

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

\*\*\*\*\*

**Present:       Shri U. N. Behera, Chairperson**  
**Shri S. K. Parhi, Member**

**CASE No. 72 OF 2019**

**DATE OF HEARING       :       06.02.2020**  
**DATE OF ORDER         :       21.04.2020**

**IN THE MATTER OF:       An application for approval of Aggregate Revenue Requirement and determination of Transmission Tariff for FY 2020-21 filed by OPTCL under Sections 62, 64 and all other applicable provisions of the Electricity Act, 2003 read with Regulations of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 and OERC (Conduct of Business) Regulations, 2004 for the year 2020-21.**

**ORDER**

M/s. Odisha Power Transmission Corporation Limited, Bhubaneswar, (in short "OPTCL") the present petitioner, undertakes Intra State transmission business in the State. It has been notified as the State Transmission Utility (STU) under Section 39(1) of the Act with effect from 01.04.2005 vide Government notification dated 09.06.2005. By virtue of the 2nd Proviso to Section 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 under section 16 of the Act and as modified by OERC by its Order dated 27<sup>th</sup> October 2006.

**PROCEDURAL HISTORY (PARA 2 TO 10)**

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 30<sup>th</sup> November in each year in the prescribed formats. OPTCL as a deemed licensee had submitted its ARR application for FY 2020-21 before the Commission on 30.11.2019 which was registered as Case No 72 of 2019. After due scrutiny and admission of the matter, the Commission directed OPTCL to publish its ARR & Transmission tariff application in the approved

format in the leading and widely circulated in English and Odia daily newspapers one each. 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 copies on them.

3. Accordingly, OPTCL published the said public notice in the leading English and Odia dailies in one issue each. The Commission issued individual notice to the applicant, objectors and to the Government of Odisha represented by Department of Energy to send their authorized representative to take part in the 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 M.V. Rao, M/s. Ferro Alloys Corporation Limited, GD-2/10, Chandrasekharpur, Bhubaneswar-751023,(2) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour & President Upobhokta Mahasangha, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012,Dist-Khurda (3) M/s. Utkal Chamber of Commerce & Industry Ltd., N-6,IRC Village, Nayapalli, Bhubaneswar-15, (4) M/s. Confederation of Captive Power Plant, Odisha(CCPPO), N-3-160, IRC Village, Nayapalli, Bhubaneswar-15, (5) M/s. Grinity Power Tech Pvt. Ltd., At-K-8-82, Kalinga Nagar, Ghatikia, Bhubaneswar-29, (6) M/s. Visa Steel Limited(VSL), Kalinganagar Industrial Complex, At/P.O. Jakhapura, Dist.- Jajpur-755026, (7) M/s. Vedanta Ltd., At-Bhurkhamunda, P.O; Kalimandir, Dist.-Jharsuguda, Odisha-768202, (8) Shri R. P. Mahapatra, Retd. Chief Engineer & Member (Gen.), Plot No-775 (P), Lane-3, Jayadev Vihar, Bhubaneswar-751013, (9) North Odisha Chamber of Commerce and Industry (NOCCI), Ganeswarapur Industrial Estate, Januganj, Balasore-756019 and (10) Electric Power Transmission Association, F-1, Mira Corporate Suites, 1 & 2, Ishwar Nagar, Mathura Road, Okhla Crossing, New Delhi-110065. All the above named objectors/their representatives along with the representative of Department of Energy, GoO were present during tariff hearing except Objector Nos. 5 & 10 and their written submissions were taken on record and also considered by the Commission.

5. The applicant submitted its reply to issues raised by the various objectors and also to the queries of the Commission made during the 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 had appointed World Institute of Sustainable Energy (WISE), Pune as Consumer Counsel for objective analysis of the licensee's Aggregate Revenue Requirement and the proposal for Determination of Transmission Tariff for FY 2020-21. The Consumer Counsel presented his views in the hearing.
7. The date for hearing was fixed on 06.02.2020 at 11.00 AM and it was duly notified in the leading newspapers mentioning the list of the objectors. The Commission also issued individual notices to the applicant, objectors and the Government of Odisha through Department of Energy informing them about the date and time of hearing. Department of Energy was requested to send the Government's authorized representative to take part in the proceeding.
8. In its consultative process, the Commission conducted a public hearing at its premises on 06.02.2020 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 on 26.02.2020 at 10.30 A.M. at its premises to discuss about the Aggregate Revenue Requirement applications and tariff proposals of licensees for FY 2020-21. The Members of SAC, Special Invitees, the Representative of DoE, Government of Odisha and Licensees actively participated in the discussion and offered their valuable suggestions and views on the matter for consideration of the Commission.
10. The Commission vide its order dated 25.02.2020 has disposed of the case filed by OPTCL in case no 55 of 2016 and observed as follows:

*“We are not agreeable to declare Railways a ‘deemed distribution licensee’ either under the provisions of Railways Act, 1989 or under the Electricity Act, 2003. The Ministry of Power has declared Railways a ‘Deemed Licensee’ not a ‘Deemed Distribution Licensee’. They are ‘deemed licensee’ for the purpose of transmission licence and not for distribution licence. They can carry on transmission activity without obtaining a transmission licence in addition to consuming power like a normal consumer due to their special and superior status under the Railways Act, 1989 in contrast to the provisions of the Electricity Act, 2003. As a consumer under Electricity Act, 2003 they have full right to avail open access under relevant Regulation made under Electricity Act, 2003”.*

## **OPTCL'S ARR & TARIFF PROPOSAL FOR FY 2020-21 (PARA 11 TO 43)**

11. 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 30<sup>th</sup> November each year under Regulation 5.2 of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014. In compliance to the above, OPTCL has submitted its Aggregate Revenue Requirement & Transmission Tariff application for FY 2020-21 for approval of the Commission.

### **Categorization of Open Access Customers**

12. All the customers seeking open access to OPTCL Transmission System are classified under two categories:

#### **a. Long Term Open Access Customers (LTOA Customers)**

A Long Term Open Access Customer means a person availing or intending to avail access to the Intra-State Transmission System for a period of 25 years or more. Based on such premise, four DISCOMs, NALCO, IMFA & BEL happen to be the long term customers of OPTCL. East Coast Railway (ECoR) had applied to OPTCL for grant of connectivity and LTOA/MTOA of OPTCL's intra-state network for drawal of power to 29 TSSs of Railway located in Odisha, OPTCL had filed one petition before the Commission on 26.10.2016 in the above matter. OPTCL has prayed therein inter alia to acknowledge ECoR as a "Deemed Distribution Licensee" and declare them as the fifth DISCOM. In the above premises, OPTCL in the present ARR application for FY 2020-21 has projected the demand of ECoR separately (as furnished by each DISCOM) as one LTOA Customer.

#### **b. Short Term Open Access Customers (STOA Customers)**

Open Access Customers other than Long Term Customer(s) are classified as Short Term Customer(s). The maximum duration that a Short Term Customer can avail open access to the Intra-State Transmission is one year with condition to reapply after expiry of the term.

### **Formulation and Computation of Transmission Charges:**

13. The Commission has framed OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 (hereinafter 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 are 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 2020-21 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:

- (a) Operation and Maintenance expenses;
- (b) Interest and Financial Charges;
- (c) Depreciation;
- (d) Return on Equity;
- (e) Income Tax;
- (f) Deposits from Transmission System Users;
- (g) Less: Non-Tariff Income
- (h) Less: Income from Other Business as specified in these Regulations

The various costs involved for carrying out transmission business by OPTCL for FY 2020-21 while formulating the ARR and Transmission Tariff have been categorized under the following heads:

#### **I. Fixed Cost**

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

#### **II. Others**

- 1) Incentive for System Availability

## DETAILS OF FIXED COST:

### O&M Expenses:

14. Taking into account the proposed expenditure towards Employee Cost including Terminal Benefits, Administrative and General (A&G) Expenses, Repairs and Maintenance (R&M Expenses), expenses related to auxiliary energy consumption, and other miscellaneous expenses, OPTCL has proposed sum of Rs. 635.97 Cr. under the head of O&M expenses for FY 2020-21.

