant	41
11	Messenger	01
12	Cook	01
13	Sweeper	02
	Total	**127**

80. Under other allowance, OPTCL has projected Rs.98 lakhs towards Night Shift Allowances, Physical Handicap Allowances, ABT Allowances, Cash Allowances, Computer Allowances, Estimator Allowance, Gas Allowances, Green Card Allowances, Shift Allowances, Special Allowances, Training Allowances, Typing Allowance,

Washing Allowances, Education Allowances, remote posting allowance etc. Therefore, assumption of the objector as the other allowance shall be Rs.66 lakhs has no basis and not to be considered.

81. Further, it may be noted that all the allowance allowed to the employees of OPTCL are applicable to the employees of erstwhile WESCO utility now transferred to TPWODL. The HRA claimed by OPTCL is about 16% of the Basic Pay. This has been objected by TPWODL and calculated at 8%. However, TPWODL in their ARR Application has claimed the HRA @ 18%. Therefore, the submission of the objector is not only confusing but also misleading.

82. As noted total expenses claims towards Staff Welfare Expenses is Rs.7.10 Cr. which includes Rs.3.80 Cr towards premium of Group Insurance Scheme and balance Rs. 3.30 Cr towards uniform, liveries, Sports, recreation and cultural activities. The same may please be considered.

83. It may be noted that the employee strength of OPTCL (2557) as on 01.04.2021 was more by 256 than TPWODL (2321). But it is observed that their projection (Rs.629.06 Cr) is Rs.102.53 Cr. more than OPTCL's projection.

A&G expenses

Views of Objectors

84. An objector has submitted that total 9 nos. of Grid sub-stations (6% increment) and 245 Ckt Kms (2% increment) has been added during last one year. However, OPTCL has proposed Rs 43.18 Cr against A&G expenses. The actual expenses till September, 2021 is Rs 14.53 Cr. So, prorating the same for full year with 7% increment, the A&G Expenses would be Rs 31.09 Cr for FY 22-23.

Submission by OPTCL

85. The number of establishments / offices of OPTCL has increased over a period of time commensuration with the increase in asset by addition of Grid Sub-stations, Ckt. of lines and MVA capacity for better supervision in construction, Operation and Maintenance and for maintaining quality of supply. Hence, A&G expenses should be increased proportionately. The objector has highlighted about Rs.43.18 Cr which includes travelling and conveyances of Rs.14.07 Cr. On the other hand, the same objector has projected Rs.12.67 Cr towards travelling and conveyances in their ARR**.** The area of operation of OPTCL is throughout the State where as the area of operation of the

objector is limited to 9 Nos. of revenue district only. Considering this the OPTCL projection is justified and on lower side. Similarly, the A&G expenses has been calculated as Rs.31.09 Cr. by prorating expenditure upto Sep-21 with 7% growth. However, the objector has projected Rs.151.76 Cr. for the FY 2022-23 in its ARR application and expenditure upto September, 2021 is Rs.50.99 Cr. Therefore, considering the above the projection of OPTCL is more legalistic and justified and the objection has no merit.

R&M expenses

Views of Objectors

86. OPTCL has projected 25% increase in R&M expenses from approved amount of FY 2021-22. The actual R&M expenses till September, 2021 is only Rs 37.31 Cr. Prorating the same for the whole year, the amount of R&M expenses for FY 2021-22 would be around Rs.75 Cr. So, the amount for FY 22-23 would be around Rs.80 Cr. The Commission may take appropriate decision as per norms of the existing Regulations.

87. OPTCL has included the cost of equipment of capital nature under Repair and Maintenance intentionally, to recover the cost of these equipment within one year, thus burdening the consumers with high transmission tariff. Such equipment should form part of the comprehensive Renovation and Modernization of lines and sub-stations and the cost thereof is to be recovered within the approved life of those equipment.

88. Further, instead of replacement of equipment in Grid Sub-stations in piece-meal basis and for augmentation of capacity of the transmission line, a comprehensive Renovation and Modernization scheme with life extension has to be prepared after making the Residual Life Assessment (RLA) study of the various equipment in the Grid sub-station and lines. The Commission may give direction to OPTCL to carry out the Residual Life Assessment (RLA) study of the various equipment in lines and substations and prepare the Renovation and Modernisation Schemes in a time bound manner.

Submission by OPTCL

89. Year wise OERC approval and actual expenditure towards R&M for the period from 2013-14 to 2021-22 (up to date) are given in the Table below.

Table 14
Approved and Actual R&M Expenses
(Rs. Cr.)

Financial Year	OERC Approved	Actual
2013-14	60.00	70.20
2014-15	93.00	100.31
2015-16	108.00	113.35
2016-17	110.59	149.53
2017-18	124.97	137.83
2018-19	111.00	115.13
2019-20	115.22	125.53
2020-21	115.22	103.07
2021-22 (up to date)	118.61	46.29

90. From the above, it is observed that OPTCL has been effectively utilizing the R&M expenditure approved by OERC and achieved Transmission system availability more than specified.

91. TPWODL projected that the R&M expenses would be Rs. 80 Cr. with the assumption that the Actual R&M Expenses till Sep-21 is only 37.31 Cr. and prorating the same the amount would be around Rs.75 Cr. or say Rs.80 Cr. Generally major R&M works has been carried out during the 2nd half of the year. Therefore, the expenditure in 1st half is on lower side. Further, for the FY 2022-23 TPWODL has projected R&M expenses as Rs. 278.52 Cr. and their expenditure upto Sep-21 is Rs.45.37 Cr. Considering the above, the projection of OPTCL is more legalistic and justified.

Interest on loan capital

Views of Objectors

92. One of the Objectors submitted that the Government of Odisha bonds may not be considered as interest in line with the earlier tariff order. The Objector further submitted that there is now a significant reduction of interest rate in banks due to demonetization and COVID-19. OPTCL may consider switching over from loan with higher interest to loan with lower interest to reduce interest on loan capital.

Submission by OPTCL

93. OPTCL has projected interest on loan Rs, 149.25 Cr. out of which Rs. 120 Cr. is towards interest on existing loan and Rs. 29.25 Cr. is on new loan. The loan available from PFC will be redeemed completely by the FY 2025-26 and 10 out of 15 loans of the

REC loan will be redeemed by FY 2024-25. Due to stringent pre exit clause, the swapping of the above loan is not feasible. However, in case of new loans OPTCL is negotiating with the Banks and FIs to avail the loan at cheaper rate. Calculation of interest on all loan except JICA @ 7.25% by TPWOLD is not as per the terms and condition of loan and will be a loss to OPTCL. Therefore, the calculation of interest on loan as Rs.122 Cr. has no merit and not to be considered.

Depreciation

Views of Objectors

94. An Objector submitted that in the present proceeding, depreciation cost of OPTCL is inclusive of Govt grant asset. The Government grant asset is kept in the liability side of the Balance Sheet under the heading Deferred Income. While calculating the depreciation on the GFA, the Commission does not exclude the Deferred Income from the resulting depreciation. Therefore, the Commission should deduct the Deferred Income from GFA and allow depreciation on Net GFA.

95. OPTCL does not submit the amount of depreciation reserve kept in their books. Without assessing the volume of accumulated depreciation reserve, it is imprudent to pass out further depreciation in tariff.

96. Another Objector pointed out that OPTCL has projected depreciation of Rs 263 Cr with projected addition of Rs 1095.44 Cr in GFA during FY 22-23. However, as per practice, depreciation is being allowed on opening GFA only. The same may be examined.

Submission by OPTCL

97. In total depreciation projection of Rs. 263.00 Cr., OPTCL has not claimed any depreciation amount on Assets created through Grants.

98. The accumulated depreciation is not the Capital Reserve for the company but a charge in the profit and loss statement of the company for the diminution in the value of the assets. Further, the term depreciation reserve has no relevance on determination of depreciation for tariff purpose, as the depreciation is the recovery of the cost of the Assets invested as per the provision of the Regulations.

99. Regulation 8.36 states that Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rate basis. Therefore, calculation of depreciation on

the opening GFA as projected by TPWODL/ TPSODL is not as per the regulation and should not be considered.

Return to Equity

Views of Objectors

100. An Objector submitted that CERC regulations state that Income tax shall not be direct pass through in the tariff. The approved Return on Equity may be grossed up with the tax rate and same is passed through in tariff. The income tax passed out in the ARR must not dishonour the CERC regulations.

Submission by OPTCL

101. Regulations 8.41 states that "The Interest earned from Investments made out of Return on Equity shall not be included in Non-Tariff Income". In this regard it is submitted that in compliance to the above Regulation no such amount has been projected.

102. Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with clause (1) of this Regulation

103. The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be.

104. STU (OPTCL) shall be allowed a Return on Equity Capital in rupee terms at the rate of 15.5% per annum (post tax), on the amount of equity capital base as determined by the Commission. This rate of return needs to be grossed up with the normal/applicable tax rate.

105. Accordingly, OPTCL has proposed Return on Equity (RoE) of Rs. 312.56 Cr. @ 15.5% on Rs. 2,016.50 Cr. as per clause 8.28 of Regulations, 2014 and requested the Commission to consider the same.

Income Tax

Views of Objectors

106. The Commission has disapproved the income tax for FY 21-22, as it was not paid as per audited account. So, TPSODL submitted that income tax may be treated on actual basis and may be trued up.

Submission by OPTCL

107. OPTCL has projected Rs. 2.16 Cr under the head Income Tax to be passed through in compliance to the Regulation 8.43 and 8.44 of OERC.

108. CERC Regulation does not stipulate that "Income Tax shall not be direct pass through in tariff" as stated by the objector. Present ARR & Transmission Tariff application of OPTCL has been prepared and submitted based on the provisions contained in OERC.

109. Income tax of the Transmission Licensee shall be recovered from the beneficiaries. This will exclude income tax on other income streams (Non-Transmission business). Further, as per Regulation 8.44 the actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act, 1961 shall be passed on to the consumers.

110. In the Audited Accounts for the FY 2020-21, OPTCL has made provision of Rs. 2.16 Cr. as Income Tax. The same amount of Rs. 2.16 Cr. is proposed for FY 2022-23. However, difference if any, as per the Regulation 8.43 and 8.44, shall be adjusted during the true up exercise based on audited accounts of FY 2022-23.

111. However, the objector M/S TPWODL has opined that Income tax may be treated on actual basis and may be trued up and suggested nil for the FY 2022-23. It may be noted that TPWODL in its ARR application has claimed Tax amounting to Rs. 16.14 @ 25.17 % p.a. Therefore, the projection of Rs. 2.16 Cr. is on lower side as compared to TPWODL. The objection of TPWOLD has no merit and not to be considered.

Working Capital

Views of Objectors

112. The Commission has opined in the OPTCL tariff order for FY 2021-22 that OPTCL has a net positive cash flow and there is no requirement of working capital loan. Accordingly, the Objector requested to approve the working capital loan on actual requirement as also done in the previous tariff order.

113. Now all the DISCOMs are paying their bill on time and availing rebate. LC mechanism has also in place. All projects constructed or to be constructed is carried out with support of loans and equity. The Objector submitted that the issue of working capital may please be examined.

Submission by OPTCL

114. OPTCL has claimed interest on working capital complying the Regulation 8.26 of OERC Regulations, 2014 and requested to consider in line with the regulations.

Incentive for System Availability

Views of Objectors

115. The Commission has approved incentive of Rs 5 Cr for FY 2021-22 against Rs 10.62 Cr projected by OPTCL. In line with the same, TPWODL has also suggested Rs.5 Cr for the year FY 2022-23 under this head.

Submission by OPTCL

116. The Commission allowed Rs.5 Cr. as incentives for the FY 2021-22 with the observation that "as SLDC has verified the System Availability of 99.98% during FY 2019-20 and is expected to maintain NATAF more than 98.50% during FY 2020-21, pending verification, the Commission approves an amount of Rs.5.00 Cr. as an incentive in the ARR of OPTCL for FY 2021-22". Therefore, the suggestion of TPWODL has no merit.

Miscellaneous receipt

Views of Objectors

117. OPTCL has not complied the requirements of Regulations 8.39, 8.40, 8.41 & 8.42 in the ARR & tariff petition. The item wise non-tariff income as stipulated in Regulations 8.40 is ignored and stated Miscellaneous Receipts. The difference between "Non-Tariff Income" and "Income from Other Business" has not been duly factored though the same has been separately regulated. There is no meaning of Income from Other Business in the books maintained by the Petitioner in view of Regulation No. 8.42. Regulation No. 5.6 has specified that the Accounting Policy & the Chart of Accounts shall be followed by the Licensee, as determined by the Commission from time to time.

118. In the ARR, it has been proposed by OPTCL to levy full transmission charges on renewable energy. In case of Odisha, every month more than 300 MU of renewable energy is being schedule by industries for compliance of their RPO obligation. So, if

full transmission charges would be levied on RE power, then OPTCL income from other sources will increase substantially by another Rs.80 crs annually. Accordingly, TPWODL has considered the same as Rs.340 crs for the year FY 22-23.

Submission by OPTCL

119. OPTCL has projected Rs.263.83 Cr. as Non-tariff income under the nomenclature as other income and cost/ Miscellaneous Receipts. Further, in compliance to the Commission's Query, OPTCL has submitted the details of Misc. Receipts of Rs.24.35 Cr. received during the period 01.04.2021 to 30.11.2021.

120. Regulation 8.40 states that: The Transmission Licensee shall submit full details of his forecast of Non-Tariff Income to the Commission along with his application for determination of tariff. The list of various heads to be considered for Non-Tariff Income is also mentioned.

121. At present no such income categorized as "Income from other business" in compliance to the Regulations 8.42 for the FY 2022-23. However, in case any income from other business is recognised during FY 2022-23, the same shall be trued up in FY 2022-23.

122. Therefore, the view of the objector that the above regulation has not been complied has no merit and not to be considered.

Transmission Charges

Views of Objectors

123. The proposed transmission tariff of @43.73 PU is abnormally very high and should not be permitted. This will adversely affect the RST of the DISCOMs and will be a huge burden on the consumers.

124. The Commission has accorded in principle approval of the Long Term Demand Forecast (LTDF)for the period FY 2015-16 to FY 2022-23 vide order dated 3.5.2016 in case no 32/2015. Further the Business Plan of OPTCL has been approved by the Commission. The transmission charges of OPTCL should be considered based on energy projection as per Commission's approval in LTDF order and approved Business Plan of OPTCL.

125. With increasing cost of capital works by OPTCL and the stagnant demand, the transmission charges are bound to increase. This will only enable OPTCL to recover its cost of new constructions without any requirement. Therefore, the Commission may fix the transmission charge to be recovered from its new transmission schemes with the

concept of "Design Energy" as is being done to determine the Generation Tariff. The transmission charge for a new scheme should be based on the approved capital cost and the projected quantum of energy (Design Energy) to be transmitted. Any deficiency of OPTCL in such a case shall not be loaded on to the consumers. The Commission may review the performance of OPTCL periodically and direct midcourse correction to avoid unnecessary increase of transmission charge.

126. As per submission made by M/s TPWODL, the transmission charges should be 25 paise per unit for FY 22-23 based on ARR of 714.47 Cr.

Submission by OPTCL

127. The proposed Transmission Charge of 11495.93/MW-DAY (i.e 43.73 paise/unit) is derived considering the recent realistic energy demand projection of all four DISCOMs and the ARR figures arrived by OPTCL justifying component wise projections as per the provisions contained in OERC Transmission Tariff Regulations, 2014, OPTCL's Audited Accounts for FY 2020-21, all relevant data/information and materials. Moreover, OPTCL had furnished all requisite information and details as per the prescribed formats of the Commission with full justifications. OPTCL has also submitted additional information / clarifications to queries raised by the Commission in which the audited accounts along with statutory audit report of OPTCL for FY 2020-21 is submitted.

128. Transmission charges as approved by OERC since FY 2009-10 has never been in a declining trend as indicated from the table given below.