### Salaries, Wages, Pension Contribution and Other Employee Costs

15. OPTCL submitted that, presently (as on 01.11.2019) the no. of employees of OPTCL is 2914 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 the vacancies in a phased manner and has accordingly initiated the recruitment process. In the meantime some additional manpower has been inducted and more will be recruited in coming years.
16. The employee cost details include salaries, dearness allowance, other allowances, stipend, reimbursement of medical expenses, house rent, leave travel concession, honorarium, Ex-gratia and misc. expenses, staff welfare expenses, wage revision arrear, stipend for new recruitment etc.
17. OPTCL has proposed Rs. 466.22 Cr towards Employee Cost, Terminal Benefits and possible impact of 7th Pay Commission including that for FY 2020-21. The details are given below:

**Table-1**

### Employee Cost Proposed by OPTCL for FY 2020-21 (Rs. Cr)

Employee cost including Salary, Dearness Allowance etc.	250.96
Terminal Benefit Liability of Employees and Existing Pensioners	177.4
7 <sup>th</sup> Pay Commission Impact for Existing Employees (40%)	52.94
Less: Capitalization	15.08
<b>Total</b>	<b>466.22</b>

### Administrative and General (A&G) Expenses

18. OPTCL has proposed Rs. 28.66 Cr towards A&G Expenses for FY 2020-21. The A&G Expenses include property related expenses, communication, professional charges, conveyance and travelling, SLDC charges, licensee fee and material related expenses.

### Repair and Maintenance (R & M) Expenses

19. 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 2020-21 is Rs.140.59 Cr , as shown in the Table below:

**Table-2**  
**Repairs and Maintenance Expenses for FY 2020-21 (Rs. Cr)**

Particulars	OERC Approval (FY 2018-19)	OERC Approval (FY 2019-20)	Projection (FY 2020-21)
(i) O&M	<b>111.00</b>	<b>115.22</b>	123.51
(ii) Telecom			3.09
(iii) Civil Works			10.00
(iv) Information Technology			3.99
<b>Total R &amp; M Expenses</b>			<b>Rs. 140.59 Cr.</b>

20. As on 01.04.2019, OPTCL owns 148 nos. grid sub-stations of different voltage classes and EHT transmission lines of 13,995.031 ckt. km. as shown in the Table below:

**Table-3**  
**Sub-station and line details of OPTCL**

Sub-Station and Line Details		
400/220kV S/S	1	
400/220/132/33kV S/S	3	
220/132/33kV S/S	19	
220/33kV S/S	10	
220/132kV S/S	1	
132kV Sw. Stn.	20	
132/33kV S/S	92	
132/33/25kV S/S	1	
132/33/11kV S/S	1	
<b>Total No. of Sub-Stations</b>	<b>148</b>	
<b>Voltage Level</b>	<b>Lines (ckt. km.)</b>	<b>Bays</b>
400kV	1196.872	44
220kV	5974.856	324
132kV	6823.303	917
33kV		1098
25kV		2
11kV		8
<b>TOTAL</b>	<b>13,995.031</b>	<b>2393</b>

The status of the transmission assets of OPTCL as submitted in the performance review held during December 2019 is as follows:

**Table-4**

	<b>As on 31.03.2016</b>	<b>As on 31.03.2017</b>	<b>As on 31.03.2018</b>	<b>As on 31.03.2019</b>	<b>As on 30.11.2019</b>
No. of grid S/S	125	132	140	148	155
EHT Line ckt. KM	12819	13072	13442	13995	14250
Transformation Capacity (MVA)	15142	16535	17461	19231	20376

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

21. **Grid Coordination Committee (GCC) Expenses:** OPTCL proposes Rs. 0.50 Cr towards annual GCC Expenses for FY 2020-21 to deal with the matters specified in the Chapter-11 (2)(2) of the Orissa Grid Code (OGC) Regulations 2015.

**Interest and Financial Charges**

**Interest on Loan**

22. OPTCL in its ARR application has proposed Rs.53.53 Cr. as interest payment on loan for FY 2020-21.

**Interest on Working Capital**

In view of the past observations in the tariff orders, OPTCL has not proposed any amount under the head interest on working capital. However, OPTCL has requested to allow the same in future years based on cash flow position of OPTCL.

**Rebate**

23. OPTCL projected 2% rebate amounting to Rs.19.33 Cr. which is calculated based on the projected ARR for the FY 2020-21.

**New projects**

24. OPTCL proposes to spend Rs.1156.41 Cr. during FY 2020-21 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. The Gross Fixed Assets at the beginning of the FY 2020-21 is estimated as Rs.6808.59 Cr. (Rs.6025.08 Cr. as on 01.04.19 + Rs. 783.51 Cr. projected addition during FY 2019-20). OPTCL has estimated depreciation of Rs. 208.59 Cr. for the FY 2020-21, which includes Rs.1.57 Cr. towards cost of premium/rent on leasehold land.

### **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. 790.07 Cr as on 31.03.2019 as per the Audited Account. Government of Odisha has committed to provide funds of Rs. 250 Cr. as equity over the five year period FY 2017-18 to FY 2021-22 i.e. Rs. 50 Cr. annually. As per the Annual Plan Budget of Department of Energy, Government of Odisha for the FY 2019-20, budget provision of Rs. 55 Cr. has been made under the scheme Share Capital Investment in OPTCL which is likely to be received shortly. Besides, GoO has already released Rs.14.70 Cr. as equity capital under the Smart Grid Scheme. The total Equity as on 31.03.2020 will be Rs.859.77 Cr. Accordingly, OPTCL proposed Return on Equity (RoE) of Rs. 123.95 Cr. for FY 2020-21 @ 15.5% as per clause 8.28 of Regulations, 2014 on Rs. 799.70 Cr. (859.77-60.07) i.e. on opening balance of FY 2020-21.

### **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 2018-19, OPTCL has made provision of Rs.8.15 Cr as Income Tax. The same amount of Rs. 8.15 Cr. has been proposed for FY 2020-21. 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 2020-21 is worked out as Rs. 1049.52 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 2018-19 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. 9.92 Cr. towards system availability for the year 2018-19 using approved ARR figure of Rs. 659.95 Cr. for the said year. Hence, OPTCL proposes Rs. 9.92 Cr towards Incentive for System Availability to be allowed in the ARR for FY 2020-21.

### Miscellaneous receipt:

30. OPTCL submitted that earnings from Supervision charges are drastically reduced as the applicant industries are less for which revenue from such charges during the balance period of FY 2019-20 would not be appreciable. OPTCL in line with the earnings during FY 2019-20 has proposed Rs. 93 Cr. under the Miscellaneous Receipt from different sources such as inter-State wheeling, STOA and STU charges, Bank interest, other Misc receipts etc. for the FY 2020-21.

### Summary of ARR proposed by OPTCL for FY 2020-21

31. Considering all the proposed expenses and receipts as explained in foregoing paragraphs, OPTCL has filed its Aggregate Revenue Requirement of **Rs.966.44 Cr** for FY 2020-21 for approval of the Commission. Details are shown in the table below:

**Table-5**  
**Summary of Aggregate Revenue Requirement of OPTCL for FY 2020-21**

ITEMS	Proposal for OPTCL FY 2020-21	
<b>A) FIXED COST</b>		
<b>1. O&amp;M Expenses</b>		<b>635.97</b>
(i) Employees Cost including Terminal Benefits	466.22	
(ii) A&G Cost	28.66	
(iii) R&M Cost	140.59	
(iv) Expenses related to auxiliary energy consumption	0.00	
(v) Other misc. expenses, statutory levies and taxes (GCC)	0.50	

ITEMS	Proposal for OPTCL FY 2020-21	
<b>2. Interest &amp; Financial Charges</b>		<b>72.86</b>
(i) Interest on Loan Capital	53.53	
(ii) Interest on Working Capital	0.00	
(iii) Rebate	19.33	
3. Depreciation		<b>208.59</b>
4. Return on Equity		<b>123.95</b>
5. Income Tax		<b>8.15</b>
<b>Sub-Total (A)</b>		<b>1049.52</b>
<b>B) Others</b>		
Incentive for system availability		<b>9.92</b>
<b>Total Trans. Cost (A+B)</b>		<b>1059.44</b>
<b>C) Less Misc. Receipts</b>		<b>93.00</b>
<b>D) ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement</b>		<b>966.44</b>

### Transmission loss

32. OPTCL submitted that the transmission loss is purely a technical loss and dependant on the location of 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'19 to September'19 is 3.24% against Commission's approval of 3.00% for FY 2019-20. OPTCL expects the loss level to remain around 3.25% in the current year. Accordingly, OPTCL proposes 3.20% transmission loss during FY 2020-21.

### OPTCL revenue receipt and deficit in the proposed ARR for FY 2020-21

33. OPTCL, on receipt of recent communication from DISCOMs on their respective realistic energy demand projection has projected the demand projection of all four DISCOMs plus Railway totalling 28187 MU for FY 2020-21 which is different than Commission approval figure in LTDF order dated 15.01.2019. OPTCL envisages 200MU 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 27987 MU (28187-200) from the total demand projection of DISCOMs and Railways.

During FY 2020-21, OPTCL will earn revenue from the LTOA Customers in the following manner:

- i. By charging the rate applicable on DISCOMs and Railways for wheeling of 27987 MU.
- ii. By charging the rate applicable on LTOA customers like IMFA, NALCO & BEL for supply of 610 MU as Emergency Power & Back-up Power to their CGPs and load centres located at different places.

The revenue to be earned by OPTCL from wheeling of 28597 MU (27987+610) at the existing transmission tariff of 25 P/U will be Rs. 714.93 Cr.

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

OPTCL has projected revenue deficit of Rs.251.51 Cr. considering the ARR proposed and the revenue to be earned from wheeling of 28597 MU at the existing transmission tariff of 25 P/U.

**Proposal for revision of Transmission Tariff/ Wheeling Charges**

**35. OPTCL submitted that the expenditure cannot be met from the existing transmission tariff of 25 P/U; therefore, OPTCL has requested to the Commission for approval of :**

1. Aggregate Revenue Requirement of Rs.966.44 Cr.
2. Recovery of Transmission Charge @ 33.80 P/U.
3. Transmission Loss for wheeling as 3.20% on energy drawl.

**Open Access Charges**

**36. Besides these Charges, the Open Access customers are also required to pay charges as determined by the Commission as per provisions under OERC (Determination of Open Charges) Regulations 2006. OPTCL has proposed that the Open Access charges for FY 2020-21 as per the table below :**

**Table-6  
Open Access Charges Proposed by OPTCL for FY 2020-21**

DETAILS	In Rs. Per Unit approach
Net Aggregate Revenue Requirement (Rs. Cr.)	966.44
Proposed Energy to be transmitted in OPTCL Network (MU)	28597
Proposed Transmission Tariff (P/U)	33.80
Power Flow (Equivalent of 28362 MU) in MWs	3265
Long term Open Access Charges in terms of Rs./MW/Day	8110
Short term Open Access Charges in terms of Rs./MW/Day	2028

37. OPTCL has filed an application before the Commission on 27.11.2017 for amendment of existing OERC Open Access Regulations, 2005 and 2006 by introducing Medium Term Open Access (MTOA), fixing higher transmission charges for STOA and MTOA customers than LTOA customers and making these Regulations compatible with CERC Connectivity & Open Access Regulations. OPTCL requested that Commission may consider to amend the existing OERC Open Access Regulations, 2005 and 2006 to enable OPTCL to earn more revenue which would be accounted for under Miscellaneous Receipt so as to relieve the LTOA customers resulting downward effect on Retail Supply Tariff.

#### **Transmission Charge**

38. OPTCL has proposed the transmission Charge @ 33.80 P/U, which shall be applicable for transmission of power at 400kV/220kV/132kV over OPTCL's EHT transmission system for the purpose of transmission of energy from generator end to the sub-station from where energy will be fed to DISCOMs, Railways and industries having CGPs. Transmission Loss shall be @3.20% for the use of EHT transmission system and for the purpose of transmission of energy from a CGP to its industrial unit located at a separate place as well as for transmission of power from outside the state to an industry located inside the State. Long Term Open Access Customers & Short Term Open Access Customers shall pay the applicable Transmission Charges plus all other charges and losses as applicable thereon, as the case may be. The transmission charge shall be applicable to the DISCOMs, Railways and CGPs for the respective month.

#### **Reactive energy charges**

39. The Commission in case no. 50/2017 has inter alia viewed that the provisional reactive energy charges of 3 paise/KVArH as allowed in FY 2018-19 order to 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. Therefore, OPTCL proposes that 3paise/ KVArH may be approved provisionally as Reactive Energy Charges for the FY 2020-21.

#### **Rebate**

40. 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**

41. 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**

42. 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**

43. OPTCL has proposed to spend **Rs.1156.41 Cr.** during FY 2020-21 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 2020-21**

Particulars	Amount (Rs. Cr.)
(i) Telecom Wing	<b>133.22</b>
(ii) Existing Assets (O&M Wing)	<b>48.83</b>
(iii) Information Technology (IT Wing)	<b>39.88</b>
(iv) Civil Wing	<b>55.29</b>
(v) New Transmission Projects (Construction Wing)	<b>879.19</b>
<b>Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)]</b>	<b>Rs. 1156.41 Cr.</b>

#### **VIEWS OF CONSUMER COUNSEL, ON TRANSMISSION TARIFF PROPOSAL OF OPTCL FOR 2020-21 (PARA 44 TO 48)**

44. The Licensee was allowed in the beginning of the hearing to give a power point presentation regarding its ARR and tariff application for the FY 2020-21. World Institute of Sustainable Energy (WISE), Pune appointed as Consumer Counsel put up queries and objections regarding ARR and tariff filing of OPTCL.