Table 15
Approved transmission charges of past period

SL NO	FINANCIAL YEAR	OERC CASE NO. & ORDER DATE	EFFECTIVE DATE	APPROVED TRANSMISSION CHARGE (P/U)
1	2009-10	Case No.63/2008 Order Dt.20.03.2009	01.04.2009	20.5
2	2010-11	Case No.145/2009 Order Dt.20.03.2010	01.04.2010	23.5
3	2011-12	Case No.145/2010 Order Dt.20.03.2011	01.04.2011	25
4	2012-13	Case No.92/2011 Order Dt.20.03.2012	01.04.2012	25
5	2013-14	Case No.102/2012 Order Dt.20.03.2013	01.04.2013	25
6	2014-15	Case No.83/2013 Order Dt.22.03.2014	01.04.2014	25

SL NO	FINANCIAL YEAR	OERC CASE NO. & ORDER DATE	EFFECTIVE DATE	APPROVED TRANSMISSION CHARGE (P/U)
7	2015-16	Case No.67/2014 Order Dt.23.03.2015	01.04.2015	25
8	2016-17	Case No.55/2015 Order Dt.21.03.2016	01.04.2016	25
9	2017-18	Case No.64/2016 Order Dt.23.03.2017	01.04.2017	25
10	2018-19	Case No.77/2017 Order Dt.22.03.2018	01.04.2018	25
11	2019-20	Case No.71/2018 Order Dt.29.03.2019	01.04.2019	25
12	2020-21	Case No.72/2019 Order Dt.21.04.2020	01.04.2020	25
13	2021-22	Case No.73/2020 Order Dt.26.03.2021	01.04.2021	28

129. In para 40 of the OERC order vide Case No. 63/2020 (Business Plan of OPTCL for the control period FY 2019-20 to FY 2023-24, the Commission has opined that the demand will be properly scrutinised at the time of approval of ARR of OPTCL for FY 2022-23. In compliance to that, OPTCL has filed the ARR application for FY 2022-23 on 30.11.2021 considering DISCOMs demand of 28517 MU as per recent & more realistic energy demand projections submitted by the DISCOMs at that time.

Annual Revenue Requirement

Views of Objectors

130. The unusually high transmission tariff proposed by OPTCL is on account of projecting an ARR of Rs 1247.14 Cr against Rs 792.93 Cr approved by the Commission for FY 21-22. This is on account of massive investment being made without increase or negligible increase in the flow of energy in the transmission system.

131. An Objector has requested to approve the annual revenue requirement of OPTCL through a prudence check.

132. OPTCL has projected its revenue requirement for FY 2022-23 at about 39% more than the approved ARR for FY 2021-22. The total increase in ARR includes an increase of Employee cost by 15%, O&M cost by 25%, A& G cost by 42%, interest on loan capital by 58% depreciation by 13% and incentive by 102%.

Submission by OPTCL

133. OPTCL has projected its ARR as Rs. 1510.97 Cr. which will be recovered from the Open Access Consumer and other Non-tariff incomes as per the regulations. The per unit price has been calculated considering the proposed energy to be transmitted in the OPTCL System by the LTOA customer.

134. The projections made by OPTCL as per the OERC Transmission Tariff Regulations, 2014 are very much realistic and the details are explained in its ARR application which need full consideration.

135. In comparison to Net ARR of TPWODL (Rs.1295.98 Cr.) after deduction of power cost, transmission and SLDC charges, OPTCL Net ARR (Rs. 1247.14 Cr.) is on lower side.

Open access charges

Views of Objectors

136. An Objector submitted that Steep increase in the STOA charges will make open access unviable for the consumers, which will be detrimental to the operation of industries / businesses of the State in the current scenario.

137. The ARR filed by the Petitioner does not consider the revenue due to collection from the Open Access customers for power transmission done by (i) HHEP to CSPDC by OHPC, (ii) Bhubaneswar Power Ltd, (iii) transmission of surplus power from OPGC Unit – III and IV after meeting state demand, (iv) transmission of power by state grid connected IPPs and (v) sale of surplus power by the CGPs of the State. The Objector requested OPTCL to submit the customer wise details of open access of power through state grid and the revenue generation thereof for the previous year FY-21.

138. Some Objectors pointed out that OPTCL contravenes the open access regulation framed by the Commission. STOA charges should be always lower than the LTOA charges.

139. Another Objector pointed out that OPTCL may be directed to submit the power handling capability, power flow and % loading of all the 400 kV, 220 kV, 132 kV line, and power transformer, auto transformer, ICT transformer. Once these data are made available, it can be ascertained that, there are sufficient margin available in the transmission network and in order to utilise it fully, STOA should be promoted and the charges for the same may be kept at ¼ of the MTOA and LTOA charges and necessary amendments in the Regulations may be made.

140. M/s Indian Energy Exchange submitted that OPTCL has projected transmission charges for STOA consumers @43.73 paisa/kWh against the present applicable charges of 28 paisa/kWh, viz. >50% increase on the current level of charges. Such steep increase in charges in two consecutive years will amount to tariff shock for the consumers.

141. Total intra-State OA of power scheduled by the Customers for FY-21 is 3838.23 MU. As the rate of 28 P/U is same for the both long-term and short-term Customers, then the revenue realization from above OA of power through State grid is Rs. 107.47 Cr whereas in the Petition, the disclosed revenue realization is Rs. 44.56 Cr on same source. The difference of revenue realization for FY-21 may be re-examined.

Submission by OPTCL

142. As the Open Access Regulations, 2020 the open access charges to all the category such as LTOA, MTOA and STOA are same. The tariffs of the electricity utilities are determined through Regulators by following all the regulatory procedure. On the other hand, the price is not the market driven as being determined by the unregulated business houses and industries. OPTCL is the designated STU and its system availability is above 99.98%. The networks of OPTCL are ready to handle the power requirements of the consumers of Odisha including the industrial consumers.

143. The details of revenue received in respect of energy transaction through open access for the FY 2020-21 are furnished below.

Table 46

Revenue received from Open Access

Sl. No.	Open Access	Amount (Rs. Cr.)
1	Open access through SLDC (Intra-state)	44.56
2	Open access through RLDC (Inter-state)	8.89
3	Open access through Exchange (IEX/PXIL)	10.98
Total		**64.43**

144. OPTCL has submitted customer-wise monthly open access schedule for the FY 2020-21.

145. OPTCL has acted as per the new Open Access regulation, OERC (Terms and Conditions of Intra-State Open Access) Regulations, 2020 which has come in to force with effect from its publication in Odisha Gazette dated 18th November, 2020.

146. OERC vide letter No. DIR (T)-351/08/1709 dated 01.01.2022 clarified that the transmission charges on STOA consumers availing open access from renewable sources is 20% as per the RST Order.

OPTCL has submitted that the monthly Total Transfer Capacity (TTC), Reliability Margin (RM) and Available Transfer Capacity (ATC) of the State Control area are computed using PSS/E software in line with the method adopted by the Regional Load Despatch Centres (RLDCs) & National Load Depatch Centre (NLDC) and displayed in the SLDC website to inform about the maximum import and export capability of the State Control area in a particular month. This study is carried in advance for three months. This information is available in the public domain and all the open access customers can access this information for their use. Further, OPTCL has submitted that no open access generator or consumer application has been rejected on account of transmission constraints during the current year.

Reactive Energy Charges

Views of Objectors

147. An Objector pointed out that OPTCL has proposed to introduce Reactive Energy Charges. There is no such provision in the Transmission Tariff Regulations and against the spirit of the Act. Hence, the proposal of OPTCL may be rejected.

Submission by OPTCL

148. Payment for the reactive energy charges by open access consumers shall be in accordance with provisions stipulated in the State Grid Code or as may be specified in relevant regulations/orders of the Hon'ble Commission.

149. The Commission in Para 16 (page 5) of the order dated 05.02.2019 in Case No. 50/2017 has inter alia viewed that the provisional reactive energy charges of 3 Paise/kVARh as allowed in ARR 2018-19 order continue for time being till a final justification is submitted by OPTCL in consultation with the stakeholders. Accordingly, OPTCL is holding consultation with the stakeholders at regular intervals and some more time is required in this regard. In view of the above, OPTCL proposes that 3paise/kVARh may be approved provisionally as Reactive Energy Charges for FY 2022-23. Hence, rejection of the proposal of OPTCL with regard to Reactive Energy Charges as suggested by the Objector is not just and proper.

Grid Support Charge for Connectivity

Views of Objectors

150. Another Objector submitted that OPTCL has proposed to introduce grid support charge for providing connectivity to CGP. There is no such provision in the Transmission Tariff Regulation and against the spirit of Electricity Act 2003 and hence, the proposal is required to be straight away rejected.

Submission by OPTCL

151. The application in the matter of levy of GSC have been filed in pursuance to the observation of the Commission dated 23.03.2017 in Transmission ARR Case No-64/2016 for the FY 2017-18.

152. The issue of GSC has been agitated in different judiciary and quasi-judiciary fora across the country and decided in favor of Transco / Licensees. Though there is no direct reference of GSC in the EA, 2003; there is enough provision in the Act i.e. u/s 86(1)(f) to adjudicate the very nature of the issue. The same is already ratified by the Hon'ble Apex Court in their judgement dated 29.11.2019 in CA 4569 of 2003 and other batches of similar appeals.

153. The very spirit of the GSC is to realise the charges from the Captive Generating Plants for taking the support of the Grid Infrastructure for smooth functioning, availing fault support and achieving higher PLF etc. which is not factored in the ARR. The very allegation of the objector that GSC is for providing connectivity is erroneous, misleading and hence denied by the Applicant.

154. Further, the GSC case is pending before the Commission (Case No 52 of 2020) for disposal. On approval of the Commission, the majority of revenue accrued from GSC will be spent towards subsidizing transmission cost which in turn, will benefit the consumers across the board.

Data discrepancy with respect to CEA's Report

Views of Objectors

155. There is a wide variation between CEA's General Review report and Petitioner's report with reference to the data on inadvertent power injection by CPP's into the grid. Petitioner is requested to reconcile the same.

156. As per the data on the length of transmission line and transformer capacity available in CEA General Review report, it appears that Odisha has surplus installed capacity. So, Petitioner – OPTCL should explain whether the transmission infrastructure of OPTCL is commensurate with the volume of business carried out by OPTCL. The economics of utilisation of the state grid infrastructure is under rated.

Submission by OPTCL

157. The Table prepared by the Objector from the data available in CEA website with respect to CPP generation not consumed in the State needs more elaboration. The scheduled CPP power transmitted through the State grid in MU for the FYs 2018-19, 2019-20 & 2020-21 is furnished below.

Table 57
Scheduled CPP power transmitted through the State grid in MU for the FYs 2018-19, 2019-20 & 2020-21

FY	Sale by CGP's through Intra-State Open Access in MU	Sale by CGP's Through Inter-State Open Access in MU	Total in MU
2018-19	1776.39	143.72	1920.11
2019-20	2319.00	195.45	2514.46
2020-21	2747.22	357.51	3104.73

158. The detailed month-wise schedule for sale of power by the state CGPs through open access for the FYs 2018-19, 2019-20 & 2020-21 has been submitted.

159. It is to intimate that the quantum of no cost inadvertent power exported by CPPs to the tune of 2198.17MU and 2408.21MU for FY 2019 and 2020 respectively is not based on any facts. However, it is pertinent to mention that CPPs have injected power to the State Grid as follows:

Table 68
Injected power to the State Grid by CPPs

FY	Energy Quantum (MU)
2018-19	468.67
2019-20	533.28
2020-21	535

160. Through such injection of Power, the system has got negative impact causing high voltage in the system for which GRIDCO has to pay Reactive Energy Charges and DSM charges as compensation.

161. That the data about the length of Transmission Lines & Capacity of the Transformers in service for States like Maharashtra, West Bengal, Rajasthan, Gujurat, Andhra Pradesh, Odisha, Telegana, Punjab & Chhatishgarh. Reports for 132kV & above Grid Sub-stations are mentioned below :

Table 79
MVA capacity per head and transmission line density for various states

Sl.No.	Trans. line length in Ckt. Kms. (132kV &above)_ CEA GR-2021,	MVA CAPACITY CEA GR-2021,	Population (Estimated-2022 census)_ Google Search (www.findeasy.in)	MVA capacity per head	Area in Sq.Km (Wikipedia)	Transmission line density (Ckt.Kms / Sq.Km.)
Maharashtra	51401	194559.7	12.44 Cr.	0.00156	307713	0.1670
West Bengal	16112	67898.455	9.80Cr.	0.00069	88752	0.1815
Rajasthan	43877	120544	7.92 Cr.	0.00152	342239	0.1282
Gujurat	32922	149021	7.00 Cr.	0.00213	196024	0.1679
Andhra Pradesh	28756	78880	5.27 Cr.	0.00150	160205	0.1795
Odisha	**15318**	**30455***	**4.55 Cr.**	**0.00067**	**155707**	**0.0984**
Telengana	26067	105589	3.80 Cr.	0.00278	112077	0.2326
Punjab	16537	64959	3.00 Cr	0.00217	50362	0.3284
Chhatishgarh	16189	32278	2.95 Cr.	0.00109	135191	0.1197

162. In the above table, a comparison is made for Nine States with Odisha with respect to the estimated population as on Census-2022 (Google search, www.findeasy.in) & the area of the State along with their MVA Capacity & Circuit Kilometres of Transmission lines. As per GOI, all the states mentioned above are almost 100% electrified. The per capita electrical power availability (MVA/head) and Transmission line density (Ckt. Kms/Sq. Km) are parameters indicating the growth potential of the States in terms of electrical power. For Odisha, it is seen that the per capita MVA capacity and transmission line density is the lowest. So, with this there is still huge scope for capacity addition & EHT transmission lines in Odisha. Further, in this context if we compare the states with less population like Telengana, Punjab & Chhatishgarh, it can be seen that their MVA capacity & Transmission lines length (Ckt. Kms.) is much higher with respect to Odisha also.

163. Further, Govt. of Odisha is taking care of its consumers throughout Odisha with a mission to provide quality & uninterrupted power to all for 24x7 hrs for which around 572 Nos. of more 33/11kV primary Substations are gradually coming into utilisation / to be utilised in the DISCOMs platform. Again, in order to improve the voltage profile,

different measures have been taken by the Govt. like establishing Grid Substations within every 30kms. radius and expanding the network to reach every corner of the State and also to meet N-1 contingency. For this, OPTCL has been continuously upgrading its performance both in terms of system availability as well as supplying reliable power to its consumers.

164. Presently, OPTCL is having an asset base infrastructure of 15451 Ckt.Kms. of EHT transmission lines and 175 Nos. of Grid S/s (including switching Stations) & 22836MVA (in total) transformation capacity with peak load demand of around 5500MW (Summer Peak). OPTCL, with the able guidance of State Government with various schemes is strengthening / expanding its infrastructure to meet the future requirement of the DISCOMs along with the upcoming industrial loads. The transmission infrastructure developed by OPTCL is commensurate to the volume of present & future business and the revenue earned is in line with the ARR of OPTCL.

165. OPTCL plans construction of transmission lines and sub-stations in line with the transmission planning criteria adopted by CEA. OPTCL generally augments its transmission assets to cater the long-term requirements proposed by eligible entities. Further, OPTCL renovates its system considering Operational constraints and feedback from drawing entities. Corporate planning wing of OPTCL makes long-term load forecasting upto 10-15 years ahead of present scenario considering recent power demand, past load growth trajectory, installation of CGP, IPP, SHEP, Integration of renewable energy and critical loads i.e. railway traction loads, steel plants, smelter plants etc. as per the transmission plan. OPTCL implements stringent measures to avoid under loading of lines and sub-stations.

166. OPTCL has implemented RRCP (Radial to Ring Conversion projects) in order to provide reliability in transmission network, power quality improvement, reduction of line loading, reduction of loss and availability of spare source to different Grid Sub-stations with n-1 contingency compliance.

Information sought from OPTCL

Views of Objectors

167. The Petitioner - OPTCL is required to compute the available capacity of the various segments / zones of the transmission lines and sub-stations as per the methods specified by the Commission in the Regulation 41 of OERC (Terms & Conditions of Intra-State

Open Access) Regulations, 2020, so as to promote the sale of services of the state grid in the open market. The above regulation requires the Petitioner – OPTCL to disclose the un-utilised capacity of the state grid in the website of SLDC / STU for the necessary information. All the States of India including neighbouring states are taking the advantage of the method to increase the operational revenue of the state grid. It is requested to comply with the directives as per open access regulations in a time bound manner.