### Analysis of the Proposal by Consumer Counsel

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

#### Annual Revenue Requirement

46. OPTCL has projected its revenue requirement for FY 2020-21 at about 19.24% more than that approved for FY 2019-20. In FY 2019-20, the total ARR was increased by 14.39% from approved ARR of FY 2018-19.
47. The ARR increase includes the increase in Employee Cost (11.07%) R&M Cost (22.02%), A&G cost (4.03%), interest on loan capital (52.33%), depreciation (28.71%) and incentive (98.40%). 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 2018-19	Approved FY 2019-20	Proposed FY 2020-21	Increase % 2019-20 vs 2018-19	Increase % 2020-21 vs 2019-20
Employees Cost incl. Terminal Benefits	360.4	419.77	466.22	16.47%	11.07%
A&G Cost	26.44	27.55	28.66	4.20%	4.03%
R&M Cost	111	115.22	140.59	3.80%	22.02%
Expenses related to auxiliary energy consumption	5.59	0	0		
Other misc. expenses, statutory levies and taxes(GCC)	1.14	0.43	0.5	-62.28%	16.28%
Interest on Loan Capital	40.2	35.14	53.53	-12.59%	52.33%
Interest on Working Capital	0	0	0		
Rebate	13.2	14.12	19.33	6.97%	36.90%
Depreciation	145.43	162.06	208.59	11.44%	28.71%
Return on Equity	69.75	106.18	123.95	52.23%	16.74%
Income Tax	4.16	3.01	8.15	-27.64%	170.76%
Incentive for system availability	5	5	9.92	0.00%	98.40%
Total	776.72	888.48	1059.44	14.39%	19.24%
Less Misc. Receipts	116.77	124.77	93	6.85%	-25.46%
Less Surplus True up		57			
ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement	659.95	706.71	966.44		
Transmission Charges (P/U)	25	25	33.8	0.00%	35.20%

48. 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 a need to review the following expenses for the benefit of the consumers:

Employee cost incl. terminal benefits and pension, R&M expenses specifically on engagement of Security personnel(about 38% of the proposal), A&G expenses, Interest on new loan to be disbursed to OPTCL and old State Government Loans, depreciation, RoE and Interest on working capital.

#### **VIEWS OF OBJECTORS ON TRANSMISSION TARIFF APPLICATION OF OPTCL FOR FY 2020-21 (PARA 49 TO 90)**

The issue wise views of the objectors placed before the Commission are summarised below:

##### **Transmission Loss**

49. OPTCL have not yet identified the areas where loss is maximum, so as to formulate action plans for loss reduction. OPTCL should inform the methodology adopted to estimate the transmission loss for every year.
50. OPTCL should have under taken energy audit of lines and sub-stations to know the quantum of transmission loss in the system. Proposing the transmission loss arbitrarily without giving the breakup of the losses in different feeders and equipments of transmission system is not appropriate. The Standard of performance of OPTCL transmission system should be monitored by third party auditor to assess the actual performance. The transmission Loss may be capped at 2.5%, the objectors added.
51. One of the objectors submitted that OPTCL is not planning for strengthening the transmission system to reduce the losses. As the load growth in last few years has not been significant and a number of 132 kV, 220 kV lines & substations have been constructed during this period, therefore the transmission loss should have reduced. The Commission may direct a proper study, through independent agency to determine the actual transmission loss.
52. One of the objector stated that OPTCL should have achieved transmission loss of 2.5% by now as per commitments given to consumers. Further, many CGPs have been synchronised and distributing additional power in local area even without the use of transmission system is also possible.

### **Human Resource Expenses/ Employee Cost**

53. Some objectors proposed that OPTCL may submit the audited balance sheet, P/L Statement along with auditor report for FY 2019-20. Further, the manpower cost of retiring personnel will be higher than the newly inducted personnel, hence the manpower cost in FY 2020-21 should be lower than the approved figure of 2019-20. Therefore, the commission may consider approved manpower cost of FY 2018-19 and approve it for FY 2020-21 till OPTCL submits its audited balance sheet. They also proposed that the Commission may direct OPTCL to submit an action plan for recruiting the sanctioned strength of manpower.

### **A&G expenses**

54. One objector sought OPTCL to justify why they have always crossed the approved expenses without obtaining necessary consent from the Commission.

### **Interest on loan capital**

55. One of the objectors submitted that out of projected interest on loan capital only State Government loan (Rs.0.26 crore) and Government of Odisha Bond (Rs.26 crore) may not be considered as per earlier tariff orders. Interest on new loan, during 2020-21 is anticipated and may be trued up as per audited accounts pertaining to that period. There is now significant reduction in Interest rates due to demonetization, hence the Commission may consider lower interest on Loan Capital of OPTCL, and also OPTCL may switch loans to lower interest rates.

### **Depreciation**

56. The huge increase in depreciation is due to artificial increase in capital base which is based on proposed expenditure to be made during year 2020-21. Objectors requested not to allow any capitalization unless the work is completed and commissioning has been declared.
57. Few objectors submitted that No depreciation should be calculated on the projected cost of Rs. 783.51 Crore to be spent in FY 2020-21. Depreciation cost for FY 2020-21 may be approved accordingly.

### **R&M expenses**

58. Objector submitted that the Commission may critically examine the proposal of OPTCL and Reduce Transmission Charges to 23 P/U for FY 2020-21. R&M expenses should be considered after verifying actual expenses till end of 3<sup>rd</sup> quarter of FY 2019-20.
59. According to Regulation 8.15 and 8.16 of Transmission Tariff Regulations the R&M expenses would be allowed at the rate of 2.5% of Gross Fixed Assets. But from 2011-12 onwards the actual assets addition is much below than the projected. Hence it is submitted that projected assets should not be considered for computation, rather actual assets may be considered.
60. Objectors submitted that OPTCL is providing equipment of capital nature under R&M costs. The O&M expenses should, vide clause 8.2(c) of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 include only the repairs and maintenance and not replacement of major equipments.
61. OPTCL should carry out 'Comprehensive Renovation' activities which will prevent sudden and total breakdown of the system. 'Comprehensive Renovations' refers to carrying out remaining life assessment of all equipments and replacement required for life extension.

### **O&M Expenses**

62. Objectors submitted that OPTCL has to produce the details about why funds allotted for O&M are not fully utilized.
63. One of the objector commented that the threshold limit is required to be decided for new projects and augmentation schemes for transmission system developed under Tariff Based Competitive Bidding (TBCB) route. It must be determined in such a way that it permits planning and development of end-to-end transmission schemes with upstream and downstream elements and once commissioned, the transmission system can be put to use without any dependence on other elements and with minimal interference and coordination issues.
64. Threshold limit should help achieve efficient procurement of equipment and provide economies of scale in development, along with the reduction of O&M expenses.

### **Return on Equity**

65. At present only Rs. 400 Crore equity has been received by OPTCL from State Government till date. Hence, RoE to be calculated on Rs.400 Crore @15.5% and accordingly may be approved accordingly by the Hon'ble commission.

### **Incentive for System Availability**

66. Transmission system availability should be fixed at minimum value of 99% above which OPTCL will be eligible for incentive instead of 98%. OPTCL has proposed to use incentive amount to increase motivation level of employees which is against last year's commission's direction. Further, as per the OERC (Terms & Conditions for Determination of Transmission Tariff) Regulations, 2014 this is not revenue required by OPTCL and hence may not be approved.

### **Miscellaneous receipt**

67. Actual revenue earned from wheeling, STOA, STU charges is much lower than approved figure. It is requested to submit the details for further scrutiny and prudence check. Also, OPTCL is requested to submit detailed note on various projects implemented by its PMU, supervision charges (6%) payable by Government and actual received. The objector requested the Commission to consider miscellaneous receipt in the view of above and accordingly consider it while approving the ARR for FY 2020-21.

### **Annual Revenue Requirement and Transmission Charges**

68. One objector submitted that considering the energy to be handled as 32654 MU as approved by OERC in case of LTDF for the period FY 2015-16 to FY 2023-24 vide order dated 3.05.2016 and business plan submitted by OPTCL, approved by OERC vide order dated 30.07.2016 in case no. 05/2016, the transmission charges of 33.88 P/U should not be considered.
69. One objector submitted that ARR for FY 2019-20 was approved at Rs. 706.71 crore against proposed Rs. 966.44 Crore for FY 2020-21. The proposed tariff is very high and will adversely affect the RST resulting in huge burden on consumers. Hence, the ARR of OPTCL for FY 2020-21 be approved accordingly through a prudence check and based on submission made.
70. The Commission may critically examine the proposal of OPTCL and reduce Transmission Charges for FY 2020-21. Further, to encourage Renewable Energy generators, transmission charges should not be levied on renewable energy transactions.

71. Another submission was that the Commission may allow the transmission charges of 17 P/U for FY 2020-21.

**Open access charges**

72. OPTCL has given the proposal to consider the LT transmission charges and ST transmission charges considering Net Proposed Transmission Cost (NPTC) which is erroneous; instead this may be corrected as Net Approved Transmission Cost as per OERC (Determination of Open Access Charges) Regulations 2006.
73. OPTCL's proposal to equate STOA and LTOA charges is against the spirit of the Act and contravenes the Open Access Regulations framed by OERC. In STOA, the transmission availability is not guaranteed and same is allotted if there is margin available in system. Hence, STOA charges should always be lower than LTOA.
74. One objector proposed amendment to OERC Open Access Regulation must be made to include MTOA consumer categories in existing categories.
75. One objector proposed that transmission charges for open access customers availing power under open access to the extent such power is sourced from RE sources should be exempted in accordance with CERC vide notification No. L-1/44/2010-CERC dated 27<sup>th</sup> March 2019, which exempted transmission charges and losses for the use of ISTS network for the generation based on solar and wind power resources for a period of 25 years from the date of commercial operation of such generation.

**Other Issues**

76. Some Objectors submitted that, application submitted by OPTCL is not supported by audited facts/figures/data.
77. One of the objectors proposed that the reactive energy charges should not be considered as consumers are paying for active energy and power factor.
78. One of the objectors prayed that each year's truing up exercise and business plan approval should be carried out by the Commission through a process of public hearing.
79. The Commission may direct OPTCL to give an undertaking through Affidavit that they would supply quality power at proper voltage to all the consumers of the State, which has not been supplied during FY 2018-19 and that all lines and substations are well equipped to give quality power supply and evacuate the entire state quota from IPPs and CGPs during FY 2020-21.

80. The Commission may direct OPTCL to produce the details of lines and S/s connected to different IPPs and evacuates all the power inside the State of Odisha and how much wheeling charges the OPTCL has received from such IPPs.
81. OPTCL has to produce the status report of the list of overloaded lines and sub stations of the state and file an affidavit before the Commission that all lines and substations are well equipped to give quality power supply and evacuate all state quota from the IPPs and CGPs during FY 2019-20.
82. OPTCL has to produce details of S/s being constructed and connected to the grid for better voltage. OPTCL has to produce the details of lines and S/s connected to different IPPs and evacuates all the power inside the State of Odisha.
83. OPTCL has to produce the status report about the joint venture companies formed by OPTCL to evacuate power inside the State of Odisha.
84. OPTCL has to submit the prospective action plan on the matter of ensuring adequate transmission corridors for both drawl of power of state use and evacuation of power for the consumers outside the state from IPPs.
85. OPTCL should update the prospective transmission plan continuously updated to take care of revision of load projection and generation scenarios considering seasonal and time of the day variation.
86. The Commission should reject the proposal of OPTCL to introduce reactive charges of 3 Paise/ kVARh as there is no such provision in the transmission tariff regulation and against spirit of the Electricity Act 2003.
87. One of the objectors commented that to encourage Renewable energy purchase, transmission charges should not be levied on renewable energy transactions quantum. Hence the transmission charges of 33.80 P/U should not be considered by commission.
88. OPTCL should submit system study report to justify construction of new GIS Sub-station and EHT system before proposing them under CAPEX expenditure. Unless sufficient reason exists, the inflation in cost due to delay should not be allowed.
89. OPTCL to submit data regarding the maximum and minimum voltages in the grid sub stations.
90. The Commission to specify the threshold limit above which all new and augmentation schemes for transmission should be developed under Tariff Based Competitive Bidding (TBCB) route.

## REJOINDER BY OPTCL TO THE QUERY OF OBJECTORS (PARA 91 TO 183)

91. In response to the views of objectors on the ARR and Tariff Application of OPTCL for 2020-21, OPTCL had filed rejoinders for the same. The response of OPTCL has been broadly classified into the following issues.

### Transmission Loss

92. The Table below indicates the transmission loss approved by the Commission for the last 12 years vis-à-vis actual transmission loss occurred in OPTCL's EHT network is given in the table below.

**Table-9**  
**Transmission loss in OPTCL network**

Year	OERC Approval	Actual
2007-08	5.00%	4.82%
2008-09	4.50%	4.52%
2009-10	4.00%	4.11%
2010-11	4.00%	3.93%
2011-12	3.90%	3.88%
2012-13	3.80%	3.84%
2013-14	3.80%	3.79%
2014-15	3.75%	3.73%
2015-16	3.75%	3.67%
2016-17	3.70%	3.58%
2017-18	3.50%	3.34%
2018-19	3.00%	3.28%

93. The detailed calculation of Transmission Loss of 3.28% for 2018-19 and 3.24% for the period April to September' 19 (1<sup>st</sup> 6 months of FY 2019-20) in OERC approved format T-6 have been enclosed with the ARR application at pages 148-149 respectively. The transmission loss has been estimated on the basis of energy flow data. Based on the present trend, OPTCL has proposed the Transmission Loss of 3.20% for the ensuing year 2020-21.

94. The transmission loss is purely a 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 has no 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. In view of the increasing demand for power at an accelerated pace due to ongoing industrialization and implementation of Central & State sponsored schemes like RGGVY, DDUGJY, BGJY, BSVY, ODSSP, 24x7 Power for All, SCRIPS, IPDS, SAUBHAGYA etc. in Odisha, there will be increased flow of power in the OPTCL transmission network contributing to increased transmission loss.

95. Over the years, OPTCL has been continuously undertaking construction of new lines and sub-stations & up-gradation of capacity of the existing system for strengthening the transmission infrastructure to improve quality of power supply, meet the future load growth and to reduce transmission loss effectively. As a result, the Transmission Loss in OPTCL network is in a gradually reducing trend over the years i.e. from 4.82% during 2007-08 to 3.28% in 2018-19 mainly due to addition of infrastructure and various system strengthening works taken up by OPTCL as evident from the data on transmission loss as shown above. The actual losses incurred over the years by OPTCL have been within the margin allowed by the Commission.
96. OPTCL has undertaken various measures for further improvement in the system operation and loss reduction measures by implementing the emerging technologies like Sub-station Automation system (SAS), 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, conductor augmentation and replacement etc.
97. OPTCL submitted that the transmission loss in OPTCL system having 14250.395 ckt. Km in 132 kV and above lines with 155 nos. Of Grid S/s is one of the lowest in the country compared to other transmission utilities.
98. OPTCL proposes **3.20%** transmission loss during FY 2020-21. Hence, OPTCL does not agree with the suggestion of the Objector to ensure transmission with loss < 3%.

#### **Steps taken for Energy Audit**

99. OPTCL has already installed 619 nos. of 0.2s accuracy class, ABT Compliant Energy Meters at identified points to meet the requirement of Energy Auditing as well as Billing. Monthly data enables OPTCL to assess the individual transmission element wise

losses (i.e. across Power Transformer, Auto Transformer & EHT lines etc.). Sub-station wise energy flow calculations are carried out and accordingly remedial action is 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.