168. An Objector has requested detailed list of substations and lines more than 40 years old and available in the system.

169. Another Objector has requested to furnish the list of 33/11 kV substations constructed under ODSSP and the amount spend for the purpose.

170. One of the Objectors requested OPTCL to furnish the list of substations and lines which have outlived its life and not in a position for operation in the required manner.

171. The Petitioner-OPTCL is requested to provide data on surplus power of state CPP's transmitted through state grid and national grid during FY-19 and FY-20. Further CPP – wise export of power outside the state through state grid and national grid are to be submitted. Also, data requested for transmission charges earned from export of such power outside the state. The same data may also be submitted for FY-21.

172. An Objector requested OPTCL to furnish the following data and information for the year FY 2021:

- Total energy flow in the state grid during previous year (both in MW and MU)
- Maximum capacity, installed capacity and used capacity of the state grid (both in MW and MU)
- User-wise data on use of the total grid capacity availed by the Grid users.
  (if possible, the data may be furnished on zone-wise)

173. The sub-stations like Baragarh new, Kasipur, Khuntuni, Mendhasal and Samagara are extremely under loaded @below 10%. Most of the sub-stations are under loaded within 50% of the Capacity as stated by OPTCL. The under loading picture of the State grid reveals that the investment done in the State grid is not viable, hence, needs review by the Commission.

174. Another Objector enquired about the status of operation of Balimela Upper Sileru transmission line which was radially connected to transmit power. OPTCL may submit the quantum of power flow in that line during last 5 years.

175. What is the expenditure incurred to set up the Budhipardar Korba 220 kV line? What is the purpose of setting the said line and whether it has served the purpose?

176. Whether interconnection points like one at Jeypore is helpful in drawing power, whenever necessary?

177. 765 kV grid substation at Sundargarh was set up to evacuate upcoming power generation to other states by Odisha IPPs after meeting the State's obligation. Whether OPTCL has the appropriate transmission connectivity with the existing generating stations to evacuate full entitlement of the State.

178. An Objector has requested to furnish the list of ongoing new transmission projects with expected date of completion and also the actual date of completion of the projects completed during last 10 years.

Submission by OPTCL

179. Considering the whole infrastructure of OPTCL with respect to No. of Grids, total transformation capacity (MVA), total length of the transmission lines (Ckt. kms.) &other parameters, the financial aspects in the shape of Aggregate Revenue Requirement (ARR) is filed every year at OERC for kind approval of the Commission.

180. OPTCL has been continuously upgrading its performance both in terms of system availability as well as supplying quality & uninterrupted power to its consumers by expanding the network with the required MVA capacity & Ckt. Kms. with reference to the proposal received from concerned DISCOMs with justified load requirement for their downstream network. For this, OPTCL not only does in-house comprehensive load flow system study but has also engaged one of the best Technical Consultant i.e. M/s PRDC, Bangalore for effective utilisation of its infrastructure. The vision of OPTCL is to provide the quality and reliable power with N-1 contingency to all its consumers even in under developed rural area of the state with improved voltage profile.

181. OPTCL is facilitating & strengthening the Transmission network with 132kV (& above) voltage level. But, the means of electricity consumption is mainly through distribution network which is managed by DISCOMs. The maximum utilisation of transmission

infrastructure is possible if and only if when the downstream network of DISCOMs are established in time and capable enough to consume the energy at full efficiency. To achieve this, a synchronized and collaborated effort is always required in between the Generating Stations, STU & DISCOMs.

182. The constructional activity of electrical infrastructure at most of the working sites of the STU and DISCOMs are affected by climatic conditions, cultivation, RoW issues, Forest issues along with Railway, NH & River crossing etc. which pose hindrance for timely execution of such projects. Hence, proper planning & advance action in coordination with relevant departments is now becoming the foremost responsibility of OPTCL.

183. Further, it is seen that even after commissioning of OPTCL GSS & Transmission lines, in few cases the 33kV take-off arrangements of DISCOMs are not ready in time to draw the load as per the proposal for their downstream networks. OPTCL is in constant dialogue with the DISCOMs at various levels to utilise all such 33kV bays. OPTCL firmly believes that such under utilisation shall get reduced with DISCOMs capex program and development of distribution infrastructure in future.

184. OPTCL executes new projects based upon the transmission plan duly approved by the Commission. In order to avoid under-utilized transmission assets, OPTCL in line with approved transmission plan considers the load requirements submitted by DISCOMS, industry power demands put forward by IDCO and railway traction load enhancement. Before execution of a new project, diversion of transmission lines or renovation of any existing transmission assets, OPTCL always checks the present feasibility of the plan.

185. The details of sub-stations and lines having more than 40 years of life is given below.

Table 20
Details of sub-stations and lines having more than 40 years of life

SL NO	SUB-STATIONS	VOLTAGE LEVEL (KV)	YEAR OF COMMISSIONING
40 - 45 Years of Service			
1	Balasore	220/132/33kV	1981
2	Bolangir	132/33kV	1981
3	Paradeep	220/132/33kV	1981
4	Polasponga	132/33kV	1981
5	Rairangpur	132/33kV	1981
6	Tarkera	220/132kV	1981
7	Jayanagar	220/132/33kV	1980
8	Bargarh	132/33kV	1979
9	Bhubaneswar	132/33kV	1979

SL NO	SUB-STATIONS	VOLTAGE LEVEL (KV)	YEAR OF COMMISSIONING
10	Kendrapara	132/33kV	1979
45 - 50 Years of Service			
1	Aska	132/33kV	1975
2	Therubali	220/132/33kV	1974
3	Mohana	132/33kV	1973
4	Rajgangpur	132/33kV	1973
5	Chainpal	132/33kV	1972
> 50 Years of Service			
1	Brajarajnagar	132/33/11kV	1969
2	Jajpur Road	132/33kV	1969
3	Khurda	132/33kV	1969
4	Ganjam	132/33kV	1967
5	Berhampur	132/33/11kV	1964
6	Sunabeda	132/33kV	1964
7	Rayagada	132/33kV	1962
8	Joda	220/132/33kV	1959
9	Jharsuguda	132/33kV	1958
10	Rourkela	132/33kV	1958
11	Choudwar	132/33kV	1956

186. The list of EHT lines having more than 40 years of lifespan is mentioned below.

Table 21
EHT lines having more than 40 years of lifespan

SL NO	NAME OF EHT LINE	VOLATEGE LEVEL (KV)	YEAR OF COMMISSIONING
40 - 45 Years of Service			
1	132 kV Bargarh - Bolangir SC	132	1981
2	132 kV Chhatrapur- IRE DC	132	1981
3	132 kV Joda - Palasponga - Rairangpur SC (Loc. No. 1 to 111)	132	1981
4	132 kV Kendrapara - Paradeep DC	132	1981
5	132 kV Polasponga LILO DC (Loc. No. 73/1 to 73/6)	132	1981
6	132 kV Tarkera - RSP DC	132	1981
7	132 kV Aska - Berhampur SC	132	1980
8	132 kV Balasore - Bhadrak SC	132	1980
9	132 kV Bhanjanagar - Aska DC	132	1980
10	132 kV Bolangir - Saintala SC	132	1980
11	132 kV Kesinga - Saintala SC	132	1980
12	132 kV Polasponga - Rairangpur SC (Loc. No. 111 to 336)	132	1980
13	132 kV TTPS - Chainpal - II & III DC	132	1980
14	220 kV Rengali - Tarkera DC (Loc. 1 to 187)	220	1979
15	220 kV Tarkera - Rengali DC (Loc. No. 188 to 645)	220	1979

SL NO	NAME OF EHT LINE	VOLATEGE LEVEL (KV)	YEAR OF COMMISSIONING
16	132 kV Burla PH - Chiplima PH DC	132	1979
17	132 kV Chandaka - Bhubaneswar Ckt-I SC	132	1979
18	132 kV Chandaka - Bhubaneswar Ckt-II SC	132	1979
19	132 kV Chiplima PH - Bargarh SC	132	1979
20	132 kV Jaipur Road - Bhadrak SC	132	1979
21	132 kV Jajpur Road - Kendrapara DC	132	1979
22	132 kV Khurda - Balugaon SC	132	1978
45 - 50 Years of Service			
1	132 kV Chainpal - FCI DC	132	1975
2	220 kV Bhanjanagar - Meramundali DC (Loc. No. 197 to 470)	220	1974
3	220 kV Jayanagar - Balimela DC	220	1974
4	220 kV Jayanagar - Therubali DC	220	1974
5	220 kV Therubali - Bhanjanagar DC (Loc. No. 471 to 827)	220	1974
6	220 kV Therubali - Bhanjanagar DC (Loc. No. 828 to 1049)	220	1974
7	132 kV Rajgangpur - OCL SC	132	1973
8	132 kV Rajgangpur - Traction DC	132	1973
9	132 kV Chainpal - ChoudwarCkt - II SC (Loc. No. 1 to 151)	132	1972
10	132 kV Chainpal - ChoudwarCkt - II SC (Loc. No. 152 to 314 via ICCL)	132	1972
50 - 55 Years of Service			
1	132 kV Jayanagar - Sunabeda SC	132	1970
2	132 kV Bidanasi - Chandaka SC (Loc. 1 - 51)	132	1969
3	132 kV Bidanasi - Chandaka SC (Loc. 52 to 90)	132	1969
4	132 kV Chandaka - Khurda SC	132	1969
5	132 kV Choudwar - Bidanasi SC (Loc. No. 22 - 23 - 91 to 118)	132	1969
6	132 kV Duburi - Jajpur Road DC	132	1969
7	132 kV TTPS - Duburi DC	132	1969
8	132 kV Chhatrapur - Ganjam SC	132	1968
9	132 kV TTPS - Chainpal - I SC	132	1968
10	220 kV Bhanjanagar - Meramundali DC (Loc. No. 196 up to Meramundali)	220	1967
11	220 kV TTPS - Joda DC (Loc. No. 1 to 234)	220	1967
12	220 kV TTPS - Joda DC (Loc. No. 235 to 503)	220	1967
13	220 kV TTPS - Meramundali DC	220	1967
14	132 kV Therubali - Rayagada SC	132	1967
55 - 60 Years of Service			
1	132 kV Angul - Boinda SC	132	1963
2	132 kV Angul - TTPS SC	132	1963

SL NO	NAME OF EHT LINE	VOLATEGE LEVEL (KV)	YEAR OF COMMISSIONING
3	132 kV Burla PH - Boinda SC	132	1963
4	132 kV Berhampur - Mohana SC	132	1962
5	132 kV Rayagada - Akhusingh – Mohana SC	132	1962
> 60 Years of Service			
1	132 kV Joda - Nalda - Bhalulata SC	132	1959
2	132 kV Rourkela - Nalda SC (Up to Bhalulata, Loc. No. 1 to 78)	132	1959
3	132 kV Budhipadar - TarkeraCkt - I SC (Rajgangpur to Tarkera, Loc. No. 1 to 88)	132	1958
4	132 kV Budhipadar - TarkeraCkt - II SC (Rajgangpur to Tarkera, Loc. No. 1 to 89)	132	1958
5	132 kV Budhipadar - Tarkera DC (Bamra to Rajgangpur, Loc. No. 283 to 410)	132	1958
6	132 kV Budhipadar - Tarkera DC (Up to Bamra, Loc. No. 164 to 283)	132	1958
7	132 kV Burla PH - Budhipadar DC	132	1958
8	132 kV Burla PH - HINDALCO DC	132	1958
9	132 kV Burla PH - Rajgangpur - Rourkela Ckt (Loc. 171 - 294)	132	1958
10	132 kV Burla PH - Rajgangpur - Rourkela Ckt (Loc. 294 - 430 - 526, Bamra to Rourkela)	132	1958
11	132 kV Burla PH - Rajgangpur - Rourkela Ckt (Loc. J1 - J65)	132	1958
12	132 kV Burla PH - Rajgangpur - Rourkela Ckt (Loc. J65 – 171)	132	1958
13	132 kV Chainpal - ChoudwarCkt - I SC (Loc. No. 1 to 147)	132	1958
14	132 kV Chainpal - ChoudwarCkt - I SC (Loc. No. 148 to 285)	132	1958
15	132 kV Tarkera - Rourkela Ckt - I SC	132	1958
16	132 kV Tarkera - Rourkela Ckt - II SC	132	1958
17	132 kV Jayanagar - Rayagada SC	132	1956
18	132 kV Machkund PH - Jayanagar SC	132	1956

187. The list of 33/11kV Sub-stations with lines which have already been commissioned & loaded under Odisha Distribution System Strengthening Projects(ODSSP), IPDS & DDUGJY has been submitted by OPTCL.

188. Further, the expenditure incurred under ODSSP as on 31.12.2021 is Rs. 3432 Cr. The expenditure incurred under IPDS as on 31.12.2021 is Rs. 65.05 Cr. The expenditure incurred under DDUGJY as on 31.12.2021 is Rs. 47.81 Cr.

189. OPTCL is strategically replacing/upgrading conductors in old EHT lines on priority basis for reduction in Transmission loss and to cater the load demand reliably. Also

upgradation and Modernization of Old Grid Sub-stations are being done by replacing the obsolete/outdated equipment with the objective to keep the assets in efficient working condition. Hence, there is no such outlived Sub-stations and lines in the system.

190. The total as well as DISCOM wise energy flow in the State Grid during FY 2020-21 is furnished below.

Table 22
DISCOM wise energy flow in the State Grid during FY 2020-21

USERS	ENERGY FLOW	
	MU	AVERAGE MW
TPCODL	8794.503	1003.939
TPNODL	6524.794	744.839
TPSODL	3660.245	417.836
TPWODL	9426.219	1076.052
NALCO	66.455	7.586
IMFA	15.564	1.777
TOTAL	**28487.780**	**3252.030**

191. Further, details of maximum capacity, installed capacity and used capacity of the state grid has been submitted.

192. During the period of last five years, there has been no power flow between Balimela Power House and Upper Sileru.

193. As per CERC Regulation, estimated cost of the assets related to 220kV Rourkela-Tarkera - Budhipdar - Korba DC line has been estimated as Rs. 3894.44 lakhs. OPTCL had filed tariff petition in CERC as per the Regulation for the block period FY 2014 – 19. CERC had approved Yearly Transmission Charges (YTC) as given in the table below.

Table 23
Yearly Transmission Charges (YTC) 220kV Rourkela-Tarkera - Budhipdar - Korba DC line

(Rs. Lakhs)

Year	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Revenue approved though YTC	885.4	899.18	913.57	928.11	943.54

194. The above YTC is to be recovered through PoC mechanism. However, the revenue as approved above has been received from PGCIL being CTU. Further OPTCL has filed tariff petition in CERC for block period FY 2019 to FY 2024.

195. The purpose of 220kV Budhipadar- Korba line was to meet the power allocation of WR beneficiaries from ISGS like Talcher STPS, Kahalgaon STPS & Farakka STPS. In addition to above purpose, STU network is getting power supply from Western region. Further, OPTCL is also earning revenue from aforementioned line as approved by CERC through yearly Transmission Charges (YTC).

196. The year wise quantum of power flow through 220kV Budhipadar-Korba lines are mentioned below.

Table 24

Quantum of power flow in MU through 220kV Budhipadar-Korbackts from 2017-2021

Sl. No.	Year	220kV Budhipadar-Raigarh PG (MU)	220kV Budhipadar - Korbackt-I (MU)	220kVBudhipadar-Korba ckt-II (MU)
1	2017	285.33	619.81	393.61
2	2018	130.11	507.72	653.1
3	2019	63.08	642.97	348.24
4	2020	449.99	414.47	382.5
5	2021	625.49	280.44	249.59
Total		**1554**	**2465.41**	**2027.03**

197. The Interconnection points like one at Jeypore helps in drawing power whenever necessary. Jeypore (PG) is connected to Jayangar through two DC lines. During low hydro conditions i.e. during low generation at Balimela and Upper Kolab, power flows from Jeypore to Jaynagar. On 21.12.2021 almost 280 MW flow was observed from Jeypore to Jaynagar.