### **Human Resource Expenses/ Employee Cost**

100. OPTCL has projected Rs.466.22 Cr. as Employee Cost for FY 2020-21. The item-wise details of employee cost is furnished in Finance format F-10 (page-204) of the ARR application and the justification thereof is mentioned in detail at page 4 to 10 of the application.
101. For FY 2020-21, OPTCL has claimed Rs. 52.94 Cr. towards balance 60% of 7<sup>th</sup> Pay Commission arrear for existing employees. Apart from that, OPTCL has proposed the Dearness Allowance (DA) of 27% against approved 13% for FY 2019-20. 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.
102. The recruitment plan of OPTCL up to 2018 has been approved by the Government of Odisha. However, keeping in view the actual physical progress and revised commissioning schedule of the ongoing projects, the recruitment plan arising out of new creation, retirement and attrition year wise, OPTCL has accordingly phased the recruitment and planned to fill the vacancies in a staggered manner. The tentative recruitment plan of OPTCL for 2019-20 is submitted below:

**Table-10**  
**Tentative recruitment Plan of OPTCL for FY 2019-20**

<b>Sl. No.</b>	<b>Designations</b>	<b>No of Posts to be filled up</b>
1	Jr. MT (Jr. Manager)	18
2	MT (Asst. Manager)	13
3	JMOT( EL)	151
4	JTTT (Telecom)	18
5	Office Asst. (Gr III) (Trainee)	13

103. However, the recruitment will be done as per the actual requirement and in a phased manner both in Executive and Non-Executive category. The Government of Odisha through department of Public Enterprises has already initiated the recruitment process for filling up the vacant posts of Directors in OPTCL which will be filled up in near future.
104. OPTCL has already submitted the Audited Annual Accounts for FY 2018-19 along with the Statutory Auditors Report to the Commission in its compliance to OERC queries.

#### **A & G Expenses**

105. The actual expenditure as per audited accounts is always higher than the OERC approved figures. The table, given below, indicates the A&G expenses for the last 9 years.

**Table-11**  
**A & G Expenses for last 9 years (Rs. Crore)**

<b>Year</b>	<b>OERC Approval (Rs. Cr.)</b>	<b>Actual (Audited) (Rs. Cr.)</b>
2010-11	18.00	33.81
2011-12	18.00	20.81
2012-13	21.25	22.48
2013-14	22.39	146.17
2014-15	24.01	45.48
2015-16	24.37	39.82
2016-17	24.66	61.68
2017-18	25.60	57.35
2018-19	27.55	38.55

106. This is due to the fact that year over year, new sub-stations and lines are added to the OPTCL network for which the field office establishment expenses increase.
107. The Commission allows A&G expenses considering an escalation (rate of inflation as measured by WPI) over the approved amount of previous year. This is not adequate.
108. The projection towards A&G expenses includes communication, professional charges, conveyance, travelling, License Fees, Watch and Ward expenses etc. As per audited accounts for FY 2018-19, the details of A&G expenses are as under:

**Table-12**  
**Details of A&G Expenses (Audited Accounts FY 2018-19)**

<b>Sl. No.</b>	<b>A&amp;G &amp; Other Expenses</b>	<b>Rs. Cr.</b>
1	Power and fuel consumed	1.87
2	Hire charges on vehicle	8.85
3	Legal and professional fees	2.20

<b>Sl. No.</b>	<b>A&amp;G &amp; Other Expenses</b>	<b>Rs. Cr.</b>
4	Rent	2.32
5	Watch and ward expenses	2.93
6	License and other fees	2.09
7	Rates and taxes	0.30
8	Insurance charges	0.03
9	Fees and subscription	0.02
10	Advertisement for tenders	1.28
11	Corporate social responsibility expenses	0.70
12	Impairment loss recognised on non-financial assets	4.28
13	Net loss on theft of material and others	4.27
14	Travelling expenses	2.46
15	Communication expenses	0.75
16	Office maintenance charges	0.48
17	Auditors remuneration and out-of-pocket ex.	0.11
18	Other General expenses	3.61
<b>Total</b>		<b>38.55</b>

109. OPTCL has proposed the A&G Cost for FY 2020-21 as Rs.32.81 Cr. excluding rebate and other provisions [as given in F-12, page 206 of ARR application]. However, OPTCL has claimed Rs.28.66 Cr. based on Regulation 8.14 of OERC Transmission Tariff Regulations, 2014 and principle adopted by the Hon'ble Commission in earlier years ARR orders.

#### **Interest on Loan Capital**

110. The projected interest on loan amounting to Rs.53.53 Cr. does not include interest on State Government Loan/Bonds amounting to Rs.26.26 Cr. as pointed out by the objector. The projection towards interest on loan capital is very much realistic as it is based on facts and evidential documents that need full consideration.
111. The loans proposed to be availed from Bank of India, Union Bank of India & JICA are in respect of various projects which have been approved by the Hon'ble Commission.
112. Accordingly, an amount of Rs.1156.41 Cr. has been proposed as CAPEX for FY 2020-21. For financing the above CAPEX and loan already availed, OPTCL proposes Rs.53.53 Cr. towards interest on loan capital for FY 2020-21 based on Regulation 8.24 of OERC Transmission Tariff Regulations, 2014.
113. OPTCL submitted that the interest rate of the bank is computed based on Marginal Cost of fund based Lending Rate (MCLR) as per the RBI guidelines.

114. The interest rate on REC and PFC loan has been furnished in F-13, page 207 to 209 of the ARR application. As the difference between loan with higher interest and loan with lower interest is not substantial, the switching over option is not viable at present due to pre-exit clause as per the loan agreement with REC and PFC wherein OPTCL has to pay Prepayment Premium @2.50%, Loss of Tax benefit u/s 36(1) (viii) of the I T Act, GST @18% etc.
115. In view of the above, OPTCL does not agree with the views of the objector and request the Commission to allow Rs.53.53 Cr. as interest on loan capital .

### **Depreciation**

116. The Commission has approved depreciation of Rs. 162.06 Cr. for FY 2019-20 as per the rate prescribed in the OERC Transmission Tariff Regulations, 2014. For FY 2020-21, OPTCL has projected depreciation of Rs.208.59 Cr. based on the audited accounts for FY 2018-19 considering the depreciation rate as prescribed under Tariff Regulations, 2014 and projected additions thereto during FY 2019-20. OPTCL does not agree with the contention of the objector that the projected depreciation is high due to artificial increase of capital base. Further, no depreciation has been claimed on any capital assets unless it is completed and put in use.
117. In view of the above, the Commission is requested to allow Rs.208.59 Cr. towards depreciation as proposed by OPTCL.

### **Repair and Maintenance (R&M) Expenditure**

118. OPTCL intends to keep its transmission system available to the highest possible percentage of time in a year by undertaking preventive and proper maintenance of its lines and grid sub-stations for which Rs. 140.59 Cr. is proposed towards R&M expenses during FY 2020-21.
119. OPTCL in its ARR application (page 11-16) has submitted in detail regarding R&M expenses to be undertaken in different streams of activities. The details of procurement of materials / expenditure incurred towards R&M works in respect of different streams already carried out during April to Nov-2019 have been submitted to the Commission in compliance with Commission's Query No.5.
120. Year wise OERC approval and actual expenditure towards R&M for the period from 2013-14 to 2019-20 (up to Nov' 19) are given in the Table below. The actual figures are

as per audited accounts up to FY 2018-19. For FY 2019-20 (up to Nov'19), the figures are based on cash flow statement. In FY 2019-20 (till Nov' 19), OPTCL has already incurred expenditure in tune of 76.50 Cr.

**Table-13**  
**R&M expense of OPTCL (approved and actual)**

<b>Financial Year</b>	<b>OERC Approved (Rs. Cr.)</b>	<b>Actual (Rs. Cr.)</b>
<b>2013-14</b>	60.00	70.20
<b>2014-15</b>	93.00	100.31
<b>2015-16</b>	108.00	113.35
<b>2016-17</b>	110.59	149.53
<b>2017-18</b>	124.97	137.83
<b>2018-19</b>	111.00	111.76
<b>2019-20 (Apr-Nov'19)</b>	115.22	76.50(prov.)

121. From the above it is observed that OPTCL has been effectively utilizing the R&M amounts approved by OERC. Hence the concern raised by the Objector is not appropriate.
122. As per Regulation 8.15 of the OERC Transmission Tariff Regulations, 2014, R&M Expenses would be 2.50% of Gross Fixed Assets. The said Regulation 8.15 doesn't specify anything about the interpretation of the Objector that assets added from "2011-12 onwards" are to be considered for calculation of 2.50%. However, this Regulation does not apply to OPTCL.
123. For OPTCL, Regulation 8.16 is applicable. This Regulation is reproduced below: "*In case of STU (OPTCL), the Commission shall allow R&M expenses basing on past trend and requirement of the licensee in this regard after prudence check*". It is reiterated that no depreciation or R&M Cost have been claimed on any capital assets unless it is completed and put in to use.
124. Hence, the projection towards R&M expenses is very much realistic as it is based on facts and evidential documents that need full consideration.
125. On the basis of present load flow profile, years of service and requirement of capacity enhancement in view of future load growth as well as n-1 contingency, OPTCL has planned for comprehensive renovation of identified lines with uprating of conventional ACSR conductors to HTLS conductors, which involve substantial cost. These projects have been proposed by OPTCL as Capital Works. Similarly, the proposals under

‘Conversion of existing SC lines to DC lines’ scheme is also proposed under Capital Works category.

126. OPTCL has carried out the following measures in a phased and planned manner for enhancement of life span of existing EHT lines and substation equipment.

For EHT Lines

- Anti-corrosive Painting/Recouping of towers and replacement of missing tower members
- Repair/Replacement of vibration dampers, repair sleeves, armor rods, mid-span joint, conductors, double jumpering of towers, PG clamps, checking of nuts and bolts etc. during annual maintenance work
- Strengthening of earthing system
- Disc Insulator replacement by Long Rod Insulators
- Conversion of SC lines to DC lines for load sharing

For sub-station equipment

- Earth resistance measurement and strengthening of earthing system wherever & whenever necessary
- Condition monitoring of equipment such as tan delta measurement, thermo-vision scanning, anti-corrosive painting of sub-station equipment at sub-stations in coastal areas
- Protection system study by engaging outside agency like CPRI
- Painting of transformers, structures, Red/Yellow/Blue painting of equipment
- Conversion of traditional isolators to motorized ones
- Sub-station bus bar conversion from single bus to twin bus
- Periodical check-up and routine maintenance of sub-stations

Further, as the replacement of old/defective/obsolete equipment in Substation & Line is being carried out on regular basis as per requirement, the replacement of the same en-masse before expiry of the useful life period for the sake of Comprehensive Renovation of the Substation/line may not be logical.

127. As regards Comprehensive Renovation of Grid Substations, OPTCL has envisaged ‘Conversion of AIS (Air Insulated Substation) to GIS (Gas Insulated Substation)’ for certain old, but important Grid Substations. The GIS Substations are planned to be constructed in separate sites within same premises with phase wise transfer of loads within minimum shutdown schedules. These GIS projects will be proposed under the Capex Plan in view of substantial cost involvement.
128. Further, proposals like augmentation of installed capacity at existing sub-stations through procurement of new transformers, addition of bays against the requisitions of DISCOMs are also covered under the Capex Plan as assets are to be added in the transmission system through implementation of these schemes.

129. Since major R&M of various Grid Substations as projected include Repair / Replacement of Old & Defective Equipment, Bus Augmentation, Switchyard Re-metalling & Illumination, strengthening of Earthing System, Painting of Equipment, Repair of Boundary Walls & Fencing, Repair of Approach Roads, Cable Trenches & Drainage System etc. and R&M Works of different EHT Lines include Revetment, Couping, Tower Earthing, Painting and Replacement of Angles, Conductors, Insulators, Clamps & Connectors etc., the same is proposed under the R&M Plan as the cost involvement for the sub-station specific requirement of equipment is not substantial.
130. To ensure quality as well as competitive price for these sophisticated equipment, OPTCL takes the bulk procurement action against the consolidated requirement of the total system and executes installation of the same at different grid sub-stations through separate contracts in order to avoid delay.
131. OPTCL has already adopted the new GIS technology mostly in the urban areas and constructing both indoor & outdoor GIS S/S in order to minimize the interruption in power supply which is not only efficient but also helped a lot by reducing the various undesirable issues during the site (land) selection for the project as because for indoor GIS around one-third land is required in comparison to the land required for normal AIS S/S. Regarding the proposal for Grid S/S at Hinjili, OPTCL submitted that SOUTHCO has proposed the S/S as load center to cater the loads of Adapada, Sheragada, K.Karadakana, Sasan Ambagaon, Podingi & Gandala area. The construction of one 132/33 kV grid substation at Hinjili will divert the loads from Berhampur and Digapahandi 132/33 kV grid S/S for improvement of voltage profile to the command area of Hinjilicut. OPTCL has submitted the copy of the memorandum placed before BoD along with the load details in that area as submitted by SOUTHCO.

#### **Return on Equity (RoE)**

132. As on date, OPTCL has received Rs. 744.70 Cr. from Government of Odisha towards Equity Share Capital. The details regarding the dates of receipt and sanction orders of the State Government up to the date 06.08.2019 are mentioned in the ARR application.
133. OPTCL is expecting further Rs.55.00 Cr. at any time during this month from the Plan Budget provision of Energy Department for FY 2019-20. The copies of the sanction orders towards subsequent infusion amounting to Rs.14.70 Cr. have been furnished at Annexure-8a & 8b (page 109-112) in compliance with the Hon'ble Commission's Query

No.18. The projection of Rs.123.95 Cr. (@15.50% post-tax) towards RoE is based on Regulations 8.28 & 8.29 of OERC Transmission Tariff Regulations, 2014. Hence, the projection towards RoE is very much realistic which needs full consideration.

#### **Incentive for System Availability**

134. OPTCL has proposed an amount of Rs. 9.92 Cr. towards incentive for system availability following Regulation 6.5 of OERC Transmission Tariff Regulations, 2014. The Commission may consider OPTCL's proposal in this regard. The details of expenditure made by OPTCL towards R&M works in respect of O&M Wing during FY 2019-20 (04/19 to 11/19) have already been furnished in the compliance to OERC queries against Query No. 5 (page 6-7) which includes the incentive amount approved by the Commission.
135. OPTCL does not agree with the suggestion of the Objector for disallowing the incentive as this is contrary to the provisions of OERC Regulations.

#### **Miscellaneous Receipts**

136. The income from sale of tender paper is not considered as income but utilized against the cost of advertisement for the respective tender. Hence, it is not directly attributable to income.
137. Further, tender-wizard is vender based portal where all the fees related to the tender wizard is the income of the service provider (in our case M/s KEONICS) not OPTCL. The item wise details of proposed Misc. Income are mentioned in Table-21 (page-33) of the ARR application which includes revenue from both short-term open access (inter-state & Intra-state wheeling). Further, OPTCL has submitted the details of quantum and revenue earned towards inter-state and intra-state wheeling, STOA and STU charge received in compliance to OERC Query No. 11 (page 13-16).
138. OPTCL is implementing no. of projects for both Transmission and Distribution sectors like ODSSP, ODAFF, SCRIPS, DRPS, RRCP, SMART GRID, DRC, DDUGJY, IPDS, GPS Survey etc. with financial assistance from the State Government as well as Central Government It may be noted that ODRPS, DHQ are not being executed by OPTCL. Odisha Power Sector Improvement Project is not a project but a loan availed from JICA. GoO has agreed to provide 6% Project Management Cost (PMC) in case of ODSSP scheme and 2.5% in case of ODAFF.