198. OPTCL is capable to evacuate state's entitlement through existing network connected to generating stations with OPTCL system. But the real time power flow depends upon the system parameters.

199. OPTCL has submitted a list of ongoing transmission projects with expected month of completion and a list of completed transmission projects (Sub stations & Lines) with actual date of completion.

Other issues

Views of Objectors

200. An Objector submitted that it is seen from the previous tariff orders issued by the Commission that the objections raised in the proceedings are not disposed of with reasons, in which no observations of the Commission are found against the issue /

objections raised by the respondents. In case of tariff orders issued by other SERCs the objections and suggestions of the stakeholders are recorded and the observation, analysis and ruling of the SERC are given to dispose of the issue. In case of OERC, the Commission is found to dispose of the same without any observation, resulted huge number of objections are set aside by the Commission and pending for redressal.

201. An Objector submitted that the previous tariff orders are more or less in the similar format. Although it is a fact tariff proceeding is standardized and regular routine work, for which specified formats and procedures have been devised in Regulations, but the errors and laxities of the licensee pointed out by the objectors should be considered and addressed by the Commission.

202. OPTCL is violating the Licence Conditions by executing many new lines and sub-stations, even before submitting the proposal to the Commission and prior to the approval by the Commission. For such continuous violation, the Commission may impose penalty so that such violation can be avoided.

203. OPTCL may submit the audited balance sheet, P/L statement and auditor report, without which the tariff proposal should not be entertained.

204. OPTCL has been making provision for GIS in many remote areas on considerations other than Technical Requirements, resulting in higher capital and maintenance expenditure. The Commission may disallow such schemes.

Submission by OPTCL

205. In compliance with the Chapter 3 of Odisha Grid Code (OGC) Regulations 2015 along with Clause 16 of the Licence Conditions of OPTCL, a five year Intra-State Transmission Plan for Odisha is sought for approval of the Commission from time to time. Based on the approval of the projects proposed under the Intra-State Transmission Plan, a five year Business Plan is filed in accordance with the guidelines prescribed under the "OERC (Terms & conditions for Determination of Transmission Tariff) Regulations, 2014" before the Commission for approval. Prior to consideration of the projects under the aforementioned Transmission Plan, the in-principle / administrative approval of BoD of OPTCL is duly accorded. In accordance with the licence condition 23.1 & 10.1 of OPTCL, Investment Proposal of each and every project estimated to be more than or equal to Rs.10 Cr is filed before the OERC for Investment approval.

206. The article of Sri Ananda Mohapatra has no relevance on determination of ARR and transmission tariff of OPTCL. Hence, it cannot be considered as an objection. OPTCL has clarified that the Transmission Assets created out of grants/deposit works have been shown as assets of OPTCL and only O&M expenses against the said assets have been claimed in the tariff.

E. OBSERVATION OF THE STATE ADVISORY COMMITTEE (SAC) (PARA 207)

207. The Commission convened the State Advisory Committee (SAC) meeting on 11.03.2022 at 11:00 A.M. through video conferencing mode. The Members of SAC deliberated on different issues related to power sector and the Annual Revenue Requirement of various licensees. SAC members expressed their concern about the rising in expenditure of the licensees without any growth in demand. Some members suggested that tariff should be linked with the efficiency. The proposal of OPTCL for transmission charges @43.73 paise is too high and should not be allowed. Further, the transmission loss of 3.10% should not be allowed since a lot of investment has been made for commissioning of new sub-stations, uprating/upgradation of lines/sub-stations, implementation of Sub-station Automation System (SAS), procurement of more efficient equipments etc. The tariff should be reduced instead of further increase and should commensurate with the technology infusion. Further, transmission system of OPTCL should take up its grid expansion plan for seamless integration of large scale renewable generation in future addressing the technical concerns of reactive power management, harmonic current, load management, demand response etc.

F. VIEWS OF GOVERNMENT OF ODISHA ON TARIFF ISSUES (Para 208)

208. The Commission had written to Government of Odisha vide Letter No.DIR(T)-405/2022-23-190 dated 28.02.2022 to submit their views on various issues raised during the tariff hearing for FY 2022-23. Government of Odisha in their letter No. 2428, dated 22.03.2022 has intimated as follows:

i. Considering the surplus revenue (regulatory transfer) and profit of DISCOMs as well as the loss of GRIDCO during the first nine (9) months of the current financial year, there is a scope of increasing the BST for DISCOMs without increasing the RST. The fixed cost of the PPAs signed by GRIDCO as well as the finance cost need to be taken into account in the ARR of the GRIDCO for the year 2022-23.

ii. Concession on intra-State transmission charges, wheeling charges given on open access RE power need to be withdrawn forthwith. The Commission may also impose cross subsidy surcharge on RE power. A detailed affidavit in this regard was submitted by the Department before OERC in Case No. 81/2021, which need to be taken into consideration.

iii. Operation of OPGC has become unviable because of present level of provisional tariff. OPGC has also filed an application before the Commission for determination of tariff. It may take some time. Hence, OPGC may be allowed reasonable and prudent provisional tariff w.e.f. 01.04.2022 for covering its fixed cost in full.

iv. The Government have constructed the entire distribution infrastructure necessary for operationalising the mega lift irrigation points. The DISCOMs have not made any investment. The mega lift irrigation points receive power through dedicated 33 KV lines. Hence, the losses are low and the cost of supply for the mega lift points is much lower than the average cost of supply of DISCOMs. The mega lift irrigation points also use power for 10-15 days in a year as these have not been designed to provide assured irrigation rather these LIPs have been designed to provide protective irrigation for a few days when there is less rain fall. Accordingly, OERC may consider lower fixed charges and energy charges for the mega LIPs.

G. COMMISSION'S VIEWS AND ORDER (PARA 209 TO 311)

209. The Commission had notified OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014. The "Control Period" is defined in the said Regulations at Regulation 2.1 (k) as "Control Period" means a multi-year time period fixed by the Commission, from time to time. The 1st Control Period under these Regulations starts from 1st April, 2014 and remain valid upto 31st March, 2019. After expiry of 1st control period the Commission in their communication to OPTCL in the year 2019 had allowed OPTCL to submit their Business Plan for 2nd control period which was defined by the Commission as a period starting from 01.04.2019 upto 31.03.2024. After that development and declaration of 2nd control period by the Commission, OPTCL had submitted its Business Plan for 2nd control period which has been approved by the Commission in their order in Case No. 63/2020 dated 03.11.2021.

Over and above the Commission in their order in Case No. 72/2019 exercising power under Regulation 9.1 has also extended the definition of controllable and uncontrollable cost enumerated in the above Regulations until further order. The Regulations of the Commission does not expire with the control period but remains in force until it is specifically repealed by the Commission or another Regulations take its place. The Regulations empower the Commission to define control period from time to time. The Commission in pursuance to the OERC (Terms & Conditions for Determination of Transmission Tariff) Regulations, 2014 has made 2nd control period operational with effect from 01.04.2019 as explained above. It is incorrect to state that the Regulation is co-terminus with 1st control period and has since expired.

210. Under Section 61 (a) of the Electricity Act, 2003 the Commission is to be guided by the principle and methodologies specified by the Central Commission for determination of tariff applicable to generating company and transmission licensee. The Central Commission has adopted POC method for determination of inter-State transmission charges. The Commission is fully aware of it. This method requires line-wise information for the determination of transmission charges for a particular line which is payable by the beneficiaries of that line. In this order we are approving the ARR and consequent transmission charges of the transmission utility as a whole and not the line-wise transmission charges. The operational platform of CTU and OPTCL are completely different. CTU primarily deals with 400 kV and above voltage level whereas OPTCL operates majorly in 220 kV and 132 kV voltage level. The terminal stations of transmission system are either a generating station or a sub-station in case of CTU whereas in case of OPTCL the transmission system sometime terminates at consumers premises. Therefore, the consumers will be beneficiary in the OPTCL system whose tariff is determined on different premises which is not just sharing of transmission charges. In addition to that Odisha follows the uniform retail supply tariff across the State. Though introduction of POC may be technically possible in Odisha but its implementation requires details study and analysis of the system. The Commission in one of the earlier occasions had made an attempt in this regard. In absence of relevant information and detail study, the Commission had decided that postage stamp method is the appropriate method in the present state of affairs. Accordingly, the Commission has notified the Transmission Regulation, 2014. It is also seen from the experience that the POC charges payable by GRIDCO for use of inter-State transmission system sometimes

are higher than transmission tariff determined by the Commission for use of transmission system of OPTCL. In view of the above, the postage stamp method is considered to be the appropriate method for determination of transmission charge of OPTCL at present.

211. Multi-year tariff principle is nothing but setting up of some bench marks for components of tariff for future year. This gives the predictability to the tariff during the control period. In our Regulation we have adopted the MYT principle by fixing benchmark for different component of tariff such as O&M expenses, depreciation and return on equity etc. for control periods. The Regulations also differentiate different components of tariff on the basis of controllable and uncontrollable costs. Therefore, the present Regulation is purely within the framework of MYT regime.

212. Accordingly, the Commission while approving ARR and transmission tariff of OPTCL for the FY 2022-23, shall be guided by the principles as laid down in OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 and also shall be guided by the provisions of the Tariff Policy as well as other Statutory Notifications and Directives with due consideration of State specific need of Odisha.

213. OPTCL has inherited a transmission network from GRIDCO on “as is where is” basis. Continuous expansion/up-gradation and regular repair & maintenance are required for smooth flow up power from generating station to ultimate consumer through distribution network. A robust transmission system is required for safe & secure operation of the grid and to meet the growing power demand of DISCOMs as well as to fulfil the expectation of the Commission and consumer on quality of supply, performance standards and availability of transmission network. In view of the above, the Commission, over the past several years, has been approving a significant amount of Capital Investment proposals for installation of new Grid substations, transmission lines etc. for availability of adequate Transmission network and is also allowing significant amount of R&M expenses for encouraging the Licensee to carry out required maintenance for maintaining a healthy transmission system.

214. The tariff policy notified by the Ministry of Power on dated 28.01.2016 stipulates the following objectives in respect of transmission system:

(i) Ensuring optimal development of the transmission network ahead of generation with adequate margin for reliability and to promote efficient utilization of generation and transmission assets in the country;

(ii) Attracting the required investments in the transmission sector and providing adequate returns.

215. Para 7.2(2) of Tariff Policy states that it is desirable to move to a system of loss compensation based on incremental losses as present deficiencies in transmission capacities are to overcome through network expansion. Necessary studies are to be conducted to establish the allowable level of system loss for the network configuration and the consequential capital expenditure required to augment the transmission system and reduce system losses. Since additional flows above a level of line loading lead to significantly higher losses, CTU/STU should ensure upgradation of transmission systems to avoid the situations of overloading.

216. Further, Para 7.3(1) of Tariff Policy states that the financial incentives and disincentives should be implemented for the CTU and the STU around the Key Performance Indicators (KPI) for these organizations. Such KPIs would include efficient Network Construction, System Availability and Loss Reduction. All the available information, particularly the information on available transmission capacity and load flow studies, should be shared with intending users by the CTU/STU and the load dispatch centres.

Computation of Transmission Loss for FY 2022-23

217. The transmission system of OPTCL operates as an integral part of the Eastern Regional Grid to serve the internal demand of the State as well as carry out import and export of power depending upon the system demand under the overall supervision of the Eastern Regional Load Dispatch Centre in accordance with the Grid Code. Transmission loss, therefore, has been determined on the basis of principle of 'As the System Operates'.

218. OPTCL submitted that the transmission loss is purely a technical loss and dependent upon the real time injection/location of generation sources, system configuration and power flow requirements at different load centres. It also depends on parameters/factors such as distance and mismatch between generation & load, types of load, reactive power compensation, voltage profile, seasonal variation etc. OPTCL therefore does not have much control over the same. OPTCL, in the interest of public has constructed some grid substations and lines in remote and deprived areas of the State with financial support

from Central & State Government. Expansion of EHT network and creation of number of transformation levels in substations are also responsible for increase in transmission loss. The under loading of EHT lines for most of the time is responsible for over voltage problem at EHT level. The actual transmission loss of OPTCL was within the margin allowed by the Commission up to the year FY 2017-18. The actual transmission loss in the OPTCL's transmission system for FY 2018-19, FY 2019-20 & FY 2020-21 was 3.28%, 3.25 % & 3.22% respectively as against Commission's approval of 3.00%.

219. Over the year, OPTCL has been able to reduce the transmission loss gradually from 3.73% during 2014-15 to 3.22% in 2020-21 and has remained as 3.13% during 1st six months of FY 2021-22 mainly due to addition of infrastructure and various system strengthening works. OPTCL is adopting various loss reduction measures by implementing the emerging technologies like system Automation, load bifurcation, modification in system configuration, conversion of radial to ring system etc. to bring down its transmission loss further. In view of this trend of transmission loss level and adoption of various loss reduction strategies, OPTCL has proposed 3.10% transmission loss during FY 2022-23.

220. The approved and actual transmission loss for the year 2012-13 to 2020-21 is furnished in the table below:

Table - 25

FY	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Approved (%)	3.80	3.80	3.75	3.75	3.70	3.50	3.00	3.00	3.00	3.00
Actual audited (%)	3.84	3.79	3.73	3.67	3.58	3.34	3.28	3.25	3.22	3.13 (Provisional for April 21 to Sept' 21)

221. Some objectors have suggested for identification of maximum loss prone areas and conduct energy audit to know the quantum of loss in the system. Some objectors suggested that OPTCL should inform the methodology adopted for estimation of transmission loss and formulate action plan for loss reduction. Further, in the meantime, a lot of investment has been made by OPTCL for installation of many new Grid substations and up-rating/up-gradation of lines/substations for efficient operation of its Transmission system. Loss reduction is also a part of efficient operation. It is the responsibility of the OPTCL to reduce its transmission loss in time bound manner. OPTCL has undertaken various loss reduction measures by implementing the Substation

Automation System, digitisation of Grids by using Bay control units, uprating of conductors from ACSR to HTLS, conversion from single circuit to double circuit line, procurement of efficient equipments etc. Further, the Commission in its Business plan order vide case No. 63/2020 dated 03.11.2021 had approved the Transmission loss as 2.71% during the year 2022-23 basing on submission of OPTCL. OPTCL submitted that the Transmission Planning Study are based on System Operation in ideal condition. But, the actual loss is being calculated from energy meter readings which includes losses at various stages due to different real time conditions. Therefore, there is a difference in actual transmission loss to that of loss reported in planning study. The technical loss directly depends on the network characteristic and mode of operation. The Commission therefore feels that the loss can be reduced with appropriate system design and efficient operation of the system. In view of the above and considering the submission of the stakeholders, the Commission had approved the transmission loss of 3% for the FY 2021-22. Therefore, the contention of OPTCL at present that increase in transmission loss is due to addition of infrastructure and various system strengthening works and therefore loss should be considered at the level of 3.10% without any supporting study or well-substantiated reason is not acceptable.

222. It is observed that OPTCL has not achieved the loss target approved by the Commission FY 2018-19, FY 2019-20 and FY 2020-21. OPTCL in its submission has submitted that the approved loss level could not be achieved primarily due to addition of infrastructure and various system strengthening works in remote and deprived areas of the State. However, the neighbouring state such as Andhra Pradesh, where almost similar type of network configuration is available, the Electricity Regulatory Commission has considered the lower limit of intra state transmission loss at the level of 2.83% and average transmission loss of 3.03%. Further, the transmission losses approved by the respective Electricity Regulatory Commissions for other neighbouring states are in the range of 2.23% to 3%. Hence, keeping in view the licensees' track record in reduction of the losses, the huge investment made in the transmission network for system strengthening, automation, utilisation of energy efficient equipments etc., and considering the submission of objectors as well as OPTCL, the Commission approves 3.00% as transmission loss for FY 2022-23 which is same as that of FY 2021-22. Further, the Commission directs OPTCL to continuously monitor the operation of transmission system, prevent over loading/under loading wherever possible by taking

suitable measures and take up innovative action for optimum loading of the existing network for further reduction of loss.

Execution of Transmission Projects

223. Objectors have submitted that most of the substations are under-loaded which reveals that the investment made by OPTCL is not viable because of less growth in demand. The Commission therefore directs OPTCL that due consideration of load growth should be taken into account at the time of submitting investment proposals for approval of the Commission. Further, OPTCL is not completing the ongoing projects within the allowed time frame. In its reply OPTCL submitted that some projects are inordinately delayed due to ROW problems, Court cases, delay in getting statutory clearances from Railways, Forest & NHAI, and non availability of clear corridor for construction of line etc. Further, OPTCL has mentioned that some of the substations are operating in under loaded condition because of absence of downstream infrastructure of DISCOMs. The Commission directs OPTCL to take action for a co-ordinated development of intra-state network, ISTS and downstream distribution network. The time frame of execution of transmission system should be discussed with DISCOMs & CTU in order to avoid stranded assets and idle investments.

224. The delay in commissioning of transmission projects by OPTCL has become a matter of concern. Most of the projects completed during FY 2020-21 are delayed by 3 to 4 years. The forest clearance, RoW issue and contractual issues need to be resolved on priority basis and sincere effort should be made for timely completion of projects to avoid cost and time overrun. The Commission directs OPTCL to appraise the Energy Department on the pending issues so that the same can be taken up by them with the concerned departments and District Administration for early resolution.

225. The projects are to be monitored in a more professional manner. The Commission suggested for Aap based project monitoring system. Since, OPTCL is executing more than 800 cr. of projects in a year; it should have a protocol in place for monitoring the progress of the projects. Assistance of professional experts may be taken during design, estimate, preparation of bill of materials, tendering etc. Everything should be documented in the work order and task lists, schedules, reporting on progress are to be carried out in a timely manner. Day-wise progress is to be recorded by the field officials

so that a consolidated report can be generated at the end of the month for the management to decide on the next course of action.

226. OPTCL, during planning of transmission system, should take utmost care to avoid stranded assets. Additional transmission strengthening proposals without cost benefit analysis and quantified objective would lead to increase system losses, over voltage problem, necessitating more reactive compensation etc. The consumers will also bear the burden on account of high capital investments, RoE, interest on loan, O&M expenses etc. The Commission feels that one of the reasons for increase in ARR of OPTCL from year to year is the high capital investment in creation of stranded assets. Therefore, the Commission desires that henceforth no transmission system strengthening proposals should be executed without the prior approval of the Commission. OPTCL should submit the comprehensive system study along with requirements as specified in the licence conditions of OPTCL and tariff regulations for approval of the Commission before proceeding for execution of the project.

227. A reliable, resilient transmission system is the backbone of the power system. The transmission system establishes the link between the generation sources on one side to the distribution network, which in turn connected to the ultimate the consumers. The transmission network provides a range of benefits that ultimately accrue to customers in the form of reliable service and reduction in costs by improving power flow and relieving congestion, facilitating market competition, meet diverse and changing energy portfolio, limiting customer outages during severe weather events to the system. Therefore, Transmission system is required to be planned/developed based on generation addition, long term agreement, load growth (peak demand) and transmission system constraint in the existing system as highlighted by the system operator (i.e. over loading of lines and transformer, requirement of reactive compensation).

228. Transmission planning is an ongoing process of assessing the electric system and its ability to deliver electricity reliably, efficiently to customers and recommending system reinforcements to meet forecasted load demand. As per the Section 39(2) of the Electricity Act 2003, Intra State Transmission System should be developed in a coordinated manner in consultation with CTU, State Government, Generating Companies, Regional Power Committees, CEA, Licensees etc. The Inter-State Transmission System (ISTS) is developed by CTU in consultation with CEA, STUs and other stakeholders but Intra-state transmission development is the responsibility of State

Transmission Utility (STU). As per tariff policy, necessary studies are to be conducted to augment the transmission system and to reduce transmission system loss. The development of Intra-state transmission system should always match with development of ISTS and downstream distribution network. Mismatch in development will creates un-utilisation/under-utilisation of transmission assets. Coordinated development of ISTS, Intra-state system including distribution network is very much required for optimum utilization of developed transmission system. Rigorous system study is required to assess the upstream and downstream evacuation followed by implementation planning.

229. In the above backdrop, it is emphasised that co-ordination in between the upstream and downstream development is essential. OPTCL should take care of all these things for proper development of the system. System planning should be done properly followed by implementation plan so that there will be minimum underutilisation of assets created by the STU. In central level system study is always carried by CTU and CEA. Similarly at state level there should be a strong team capable for taking up of system studies. OPTCL should strengthen their System Study group instead of depending solely on external consultancy agencies. The Planning process should consider upgradation of existing sub-station with GIS technology, if required, and uprating of existing lines, wherever required as first step. The next step should be to go for new sub-station and new lines. Creation of number of EHV sub-station in close by area will unnecessarily increase CAPEX and transmission system loss. The creation of new substation should be based on load growth and voltage level based on quantum of power to be handed. The new sub-station should have adequate space provision for accommodating future expansion (addition of bays, transformation capacity, reactive compensation etc.) so as to avoid creation of another sub-station unnecessarily in nearby area. OPTCL is therefore directed to develop its own system study group instead of relying upon the Consultants for proper planning of the system in a coordinated manner to avoid stranded assets in the system.

230. In addition to planning, there is a need for proper design & engineering, smooth operation and required maintenance to ensure reliability and availability of transmission system. Standardisation of sub-station capacity, switching schemes, transformation capacity, equipment rating etc. are the need of hour. In this respect, CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations & CEA

guidelines on standard specification for transformer and reactor covering standard rating, standard technical parameter, quality assurance plan, standardisation of foundation for interchangeability of transformer of different make, Condition Based Maintenance (CBM)/ Reliability Centered Maintenance (RCM) practice and erection & commissioning aspect etc. need to be referred. The document also covers about erection commissioning, condition assessment, residual life assessment etc. along with various aspects of transformers starting from 66 kV to 765 kV. OPTCL is directed to refer the above document and should have its main focus on the standardisation and adequate provision for future expansion, so that installation of new substation in nearby area in next 5-10 years can be avoided saving lot of investment

231. Odisha is a cyclone prone area and the transmission & distribution network along coastline of about 480 KMs is being affected very frequently because of cyclone. The frequency of occurrence and intensity of cyclonic wind has increased over the years causing large scale damage to the transmission and distribution system infrastructure. The effect of cyclonic storm is largely felt within the belt of 60 kms from the coast line. OPTCL should, therefore, plan for cyclone resilient transmission infrastructure for the State. A document prepared by the task force constituted by the MoP, GoI on "Cyclone Resilient Robust electricity transmission and distribution infrastructure in coastal area" is available in the public domain for reference. The said document has clearly elaborated about the design aspects and various measures etc. to be considered to reduce the impact of cyclone in coastal areas. Provision of adequate spares, Emergency Restoration System (ERS) and mobile sub-station should be made in line with CEA guidelines/regulations for faster restoration of system and to meet the contingency situation during cyclone. It is understood that OPTCL has received funds from the Government for construction of disaster resilient power system and disaster response centre. OPTCL should therefore submit a detailed report on the amount received and utilisation of the above fund.

232. Right of Way (RoW) is going to be one of the major challenges in construction of new transmission line(s) in future. Use of multi-circuit, multi-circuit & multi-voltage, compact transmission lines using insulated cross arm and use of steel pole, use of high temperature conductor, FACTs devices etc. are the need of the hour to optimise RoW and increase power flow per meter of RoW. In this connection, MoP document on reduction in RoW in urban and forest area which is available in the public domain may be referred. OPTCL is therefore directed to plan its system accordingly for better

aesthetic, high reliability, reduction and optimisation of RoW and carry out system studies to take necessary action to uprate existing transmission lines by replacing ACSR conductor by High Temperature/ High Temperature Low Sag (HTLS) conductors, wherever required for enhancing power flow.

233. One of the most important issues in present scenario is Cyber Security. Many substations in OPTCL and other parts of the country are moving towards substation automation and communication with the remote control station. Cyber Security is going to play a major role as cyber attack can affect the entire system and leading to disastrous situation. MoP in association with CEA and other stakeholders has come up with a document on Cyber Security, which is available in the public domain for reference of all the stakeholders. Cyber intrusion attempts and cyber attacks is a threat to security of the transmission system. Any compromise on this may result in mal-operations of equipments, damage of the equipment or even lead to brownout/blackout. MoP has advised to conduct cyber security audit of the entire cyber infrastructure including websites at regular intervals through CERT-In (Indian Computer Emergency Response Team) empanelled auditors so as to identify the gap and take appropriate corrective actions. OPTCL is therefore directed to intimate the action taken by them in the matter of cyber security.

234. OPTCL should conduct protection audit, mapping and monitoring of transmission assets for efficient and healthy operation of its system. Use of Unmanned Aerial Vehicle (UAV) should be considered as a technology option for survey, stringing of conductor & monitoring of overhead transmission line in inaccessible area and monitoring of sub-station. The introduction of concept of dynamic line rating should be considered to reduce requirement of additional transmission line.

235. In line with National Asset Management Centre set up by Powergrid, which controls and monitors the Powergrid substations across the country, OPTCL may plan to set up State Level Asset Management Centre which will help to monitor and control their assets from a single location.

236. It is observed that numbers of lines and substations in OPTCL system have crossed their normal service life and 26 nos. of substations (at 132 kV and 220 kV level) have served more than 40 years. Some of the transmission substations are even more than 50 years of operation. Similarly, 69 nos. of transmission lines (at 132 kV and 220 kV level) have

served for more than 40 years and out of which 18 transmission lines have crossed 60 years of operation. There is a strong need for Residual Life Assessment (RLA) Study for old substations and EHV transmission lines. Therefore, Residual Life Assessment (RLA) Study of old sub-station equipment including transformers, reactor and transmission line assets should be carried out by OPTCL. This action will help in planning of Run-Refurbish-Replacement (3R) decision of transmission assets.

237. Electrical safety hazards are increasingly posing risk to people and property in the form of shocks, injury, fire, explosion leading to fatal/non-fatal accidents. The growing number of electrical accidents in the State is a serious concern for all. The Commission is receiving the reports on lots of incidents on electrical accidents with fatalities. The primary reasons of such incidents are basically due to non-adherence to safety rules, no/improper maintenance of transmission/distribution system elements, non-compliance of safety clearances, lack of proper use of safety gadgets by the employees etc. Further, appropriately trained/licensed personnel are not being entrusted to work in the field. CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 has vividly dealt with all these matters i.e. relating to issue of certificate of competency /electrical work permit, engagement of personnel having undergone appropriate training, engagement of safety officer, maintaining equipment/material in healthy condition, maintenance of required safety clearances etc. In this connection, the Commission has framed a Regulation on compensation to electrical accident victims. The Commission, therefore, directs the licensees to adhere to the provisions of CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 scrupulously.

238. The Commission, while approving the investment proposals of OPTCL had observed that the State Government desires to support the projects coming up in the remote areas for the larger interest of the people of the state and to cater the additional demand requirement by the upcoming industries, etc. The Commission therefore directs OPTCL to take up the matter with Government of Odisha to fund the economically unviable projects and the other projects that are required for the larger interest of the State through grants.

239. OPTCL should plan transmission system and upgrade the existing substation/ transmission lines and equipments to enhance power transfer capacity and reliability. The transmission lines and substations should have proper protection devices to ensure safe operation of the power system, to reduce the risk of damage to the equipments and

to avoid all kinds of electrical accidents. Further, OPTCL should adopt state of art technology for control, monitoring, protection and communication system, etc. for safe, reliable and efficient operation of its transmission system taking into account the large scale integration of generation from renewable sources having intermittency and variability. OPTCL should adopt the Condition Based Maintenance (CBM)/ Reliability Centred Maintenance (RCM) practices and take up R&M activities for efficient functioning of its transmission elements and also plan for a Disaster Resilient Transmission System to prevent the damage to a large extent during natural disaster. Availability of healthy meters at interfaces of (a) generator and transmission system; (b) ISTS with Intra-state and (c) Intra-state with DISCOMs should be ensured by OPTCL to assess the transmission loss at different system operating voltage levels (i.e. 132 kV, 220 kV and 400 kV levels) and plan the development of transmission system accordingly for reduction in loss level, wherever technically feasible. OPTCL should ensure that the meters of appropriate class as per CEA Regulation are available at all interface points. OPTCL is therefore directed to consider the meter data to assess the month-wise transmission loss in intra-state transmission system including losses at different voltage levels (i.e. 132 kV, 220 kV and 400 kV levels). A report on the transmission loss at different voltage levels for the FY 2021-22 should be furnished latest by 30.06.2022. Further, a report on the month wise transmission loss in intra-state transmission system at different voltage levels (i.e. 132 kV, 220 kV and 400 kV levels) for the 1st quarter of FY 2022-23 should reach the Commission by 31.08.2022.

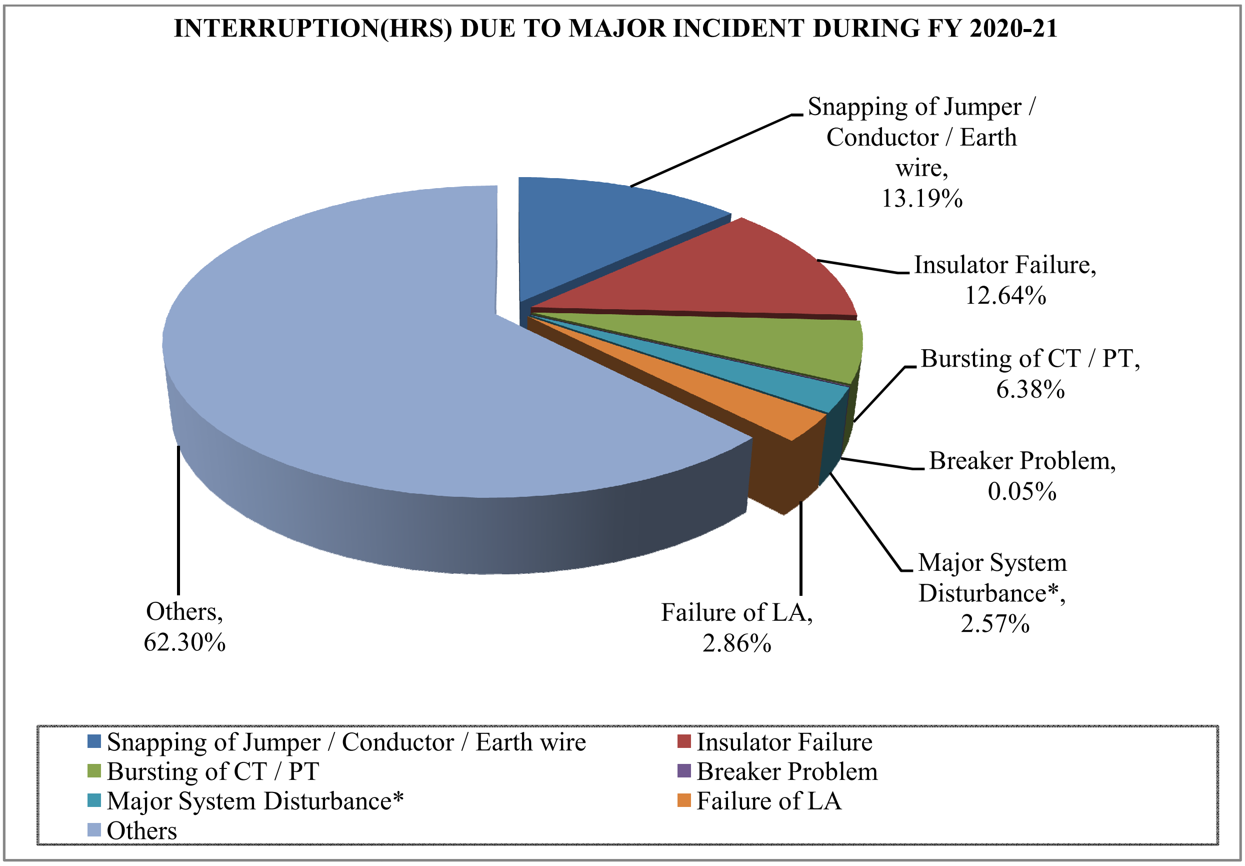
System Interruptions due to Major Incident:

240. OPTCL's system has faced aggregated Annual interruptions varying from 6 hour to 34 hours at different locations on account of conductor/jumper/earth wire snapping, insulator failure, bursting of Current Transformer/Potential Transformer, circuit breaker problem, system disturbance, Lightening Arrester failures etc. The duration as mentioned below is the sum total of interruptions occurred at different areas (s/s) during the FY 2020-21. However, OPTCL has claimed that it has arranged to maintain power supply (without resorting to total power failure due to non-availability of transmission capacity) from other nearby transmission facilities. The effort has been made by OPTCL in maintaining uninterrupted power supply even in the event of generation failures. It has been reported that the load restriction has been imposed to curtail demand due to non-availability of generation/failure of generating stations. OPTCL claimed that there

was no black out experienced in the State during the FY 2020-21. Duration of interruption in the year is given in the table below:

Table - 26
Interruption due to Major Incident

Incident	Duration of Interruption	No. of Interruption	Percentage
Snapping of Jumper / Conductor / Earth wire	33:57:00	45	13.19
Insulator Failure	32:33:00	35	12.64
Bursting of CT / PT	16:26:00	18	6.38
Breaker Problem	0:08:00	1	0.05
Major System Disturbance*	6:37:00	6	2.57
Failure of LA	7:21:00	17	2.86
Others	160:23:00	379	62.30
The duration of interruption indicated above is the sum total of interruptions occurred at different areas (S/s) during the year. However there was no total blackout experienced for the State during the year 2020-21.			



241. It is observed that during FY 2020-21 the daily peak demand touched at 5048 MW maximum on dt.19.10.2020 and a minimum of 2808 MW on dt.25.04.2020. The peak demand of 5048 MW in 2020-21 is about 103 MW lower than the peak demand

experienced during the previous year 2019-20 (5151MW). The total energy drawl is 25448MU in FY 2020-21 against 25532 MU in 2019-20, which indicates the decrease in electricity consumption of around 84 MU in the State.

242. The EHT voltage, as per Regulations 3(1)(b) of Central Electricity Authority(Grid Standards) Regulations, 2010 should be in the range 122-145 kV for system voltage of 132 kV, 198-245 kV for system voltage of 220 kV and 380-420 kV for system voltage of 400 kV. OPTCL has however experienced minimum & maximum operating voltage of 109 kV & 143 kV in its 132 kV system, 195 kV & 245 kV in its 220kKV system and 386 kV & 434 kV in its 400 kV system. The maximum and minimum voltage levels at different major grid S/Ss of OPTCL are given in table below:

Table – 27

Allowable Range (245-198 kV)			
Sl. No.	Name of the 220/132 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	ATRI	241	212
2	Balasore	242	210
3	Bhadrak	244	197
4	Bhanjanagar	245	213
5	Bidanasi	242	210
6	Budhipadar	239	205
7	Chandaka	239	204
8	Duburi	238	214
9	Jaynagar	245	229
10	Joda	231	211
11	Katapalli	231	211
12	Lapanga	232	204
13	Laxmipur	244	228
14	Mendhasal	241	212
15	Meramundali	235	223
16	Narendrapur	242	211
17	Nayagarh	242	214
18	Paradeep	243	202
19	Sadeipali	236	195
20	Tarkera	240	217
21	Theruvali	243	222

Allowable Range (380 -420 kV)			
Sl. No.	Name of the 400 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	Duburi (N)	431	394
2	Lapanga	418	386
3	Mendhasal	429	395
4	Meramundali	434	398

Allowable Range (145 -122 kV)			
Sl. No.	Name of the 132/33 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	Cuttack	141	121
2	Berhampur	143	109
3	Puri	141	110
4	Khurda	140	123

243. OPTCL is advised to take suitable steps to keep the OLTC of the power transformers in healthy condition and should be operated to maintain the voltage within the permissible limits. Further, OPTCL should conduct reactive compensation studies and take necessary steps for replacement of reactive compensation devices (like line reactors, bus

reactors, STATCOM etc.) at suitable locations for a better voltage control and reliable operation of its transmission system. Also, the reactive drawl of DISCOMs from its grid S/S to be monitored regularly and wherever DISCOMs draw excessive reactive load at low voltage condition, OPTCL should take up the matter with them for remedial measure.

244. OPTCL should adopt various technological options for optimum use of existing transmission system in order to increase power transfer capacity and reliability like using FACTS devices. OPTCL should identify the frequently overloaded line and transformers in substations and explore feasibility of employing FACTS devices and addition of transformers. This would not only relieve congestion but also enhance controllability, power transfer capability and reliability of supply. OPTCL is required to develop appropriate system to ensure power supply without interruptions in any part of the State. The Commission expects OPTCL to plan R&M activities with provision of advanced metering /protection/communication system with modern automation. Further, as a part of O&M activity, OPTCL should upgrade the overloaded grid S/Ss in consultation with DISCOMs. OPTCL should ensure safe, secure and economic operation of state grid in a transparent and non-discriminate manner.

245. OPTCL should avoid under loading/over loading of lines & substations resulting in losses and over voltage problem and should follow efficient mode of operation to optimise the loss. There should be periodic audit of relay/protection system of transmission system/distribution system within the state for reliable operation of the State Transmission System. OPTCL should have in place an efficient and holistic monitoring/management system of its transmission network.

246. As an important function of the licensee all major incidents affecting any part of the transmission system should be reported to the Commission in accordance with the provisions of Condition 9.3 of Transmission License Condition and consequent instruction dated 03.01.2007. The Commission, therefore, directs OPTCL to report all the major incidents for which any part of the transmission system is affected in the approved formats within the time line as specified in the aforesaid letter.

Finance

247. The Commission has analysed the application of OPTCL for Aggregate Revenue Requirement (ARR) for FY 2022-23 according to OERC (Terms and Conditions for

Determination of Transmission Tariff) Regulation, 2014. As per Regulation 8.1, the ARR for Transmission Business for each year shall contain the following items.

i. Operation and Maintenance expenses
ii. Interest and Financial Charges
iii. Depreciation
iv. Return on Equity
v. Income Tax
vi. Deposits from Transmission System Users
vii. Less: Non Tariff Income
viii. Less: Income from other business as specified in these Regulations.

Operation and Maintenance Expenses

248. Operation and Maintenance expenses includes (1) Salary, Wages, Pension contribution and other employee costs. (2) A & G expenses (3) Repair & Maintenance cost (4) Expenses related to auxiliary energy consumption in the sub-station for the purpose of air conditioning lighting, technical consumption etc., and (5) other miscellaneous expenses, statutory levies and taxes ~~.~~

249. OPTCL has proposed employee cost of Rs.526.53 crore for FY 2022-23 which includes Salary, Dearness allowance, Conveyance allowance/Reimbursement, HRA, Medical Allowance, Bonus/Ex-gratia etc. While projecting the employee cost, the petitioner has considered the following assumptions:-

i. The actual cash outflow on this head from April-21 to Nov-21 has been extrapolated to arrive at Basic Pay for FY 2021-22 at Rs 148.73 Cr. considering the average no. of employees during this period and a 3% hike in annual increment the Basic Pay for the FY 2022-23 is worked out as Rs.151.67 Cr.

ii. OPTCL has proposed Rs.26.01 Cr. towards balance 50% arrear salary of 7th pay revision to be considered in the ARR of 2022-23.

iii. **Dearness Allowance (DA):** OPTCL has estimated that the DA rate for the FY 2022-23 would be around 38% of Basic pay. With this assumption, the DA for FY 2022-23 is projected to Rs. 60.25Cr.

iv. OPTCL submitted that the rate of HRA is 18-20% depending on the type of city/town they are residing in. OPTCL has estimated HRA for 85% of the employees @ 19% of the Basic Pay and accordingly projected Rs.25.61 Cr. for FY 2022-23.

v. OPTCL has submitted that the employees of OPTCL are entitled to get Medical Allowance @ 5% on revised pay for outdoor medical expenses. Accordingly OPTCL has projected Rs.8.13Cr. for FY 2022-23.

vi. OPTCL has implemented group health/medical insurance policy for its employees in lieu of actual medical reimbursement concept. For this purpose, OPTCL has proposed Rs.3.80 Cr. as premium on Group Insurance Scheme under Staff Welfare expenses.

vii. OPTCL has projected Rs.3.30 Cr. towards Uniform, Liveries, GIS, Sports, Recreations & Cultural Activity etc. under staff welfare expenses for FY 2022-23.

viii. OPTCL has stated that it is functioning with 47% of manpower against sanctioned strength. For smooth functioning, OPTCL has engaged personnel in different streams through outsourcing. Accordingly, Rs.2.94 Cr. has been proposed towards payment to outsourced personnel.

ix. OPTCL has proposed Rs.8.46 Cr. towards stipend for the new recruits for the FY 2022-23.

x. OPTCL has proposed Rs.13.57 Cr. towards Bonus, LTC, Honorarium, Ex-gratia, Conveyance (both allowance and reimbursement) and other allowances (Shift, Handicap, City, ABT etc.) for FY 2022-23.

xi. OPTCL has proposed Rs.1.02 Cr. towards Capacity Building of the employees for the FY 2022-23.

Basic Pay

250. OPTCL in the reply to queries of the Commission submitted that the actual cash outflow on Basic Pay + GP from April 2021 to December 2021 (for a period of 9 months) was Rs.148.73 crore averaging Rs. 12.39 cr per month. The Basic pay and GP for FY 2021-22 as submitted by OPTCL has been extrapolated to arrive at Basic pay for FY 2022-23 taking into consideration the average number of employees during such year. The number of employees proposed by OPTCL and approved by the Commission in the ARR is given in the table below :

Table - 28
Information on number of Employees

OPTCL	Proposed	Approved
No. of employees as on 31.03.2021	2577	2577
Add: Addition during 2021-22	31	31
Less: Retirement/Expired Resignation during 2021-22	155	155
No. of employees expected as on 31.03.2022	2453	2453
Add: New employees to be inducted during FY 2021-22 & regularized during FY 2022-23	397	200
Less: Retirement/Expired/ Resignation during year 2022-23	126	126
No. of employees as on 31.03.2023	2724	2527
Average no. of employees for FY 2021-22	2515	2515
Average no. of employees for FY 2022-23	**2589**	**2490**

251. As revealed from the above table average number of employees during FY 2021-22 works out to 2515 Nos. and for FY 2022-23 works out to be 2490 Nos. While computing the average number of employees for FY 2022-23, the Commission has allowed induction of 200 Nos. of employees against the proposed employees of 397 Nos. The calculated prorated Basic Pay of Rs.148.73 crore for FY 2021-22 is factored with the average number of employees for FY 2021-22 and FY 2022-23 considering retirement and inductions and enhanced at the rate of 3% for calculating basic pay for 2022-23.The details are given in the following table:

Table – 29

(Rs in Crore)

Cash outgo	Amount
Basic+GP drawn in 04/2021	12.72
Basic+GP drawn in 05/2021	12.59
Basic+GP drawn in 06/2021	12.53
Basic+GP drawn in 07/2021	12.35
Basic+GP drawn in 08/2021	12.3
Basic+GP drawn in 09/2021	12.29
Basic+GP drawn in 10/2021	12.26
Basic+GP drawn in 11/2021	12.27
Basic+GP drawn in 12/2021	12.24
Avg Basic Pay + GP	12.39
Pro-rated for FY 2021-22	148.73
Approved for FY 2022-23	**151.67**

Dearness Allowance:

252. The Govt of Odisha implemented the 7th Pay Commission with effect from 1.1.2016. Accordingly, DA was also changed as per the 7th pay recommendations and the

following table shows the notified DA by Govt of Odisha and projected DA thereof for FY 2022-23.

Table – 30

Effective Date	Rate	Status
01.01.2016	nil	Approved By GoO
01.07.2016	2%	Approved By GoO
01.01.2017	4%	Approved By GoO
01.07.2017	5%	Approved By GoO
01.01.2018	7%	Approved By GoO
01.07.2018	9%	Approved By GoO
01.01.2019	12%	Approved By GoO
01.07.2019	17%	Approved By GoO
01.01.2020	-	
01.07.2020	-	
01.01.2021	-	
01.07.2021	31%	Approved By GoO
01.01.2022	34%	Projected
01.07.2022	37%	Projected
01.01.2023	40%	Projected

253. As per the above table the average DA rate for FY 2022-23 is assumed to be 37%.

House Rent Allowance

254. OPTCL has assumed HRA @ 19% of the basic pay and has estimated that 85% of the employees have not availed the OPTCL quarters. OPTCL has accordingly projected Rs 25.61 cr towards house rent allowance for FY 2022-23. The Commission has analysed such proposal of the OPTCL and allows **Rs 13.04 cr** for FY 2022-23 basing on the actual cash flow statement for FY 2021-22 from April 2021 to Dec.2021.

Stipend for new contractual recruitment

255. OPTCL has submitted that they have planned to recruit 397 Nos. employees during FY 2021-22 and 300 Nos. in FY 2022-23. Accordingly, OPTCL has proposed **Rs.8.46 Cr**. towards stipend for the new recruits for the FY 2022-23.

256. The Commission after prudence check allows **Rs 8.46 crore** towards stipend for new recruitments. It is directed that OPTCL should follow State Government models for contractual appointment as a State Govt. entity.

257. Medical reimbursement and all other items such as outsourced engagement, honorarium, ex-gratia, expenses for staff welfare and Leave Travel Concession(LTC) have been accepted by the Commission appropriately.

Terminal Benefit including NPS

258. OPTCL has submitted that as per Accounting Standard 15 issued by MCA, employee benefit liabilities shall be assessed through actuarial valuation. The actuarial assumptions are required to measure the obligation and the expense and there is a possibility of actuarial gains and losses. Moreover, the obligations are measured on a discounted basis because they may be settled over many years after the employees render the related service. Accordingly, OPTCL has been doing actuarial valuation by availing the service of qualified Actuary every year.

259. Para 61 of IND AS-19 states that an enterprise should recognise the net total of the following amounts in the statement of Profit& Loss except to the extent that another Accounting Standard requires or permits their inclusion in the cost of an asset.

(a) Current service cost
(b) Interest cost
(c) Expected return on any plan assets and on any reimbursement rights
(d) Actuarial gains and losses
(e) Past service cost requires an enterprise to recognise it
(f) Effect of any curtailments or settlements; and
(g) Effect of the limit i.e. the extent to which the amount determined

260. Accordingly, OPTCL has proposed Rs.210.00 Cr. towards terminal liabilities (Pension, Gratuity & Leave Encashment) for the FY 2022-23 same as projected by OPTCL for FY 2021-22.

Table- 31

(Rs. Cr.)

	FY 2022-23
Pension	185.48
Gratuity	10.43
Leave salary	14.09
Total	**210.00**

261. Besides, Rs. 18.11 Cr. is proposed towards employer's matching contribution for employees who have joined under NPS and Non-Pensioner Category. The total terminal

benefit liabilities of employees and existing pensioners is therefore projected Rs 228.11 Cr.

262. To assess the cash out flow due to terminal liabilities, the Commission sought for the month wise cash outflow information which is presented in the table below:

Table – 32

(Rs in Crore)

Cash outgo terminal liabilities	Amount
04/2021	14.59
05/2021	14.53
06/2021	14.51
07/2021	14.54
08/2021	12.20
09/2021	14.84
10/2021	15.72
11/2021	16.01
12/2021	15.30
Avg. Pension	14.69
Pro-rated for FY 2021-22	176.32
Approved for FY 2022-23	**185.48**

263. It is seen from the above table that the average monthly payment towards terminal liabilities is approximately Rs.14.69 cr. and it would be Rs.176.32 cr. for the FY 2021-22 if prorated for the whole year.

264. The Commission analysed the same and find that the projection made by the OPTCL of Rs.185.48 cr. for FY 2022-23 is reasonable, which is allowed towards terminal liabilities to OPTCL for FY 2022-23. Besides the above, an amount of Rs.18.11 crore towards NPS is allowed for FY 2022-23.

265. As regards the 7th Pay Commission arrear, OPTCL has proposed 50% of the balance payment of Rs.26.01 crore. Govt. of Odisha has recently notified to release 30% of such arrear. The Commission accordingly allows Rs.15.61 crore towards 30% of the 7th Pay Commission arrear. The balance 20% of the arrear will be allowed as and when it is notified by the State Govt.

266. The expenses on outsource engagement is allowed as proposed by OPTCL amounting to Rs.2.94 crore.

267. With the above observations the amount of employees cost as proposed by the petitioner and approved by the Commission is given in the following table:

Table - 33
Approved Employees Cost for FY 2022-23

(Rs. in Crore)

Sl. No.	Particulars	FY 2021-22 Approved	FY 2022-23 Proposed	FY 2022-23 Approved
A	**Salary & Allownce**			
1	Basic Pay and Grade Pay	167.48	158.56	151.67
2	Dearness Allowance	48.57	60.25	56.12
3	House Rent Allowance	15.02	25.61	13.04
4	Other Allowance	0.79	0.98	0.98
5	Bonus	0.04	0.02	0.02
6	Stipend for New Recruitment	7.26	8.46	8.46
7	Arrear Salary for 7th Pay Commission		26.01	15.61
	Sub-total (A)	**239.16**	**279.89**	**245.90**
B	**Additional Employee Cost**			
1	Out Sources Engagement	2.57	2.94	2.94
	Sub-total (B)	**2.57**	**2.94**	**2.94**
C	**Other Employee Cost**			
1	Medical Expenses (allowance + Reimbursement)	5.74	8.13	8.13
2	Leave Travel Concession	-	0.50	0.50
3	Honorarium	0.07	0.06	0.06
4	Ex-gratia	5.00	7.77	5.00
5	Staff Welfare Expenses	3.07	7.10	3.38
6	Miscellaneous	3.00	-	-
7	Conveyance expenses		4.24	4.24
8	Capacity building charges		1.02	1.02
	Sub-total (C)	**16.88**	**28.82**	**22.33**
D	**Terminal Benefits**			
1	Pension	185.48	185.48	185.48
2	Gratuity	10.43	10.43	10.43
3	Leave Salary	5.25	14.09	5.25
4	Other (including contribution to NPS)	13.19	18.11	18.11
	Sub-total (D)	**214.35**	**228.11**	**219.27**
E	**Total Employees Cost (A+B+C+D)**	**472.96**	**539.76**	**490.43**
F	Less: Employees Cost Capitalised	15.08	13.24	13.24
G	**Net Employee Cost (E- F)**	**457.88**	**526.52**	**477.19**

The employee cost approved for the FY 2022-23 is Rs. 477.19 crore.

Repair & Maintenance Expenses

268. The OPTCL has submitted that the R&M works are undertaken in different streams namely O&M, Telecom, Civil Works and Information Technology (IT). The OPTCL has projected a sum of Rs.148.04 cr. towards R&M expenses and the summary of proposed R&M Expenses under these four heads is given in the following table :

Table - 34

(Rs. in Cr.)

Particulars	OERC Approval (FY 2020-21)	OERC Approval (FY 2021-22)	Projection (FY 2022-23)
(i) O&M	**115.22**	**118.61**	124.53
(ii) Telecom			4.67
(iii) Civil Works			14.57
(iv) Information Technology			4.26
Total R&M Expenses			**Rs. 148.04Cr.**

269. The OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations at Regulations 8.15 and 8.16 provides the following with regard to determination of Repairs and Maintenance (R&M)

'Repair and Expenses would be allowed at the rate of 2.5% of Gross Fixed Assets (GFA) only on assets owned by the transmission company, for each year of the control period.'

'In case of STU (OPTCL) the Commission shall allow Repair and maintenance expenses basing on the past trend and requirement of the licensee in this regard after prudence check.'

The OPTCL was asked to submit the actual expenditure incurred under R&M during the previous year 2020-21 and the current year up to Dec. 2021 (FY 2021-22). As per the submission for the current year from April 2021 to November 2021 is Rs. 46.29 cr. for 9 months. Accordingly, for the current year the prorated amount is arrived at Rs 61.72 Cr. The actual expenses in the audited account on R&M is Rs.126.10 & 103.91 cr. for the FY 2019-20 and 2020-21. The average expenses on this account for the past two years comes about Rs.115 cr. However, considering the views of some objectors that OPTCL has included the cost of some equipment of capital nature under R&M, the Commission approve Rs.110.50 cr. for FY 2022-23. The details of the same is depicted in the table given below:

Table – 35
Expenditure on R&M
(Rs. in Cr.)

O&M	39.21
Construction	0.88
E&MR	0
Telcom	1.62
Stores	0
Civil units	3.64
IT & others	0.94
Total for FY 2021-22	46.29
Prorated for FY 2021-22	61.72
Approved for FY 2022-23	110.50

270. Accordingly the amount of R & M expenditure for the FY 2022-23 is approved for Rs.110.50 cr.

Administration & General Expenses

271. For the FY 2022-23, the petitioner has proposed an amount of Rs.43.18 Crore under the head Administration & General Expenses. Item-wise break up of expenses is given in table below:

Table - 36

PARTICULARS	(Rs. Cr.)
Property Related Expenses	4.54
Communication	0.89
Professional Charges	6.71
Conveyance & Travelling	14.27
Electricity & Water Charges	2.15
Fees & Subscription	0.10
Books & Periodicals	0.06
Printing & Stationery	0.50
Advertisement	1.54
Entertainment	0.19
Watch & Ward	3.11
Miscellaneous	3.68
Training	2.14
Office Maintenance	2.46
SLDC Charges	0.89
Total	**43.18**

272. As per the OERC Regulation, the Commission shall allow A&G expenses by giving an escalation factor equal to WPI over the amount approved by the Commission in the previous year.

273. Therefore, the Commission allows escalation of 2.76% (rate of inflation measured by WPI for the period up to Jan 2022) over the approved amount of previous year. The calculation for determining the A&G expenses is given in table below:

Table - 37

(Rs. in Crore)

Normal A&G approved during 2021-22	30.35
Escalation as per WPI (upto jan'2022@ 2.76%)	0.84
Normal A&G for 2022-23	31.19
Add licensee fees to Commission	1.90
Add: Inspection fees	3.72
SLDC charges	0.92
Total A&G Expenses approved for FY 2022-23	37.73

274. The Commission approves an amount of Rs. 37.73 crore towards A&G expenses for the FY 2022-23. The Commission also directs OPTCL to keep the A&G cost under control commensurating with business volume.

Interest and financial charges

A. Interest on loan

275. OPTCL has projected Interest on loan at Rs.149.25 Cr. for FY 2022-23. Details of interest on loan capital projected by OPTCL is shown in following table:

Table - 38

(Rs. in Cr.)

Loans	Rate of Interest	Principal as on 01.04.22	Loan to be received (FY 21-22)	Loan to be redeemed (FY 21-22)	Interest payment (FY 22-23)	Total Payment (FY 22-23)
JICA	5.00%	608.89	89.52	49.65	31.44	81.09
Bank of India	7.20%	24.89	-	6.75	1.8	8.55
REC Loan	10.83% (Avg.)	142.27	-	22.63	15.28	37.91
PFC Loan	11.36% (Avg.)	24.26	-	6.74	2.91	9.65
Union Bank of India-I	7.20%	477.24	-	46.67	32.68	79.35
Union Bank of India-II	7.20%	389.79	217.33	-	35.89	35.89
New Loan	7.25%	-	403.48	-	29.98	29.98
	Grand Total	1,667.34	620.81	132.44	149.25	281.25

276. Interest on the Government loans are not allowed as per earlier orders in the ARR. As revealed from the above table OPTCL has submitted that the anticipated receipt of loan during FY 2021-22 would be total to the tune of Rs.620.81 crore. OPTCL has also proposed Loan redemption to the tune of Rs.132.44 crore.

277. The Commission analyses the Loan statement submitted by OPTCL. Interest on new loan to be taken during the FY 2022-23 is not considered except for JICA loan. Source wise break up on loan as on 31.03.2022 and 31.03.2023, average rate of interest on the above loan and the amount of interest determined and approved for 2022-23 is given in table below:

Table – 39

(Rs. in Crore)

Source	Average rate of interest (%)	Loan as on 31.03.2022	Anticipated Payment (FY 22-23)	Loan as on 31.03.2023	Average Loan amount	Interest amount
JICA	5.00%	608.89	49.65	648.76	628.83	31.44
Bank of India	7.20%	24.89	6.75	18.14	21.52	1.55
REC Loan	10.83%	142.27	22.63	119.64	130.96	14.18
PFC Loan	11.36%	24.26	6.74	17.52	20.89	2.37
Union Bank of India-I	7.20%	477.24	46.67	430.57	453.91	32.68
Union Bank of India-II	7.20%	389.79	-	389.79	389.79	28.06
New Loan	7.25%	-	-	0	0.00	0.00
Total		1667.34	132.44	1624.42	1645.88	110.29

278. The Commission allows Rs. 110.29 crore towards interest on Loan for FY 2022-23.

Interest on Working Capital

OPTCL has estimated its working capital at Rs.293.47 cr and the interest on working capital Rs 30.23 Cr. The Commission analysed the Cash flow statements (Revenue items) of previous year and current financial year from April 2021 to November 2021. It is observed that the total cash inflow for the FY 2020-21 is Rs.669.02 cr as against the outflow of Rs463.71 cr. This analysis indicates that OPTCL has a net positive cash flow. In the above scenario, the Commission is of the opinion that there is no requirement of working Capital loan for OPTCL. Hence the amount of interest on working capital as proposed by OPTCL is not allowed in the ARR.

Depreciation

279. OPTCL has submitted that as per the Regulation 8.38 of OERC (Terms & Conditions for determination of Transmission Tariff) Regulation 2014, the depreciation shall be ~~has~~ calculated for each year of the control period on the original book value of the assets considering applicable depreciation rate as determined by the Commission from time to

time . The Regulations further provides that the depreciation shall not be allowed on assets funded by Transmission system users and capital subsidies/grants. OPTCL in the ARR application has submitted the details of transmission fixed assets based on audited accounts of OPTCL since inception till FY 2020-21 along with the prior period assets belonging to GRIDCO/OSEB in order to remove any ambiguity relating to up valued fixed assets and original book value of transmission fixed assets of OPTCL as on 31.3.2021.

280. OPTCL has given a table showing opening balance of assets starting from 1996-97 till FY 2020-21 along with other information such as addition, deduction and closing balance. The closing balance as on 31.03.2021 is accordingly arrived at Rs 7237.58 cr. OPTCL has considered deduction from such closing balance in respect to up valued assets of Rs 512.71 cr, beneficiary/deposit works assets of Rs 845.18 cr, grant assets of Rs 605.41 and original book value of assets fully depreciated (i.e., 90%) assets of Rs 1562.57 cr as on 31.3.2021. Considering these figures and norms of tariff Regulations the original book value of transmission assets is arrived at Rs. 3711.71 crore.

281. OPTCL has projected total transmission assets (excluding grant and beneficiary assets) of Rs 877.83 cr to be added during the FY 2021-22 and Rs 1095.44 cr during the FY 2022-23. Considering the same the original book value the transmission fixed assets of OPTCL is projected at Rs 5684.98 cr (Rs 3711.71 cr + Rs 877.83 cr + Rs 1095.4 cr) as on 31.3.2023. Based on norms of the Tariff Regulations and reads specified therein, OPTCL has calculated Rs 263.00 cr towards depreciation to be considered in ARR.

282. The Commission has gone into the details of the submission made by the OPTCL. OPTCL has proposed Rs.263.00 Cr towards depreciation for the FY 2022-23. The Commission in its tariff orders allows depreciation on the historical costs of the assets without considering the effect of up valuation. The Govt. of Odisha in successive years has also communicated to keep in abeyance the effect of up-valuation of assets from the ARR calculation. In line with the same principle, the Commission considers the calculation of depreciation on the pre up-valued assets. The commission has accordingly derived the effect of up-valuation which is shown in the following table:

Table - 40

(Rs. in Crore)

Transmission Assets	**Assets as on 31.03.2016 as per audited report (up valued)**	**Assets as on 31.03.2016 as approved by commission (pre-up valued)**	**Difference (Up valuation effect)**
Free Hold Land	34.46	55.57	5.64
Lease Hold Land	26.75		
Buildings	87.70	86.35	1.35
Electrical installation	1.39		1.39
Plant and Machinery (other civil works)	8.88	8.69	0.19
Plant and Machinery	1903.18	1832.31	70.87
Plant and Machinery: (Lines, Cables and Network)	1953.76	1502.47	451.29
Vehicles	2.09	1.65	0.44
Furniture, Fixture	4.51	3.31	1.20
Office Equipment& Others	25.66	23.45	2.21
Total	**4048.38**	**3513.80**	**534.58**

283. The Commission has been considering the gross fixed assets as appearing in the successive available audited accounts. In the audited account for the FY 2016-17, OPTCL has adopted Ind-AS system of accounting. As reported in the said audited account deemed cost of assets on 31.3.2017 was Rs 3042.57 cr. However, the Commission in the previous Tariff Order approved the total assets of OPTCL as on 31.3.2017 to tune of Rs 4086.91 cr. Therefore, there was a reduction in the assets value to the tune of Rs 1044.34 cr due to the implementation of Ind-AS system of accounting. Accordingly, the Commission has been considering such deemed cost of assets appearing in the audited accounts for successive year while calculating deprecation in the ARR of OPTCL. However, OPTCL in the successive tariff petition after implementation of Ind-AS System has been asking to consider, the total value of assets at historical cost and not the deemed cost appearing in the audited accounts. The Commission after analysis considered the deemed cost in the audited accounts as the Commission had no full information on original book value of assets fully depreciated, beneficiary/deposit works assets and grant assets. Therefore, deemed cost was considered to arrive at the depreciation calculation after deducting the up valued assets. Now in the present OPTCL have provided all the required and relevant information relating to up valuation, beneficiary/deposit work / grant assets and 90% fully depreciated asset till FY 2021 from inception in the present petition.

284. The Commission analysed such information and considers that the historical cost of assets as on 31.03.2021 amounting to Rs 7237.58 cr. After deduction of fully depreciated amount (Rs. 1562.57 cr.), Upvaluation effect (Rs. 534.58 cr.), assets created out of grant beneficiary & deposit assets (Rs.1450.59 cr.) the Value of assets assets as on 1.04.2022 is arrived at Rs. 3689.84 cr. OPTCL has added assets worth Rs. 877.83 cr. and considering that the assets amounts to Rs 4567.67 as the book value of assets as on 31.03.2022. The depreciation in the present ARR is accordingly calculated ~~in~~ on such basis. The following table shows the statement of fixed assets and block-wise computation of depreciation allowed for FY 2022-23.

Table - 41

Particulars	OERC Rates of Depreciation	Book Value of FA as on 1-4-2021 including Upvalued and Grant/Depost Assets	Book Value of FA as on 1-4-2021 Depreciated (90%)	Upvaluation effect	Book Value of FA as on 1-4-2021 (Grant , Beneficiary& Deposit Assets)	Book vale of own Assets as on 1-4-2021 (on which Dep. Calculated)	Addition during FY 2021-22 (Approved)	Book vale of own Assets as on 01-04-2022	Depreciation for the Year
1	*2*	*3*	*4*	*5*	*6*	*7=3-4-5-6*	*8*	*9=7+8*	*10*
Transmission Assets									
Free Hold Land		52.31			6.29	46.02	8.95	54.97	-
Lease Hold Land	3.34%	55.99		5.64	5.11	45.24	11.46	56.70	1.89
Buildings	3.34%	137.99	0.21	1.35	6.99	129.44	72.00	201.44	6.73
Electrical Installation	5.28%	10.25	0.47		3.44	6.34	1.43	7.77	0.41
Plant and Machinery: (Other Civil Work)	3.34%	85.76		1.58	3.13	81.05	18.40	99.45	3.32
Plant and Machinery	5.28%	4,190.91	696.19	70.87	893.54	2,530.31	525.85	3,056.16	161.37
Plant and Machinery: (Lines, Cables & Network)	5.28%	2,625.07	850.47	451.29	528.23	795.08	230.86	1,025.94	54.17
Vehicles	9.50%	2.51	1.46	0.44		0.61	0.24	0.85	0.08
Furniture, Fixture	6.33%	8.17	1.33	1.20	0.44	5.20	1.34	6.54	0.41
Office Equipment	6.33%	51.04	12.44	2.21	3.42	32.97	7.29	40.26	2.55
Intangilbe Assets	15.00%	17.58				17.58		17.58	2.64
Total Own Assets		**7,237.58**	**1,562.57**	**534.58**	1,450.59	3,689.84	**877.83**	4,567.67	**233.57**

285. Accordingly, Commission approves an amount of Rs.233.57 cr towards depreciation for the FY 2022-23.

Return on Equity

286. OPTCL has proposed an amount of Rs.312.56 crore as return on equity during FY 2022-23 as per clause 8.28 of Regulation, 2014 on equity share capital of Rs. 1560.99 crore @ 15.50%.

287. As per the Regulation 8.28 & 8.29 of OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014, return on equity shall be computed on pre-tax basis @15.50% to be grossed up as per Clause (2) of this Regulation. As submitted

by OPTCL the amount of equity infused by State Govt. till the date of filing application amounts to Rs.1560.99 crore. The sanction order and date of Govt. fund as filed by OPTCL is given in table below:

Table – 42

Sl. No.	Sanction Order No. and Date	Amount (Rs. Cr.)
1	R&R-I-01/2009-3560 dt.25.03.09	23.04
2	R&R-I-01/2009-2003 dt.24.02.09	0.01
3	R&R-I-01/2009-9464 dt.11.09.09	5.00
4	R&R-I-01/2009-4826 dt.01.06.10	20.00
5	R&R-I/73/2010-2438 dt.23.03.2011	51.95
6	R&R-6/12-685 dt.31.01.2012	1.00
7	R&R-6/12-690 dt.31.01.2012	39.00
8	R&R-6/12-695 dt.31.01.2012	3.00
9	R&R-6/12-629 dt.22.01.2013	25.76
10	R&R-6/12-634 dt.22.01.2013	16.60
11	R&R-6/12-624 dt.22.01.2013	7.64
12	R&R-6/12-5693 dt.18.07.2013	29.19
13	R&R-6/12-5698 dt.18.07.2013	11.97
14	R&R-6/12-5703 dt.18.07.2013	8.84
15	R&R-69/14-10445 dt.29.12.2014	10.50
16	R&R-69/14-10450 dt.29.12.2014	27.50
17	R&R-69/14-10455 dt.29.12.2014	12.00
18	R&R-69/14-6823 dt.06.08.2015	19.68
19	R&R-69/14-6818 dt.06.08.2015	17.22
20	R&R-69/14-6813 dt.06.08.2015	20.03
21	BT(P)-15/15-10291 dt.21.12.2015	0.07
22	R&R-69/14-5364 dt.18.7.2016	10.00
23	R&R-69/14-5369 dt.18.7.2016	20.00
24	R&R-69/14-5374 dt.18.7.2016	20.00
25	BT(P)-04/2018/En-1786 dt. 26.02.18	15.00
26	BT(P)-04/2018/En-1791 dt. 26.02.18	20.00
27	BT(P)-04/2018/En-1796 dt. 26.02.18	15.00
28	R&R -54/2015/En-5458 dt. 23.06.15	20.00
29	R&R -54/2015/En-737 dt. 28.01.16	10.00
30	R&R -54/2015/En-4348 dt. 07.06.16	20.00
31	R&R -54/2015/En-466 dt. 17.01.17	60.00
32	R&R -17/2017/En-2895 dt. 22.04.17	20.00
33	R&R -17/2017/En-10216 dt. 27.12.17	50.00
34	R&R -40/2018/En-3902 dt.28.04.2018	15.00
35	R&R -40/2018/En-4632 dt.24.05.2018	40.00
36	BT(P)-04/2018(pt)-10432/En dt. 19.12.2018	15.00
37	BT(P)-04/2018(pt)-10439/En dt. 19.12.2018	15.00
38	BT(P)-04/2018(pt)-10446/En dt. 19.12.2018	15.00

Sl. No.	Sanction Order No. and Date	Amount (Rs. Cr.)
39	R&R-40/2019-5100/En TD.27.06.2019	3.67
40	R&R-40/2019-6530/En Dt.6.08.2019	11.03
41	201915819273 DTD.27.02.2020	55.00
42	202018025467 DTD.13.10.2020	50.00
43	202019752418 dtd.26.03.2021	5.29
44	202019704714 dtd.23.03.2021	9.00
45	202019747311 dtd 26.03.2021	647.00
46	202121454297dtd 06.09.2021	50.00
	Total	1,560.99

288. The Commission allows return on equity at the rate of 15.50% on the equity value. The above table reveals that there is equity of Rs.647.00 crore which is relating to the sanction of Government towards conversion of outstanding to the equity. The Government of Odisha specifically in its letter No.3333 dated 24.03.2021 has communicated to the Commission that no return on equity shall be paid on such amount. The Commission therefore, excludes this amount while arriving at the return on equity on the total equity based as shown in the above table. After exclusion of the above said amount of Rs 647 crore, the equity based considered is Rs 913.99 cr (Rs 1560.99 cr minus 647 cr) and RoE calculated on such equity based is approved at Rs 141.67 cr.

289. Further, OPTCL has proposed an amount of Rs.2.16 Crore towards income tax for the FY 2022-23 based on the provision made in the audited accounts for the FY 2020-21. The Commission accordingly, allows Rs 2.16 cr towards Income Tax in the ARR of 2022-23. Any amount of income tax liability to be paid in subsequent period shall be adjusted during the true up exercise based on audited accounts.

Other miscellaneous expenses

290. Grid Co-ordination Committee Expenses: OPTCL proposed an amount of Rs.0.35 crore under the head GCC expenses for the FY 2022-23. The said expenditure for GCC is in general a part of A&G expenses. Therefore, the Commission allows an amount of Rs.0.35 crore towards GCC expenses for the year 2022-23 in line with approval of the last year ARR with stipulation that this provision should be treated as a controllable expense.

Incentive for system availability

291. OPTCL in its submission has proposed an incentive of Rs.10.73 crore to be passed on the ARR of FY 2022-23 as the system availability of OPTCL Transmission Network. The transmission system availability factor (TAFY) for FY 2020-21 was 99.98%, which is more than Normative Annual Transmission System Availability Factor (NATAF) of 98.50%. The OPTCL system availability of 99.98% has been duly verified & certified by SLDC.

292. The Commission examined the relevant provision of Act & Regulations on payment of incentive to OPTCL. As SLDC has verified the System Availability of 99.98% during FY 2020-21 and is expected to maintain NATAF more than 98.50% during FY 2021-22, pending verification, the Commission while appreciating the system availability of 99.98% during FY 2020-21, approves an amount of Rs.5.00 crore as an incentive in the ARR of OPTCL for FY 2022-23 with a rider that this incentive amount approved by the Commission should be spent on solarisation of grids and capacity building/efficiency improvement of its employees. The Commission directs that OPTCL to submit the detailed breakup of the amount spent under system improvement & capacity building.

Rebate

293. As per Regulation 8.49 of OERC Regulation, 2014 a rebate of 2% is to be allowed by the transmission licensee in case the payment is received within 2 working days. Similarly, as per the Regulations, 8.50 a rebate of 1% is to be allowed by the transmission licensee in case the payment is received after 2 working days and within a period of 30 days. Accordingly OPTCL has projected an amount of Rs.24.94 crore towards rebate for FY 2022-23. The Commission approves an amount of Rs.16.64 crore towards rebate as a pass through in the ARR.

Miscellaneous Receipts

294. OPTCL has proposed an amount of Rs.263.83 crore towards miscellaneous receipt from inter-state wheeling, short term Open Access & STU charges, Bank interest, sale of Scraps and other Misc. Receipts. OPTCL in its submission stated the item-wise details in the table as follows.

Table - 43

Source	Rs.Cr.
Inter-State Wheeling	9.45
Short-Term Open Access& STU Charges	212.64
Bank Interest	19.40
Supervision Charges	1.92
Net gain/(loss) on disposal of PPE(Scrap)	12.48
Other Misc. Receipts	7.94
Total	**263.83**

295. The Commission examined the other receipts earned by the OPTCL in the shape of 'Revenue from operations' and 'Other income' from the cash flow statement for the current year till December 2021. Out of the various heads under which OPTCL earns other receipts the commission has excluded income from few heads while computation of miscellaneous income. These heads are Long term open access charges, income relating to SLDC charges, loans to employees, suppliers, advances to suppliers, income tax refund, deferred income, disposal of property, plant, provision written back, employee trust provision withdrawn etc.

296. The Commission by OERC (Terms and Conditions of Intra-State Open Access) Regulations, 2020 has rationalised the LTOA, MTOA and STOA charges paid by the Open Access customers in line with the CERC (Open Access in Interstate Transmission), Regulations. In view of such developments the receipts of STOA during the ensuing year 2022-23 would be substantially increase. The commission while estimating the Miscellaneous receipts has gone into the details of the cash flow for the current year 2021-22 upto December 2021 and prorated such receipts for FY 2022-23 except for the Short Term open Access & STU charges where the actual proposal of OPTCL has been considered. The following table shows the calculation for arriving at Miscellaneous receipts.

Table - 44

Source	Rs.Cr.	Actual Cash flow till Dec 2021	Approved Miscellaneous Receipts for FY 2022-23
Inter-State Wheeling	9.45	11.67	17.505
Short-Term Open Access& STU Charges	212.64	124.52	212.64
Bank Interest	19.4	15.47	23.205
Supervision Charges	1.92	0.98	1.47
Net gain/(loss) on disposal of PPE(Scrap)	12.48		12.48
Other Misc. Receipts	7.94	23.9	35.85
Total	**263.83**	176.54	303.15

297. Therefore commission allows total miscellaneous receipt of Rs. 303.15 cr for FY 2022-23.

Transmission Cost

298. OPTCL in its ARR application has considered demand projection of all four DISCOMs totalling 28397 MU for FY 2022-23. It envisages 330 MU of energy to be transacted in DISCOMs 33kV & 11 kV network, OPTCL is not entitled to receive any transmission charge as per Commission's order on this. Hence, total MU to be transmitted in OPTCL network for DISCOMs is reduced to 28067 MU. The Commission scrutinized the proposal of OPTCL alongwith the proposals submitted by the distribution licensees and the total energy to be transmitted in the OPTCL system is estimated at 29710 MU for FY 2022-23, the details of which are mentioned in the table below:

Table – 45

Details of Energy for Transmission	Proposed by OPTCL (MU)	Approved by OERC (MU)
Total Demand of DISCOM	28397	29500
Less energy transmitted in 33KV & 11 KV network	330	300
Energy Transmitted for DISCOM	28067	29200
Wheeling to industries from CGPs & Emergency Sale to CGPs.	450	510
Total	**28517**	**29710**

299. The details of expenses proposed by OPTCL and approved by the Commission for FY 2022-23 towards transmission charges are depicted in table below:

Table – 46
ARR Proposed and Approved for OPTCL for FY 2022-23(Rs. in crore)

ITEMS	Approved FY 2021-22	Proposed FY 2022-23	Approved FY 2022-23
Employees Cost including Terminal Benefits	457.88	526.53	477.19
R&M Cost	118.61	148.04	110.50
A&G Cost	30.35	43.18	37.73
Interest and financial charges	94.50	149.25	110.29
Depreciation	232.95	263.00	233.57
Return on Equity	131.70	312.56	141.67
Income Tax		2.16	2.16
Interest on Working Capital	-	30.23	-
Sub-Total	**1,065.99**	**1,474.95**	**1,113.11**
Special Appropriation			
Pass Through Expenses			
Contingency Reserve			

ITEMS	Approved FY 2021-22	Proposed FY 2022-23	Approved FY 2022-23
Other miscellaneous expenses (Aux.)	-		-
GCC Expenses , statutory levies & taxes	0.35	0.35	0.35
Incentive for system availability	5.00	10.73	5.00
Rebate	15.86	24.94	16.64
Total	**1,087.20**	**1,510.97**	**1,135.10**
Less Misc. Receipts	243.28	263.83	**303.15**
Less: Surplus True up	51.00		
Annual Revenue Requirement to be recovered from LTA Consumers (i.e. DISCOMs & CGPs)	**792.92**	**1,247.14**	**831.95**
No. of Units to be handled (MU)	28,330.00	28,517.00	29,710.00
Transmission Charges (Paise/Unit) (Rounded)	**27.99**	**43.73**	**28.00**
Expected Revenue from LTA Customers	793.24	798.48	831.88
Deficit	**0.32**	**(448.66)**	(0.07)

TARIFF DESIGN

Transmission Tariff

300. OERC Transmission Tariff Regulation 2014 stipulates that the Transmission Tariff payable by the Beneficiaries of the Transmission System shall be designed to recover the Aggregate Revenue Requirement approved by the Commission for each year of the Control Period. The transmission Tariff shall be computed as follows:

ARR/ Total Energy handled in the Transmission System of the Licensee.

301. The Commission has followed the same principle of Postage Stamp Method as in earlier years for determination of Transmission Charges of OPTCL system. Accordingly, the Transmission Charges have been worked out at 28.00 paisa per unit which shall be applicable for transmission of power at 400 kV/220 kV/132 kV over OPTCL’s EHT Transmission Lines and Sub-stations and shall be payable by the DISCOMs.

302. The estimated energy for transmission in OPTCL’s system is 29710 MU with an average demand of 3392 MW. The net transmission cost as indicated in the table above is Rs.831.95 crore. Accordingly, the Open Access charges work out to a rounded sum of Rs.6720.00/MW-day or Rs.280/MWh. The open access customer (LTA, MTOA and STOA) other than DISCOMs availing Open Access under OERC (Terms and Conditions of Intra State Open Access) Regulations, 2020 shall pay Rs.6720.00/MW-Day (Rs.280/MWh) towards transmission charges.

303. The Open Access charges i.e. cross subsidy surcharge, wheeling and transmission charges as determined by the Commission in its order passed in Case No.112, 113, 114 & 115 of 2021 for Open Access consumers of 1 MW and above shall be applicable.

Transmission Loss for Wheeling

304. OPTCL had proposed that out of the energy supplied to transmission licensee, 3.10% shall be deducted towards transmission loss and balance is liable to be delivered at delivery point at 400kV/220kV/132kV. The Commission has approved the transmission loss of 3.00% for wheeling for FY 2022-23.

Reactive Energy Charges:

305. OPTCL in its ARR application submitted that the Commission in Para 16 of the order dated 05.02.2019 in Case No. 50/2017 has approved the provisional reactive energy charges of 3 paise/kVARh till a final justification is submitted by OPTCL in consultation with the stakeholders. Accordingly, OPTCL is holding consultation with the stakeholders at regular intervals and some more time is required in this regard. In view of the above, OPTCL proposes that 3paise/kVARh may be approved provisionally as Reactive Energy Charges FY 2022-23.

306. In view of the above the Commission provisionally approves reactive energy charges @ 3 paise/kVARh for FY 2022-23. However, the direction of the Commission in the order dated 05.02.2019 in Case No. 50/2017 should be complied by OPTCL.

Transmission Charge Payment Mechanism

307. The LC arrangement has been newly created between OPTCL and DISCOMs for securing transmission charges.

Rebate

308. For payment of bills through a letter of credit or NEFT/RTGS or by payment in cash within two working days (except holidays under N.I. Act) from the presentation of bill, a rebate of 2% on current bill shall be allowed. If the payments are made by a mode other than through a letter of credit but within a period of 30 days of presentation of bills by the Distribution Licensee/user, a rebate of 1% shall be allowed.

Late Payment Surcharge

309. In case payment of bills by the licensees/ user is delayed beyond a period of 30 days from the date of receipt of bill, a late payment surcharge at the rate of 1.25% per month shall be levied by OPTCL on the unpaid amount.

310. The transmission tariff approved as above in respect of OPTCL will become effective from 01.04.2022 and shall continue to remain in force until further orders.

311. The application of OPTCL in Case No. 105 of 2021 is disposed of accordingly.

Sd/-	**Sd/-**
(S. K. RAY MOHAPATRA) **MEMBER**	**(G. MOHAPATRA)** **(Officiating Chairperson)**