139. OPTCL has to incur cost on setting up the project office, manpower, contingencies and project related administrative expenses as well as fees payable to Project Management Consultants from this PMC. Hence, PMC is not the same as Supervision Charges. There are no PMC on the other State Government sponsored schemes. Similarly, Central Government will provide 0.5% as PMC for implementation of IPDS and DDUGJY schemes only. It is estimated that this amount will be insufficient. However, State Government has agreed to provide the extra amount beyond 0.5%.
140. Further, in compliance to IND 115(effective from 01.04.2018) the supervision/implementing agency charges in respect of DISCOMs and other works are credited to Statement of Profit & Loss in the year in which the completion and handing over (i.e. control is transferred) of the assets made to the DISCOMs/Divisions after adjustment of related expenses, if any. Therefore, the supervision/implementing agency charges in respect of the schemes ODSSP, ODAFF, DDUGJY & IPDS are not recognised in the Statement of Profit & Loss for FY 2018-19 and the same can't be recognised in advance for FY 2019-20 unless it will fulfil the above conditions. Therefore, the assumption of huge amount receivable from State Government @ 6% of the Project Cost under Misc. Income is not tenable. In view of reducing revenue trend from Supervision Charges and uncertainty involved in revenue generation from other sources as well, OPTCL expects the Misc. Receipts of Rs. 93.00 Cr. during FY 2020-21.

#### **Aggregate Revenue Requirement**

141. The projections made by OPTCL as per the OERC Transmission Tariff Regulations, 2014 are very much realistic which need full consideration.

#### **Transmission Charges**

142. The proposed transmission tariff 33.80 p/u is derived considering the energy demand projection of DISCOMs, Railways and the ARR figure arrived by OPTCL justifying component wise projection as per OERC Transmission Tariff Regulations, 2014, OPTCL's Audited Accounts for FY 2018-19, all relevant data/information and materials.
143. OPTCL filed the ARR application for FY 2020-21 on 30.11.2019 considering DISCOMs demand of 28187 MU as per realistic energy demand projections by the DISCOMs to GRIDCO at that time. Hence, OPTCL does not agree with the views of the Objector.

### **Open Access & Charges**

144. In the Table-25 (page 38 of ARR application), the derivation for LT and ST Open Access charges have been done assuming the proposed numbers. Hon'ble Commission may determine those charges based on approved figures.
145. OPTCL submitted in the present ARR application (page 38) regarding filing of an application by OPTCL before the Hon'ble Commission on 27.11.2017 for amendment of existing OERC Open Access Regulations, 2005 and 2006 by introducing MTOA, fixing higher transmission charges for STOA and MTOA customers than LTOA customers and making these Regulations compatible with CERC Connectivity & Open Access Regulations.
146. The Commission would take up the said application in due course and the present Objector may put forth its views then. In the present ARR application, the Open Access charges have been proposed by OPTCL as per the existing Open Access Regulations only.

### **Inclusion of MTOA**

147. OPTCL has filed on 27.11.2017 for amending the OERC Open Access regulations for the purpose of recognizing MTOA consumers as a separate category of consumers.

### **Introduction of Reliability Support Charge for connectivity**

148. OPTCL is in the process of filing Reliability Support Charge with proper study report and justification as directed by the Hon'ble Commission.

### **Reactive energy charges**

149. As per Regulation 4 (5) (i) under Chapter-II (CHARGES FOR OPEN ACCESS) of the Regulations 2006, the Commission shall separately determine charges for KVARH consumption from the grid in terms of paise /unit and the Open Access Customers shall pay the same.
150. 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.

151. In view of the above, OPTCL proposes that **3paise/KVARh** may be approved provisionally as Reactive Energy Charges for FY 2020-21. Hence, the contention of the objector not to consider the Reactive energy charges is improper.

### **Other Issues**

#### **Minimum & Maximum Voltage levels**

152. In compliance with the direction of the Commission, OPTCL is in the process of publishing the system performance report in the daily leading newspapers for wide circulation indicating the salient features of the transmission system of OPTCL for the FY 2018-19 very shortly. In the said publication, the maximum/minimum voltages occurring at major 220kV and 132kV grid sub-stations would be mentioned. It is submitted that the report has been compiled from the data / information related to flow of power covering a complete year.
153. The power flow in the OPTCL network is dependent on diversified geographical conditions, load trajectory, different generation scenarios and unpredictable renewable generations, transients due to varying industrial loads and harmonic injections by traction loads throughout the year. The minimum/maximum voltages shown against the sub-stations do not indicate the general voltage profile relating to those sub-stations. Those are the instantaneous value occurring once in a year due to above stated reasons.
154. However, installation of reactors at 400kV Bus of Meramundali, Mendhasal and New Duburi sub-stations is under progress. OPTCL has already commissioned 275 MVAR 33kV capacitor banks in 20 sub-stations to balance VAR injection affecting the system voltage. Further, upgradation of Single Circuit(S/C) line to Double Circuit(D/C) line and re-conductoring /uprating of old lines are being undertaken and OLTC operation of transformers is carried out during peak and off-peak hours to regulate system voltage as per requirement.
155. OPTCL is planning and implementing substantial number of projects under the categories outlined below to strengthen its transmission system for ensuring quality, adequacy & reliability of power supply in the State. Construction of new sub-stations & lines are planned taking into consideration the loading constraint of the existing system as well as demand projections by the DISCOMs. It is the prime duty of DISCOMs to distribute the power directly to the consumer of the state at proper mandated voltage level through distribution network of 33kV & below for which a no. of State & Central

Government funded schemes are being implemented for the strengthening of their network.

156. As desired by CEA, New Delhi, the RESULT FRAMEWORK DOCUMENT (RFD) i.e. target for addition of Transformation capacity in MVA and Transmission line in Ckm for the projects of voltage level 220kV and above for a financial year is normally sent to CEA in the month of Feb/March. Again, the status/achievement of these projects are submitted to CEA in the 1st week of each month. This is monitored by Chief Engineer, PSPM, CEA on monthly basis and a quarterly review meeting held at CEA, New-Delhi. The Transformation Capacity (MVA) and Transmission Line (Ckm) against Non RFD Project (NRFD) other than voltage level 220kV and above. is also taken as Achievement under NRFD,OPTCL. This achievement is taken care by both CTU as well as STU for larger interest of the consumer by constructing / augmenting more number of Grid S/s & the associated transmission lines. The status of Grid S/S, MVA capacity alongwith Ckt. Kms of OPTCL for last five years are mentioned below:

**Table-14**

<b>Particulars</b>	<b>31.03.16 (Actual)</b>	<b>31.03.17 (Actual)</b>	<b>31.03.18 (Actual)</b>	<b>31.03.19 (Actual)</b>	<b>31.12.19 (As on date)</b>
MVA	15142	16534.5	17461	19231	20376
LINES (Ckt. Km.)	12819	13072	13442	13995	14250
GRIDS (Nos.)	125	132	140	148	155

157. Out of the approved Transmission projects in the 13th Plan period (2017-18 to 2021-22), the following nos. of projects have been completed till date and the projects targeted to be completed in FY 2019-20 & FY 2020-21 are submitted below.

Projects completed in FY 2017-18: 12 nos.

Projects completed in FY 2018-19: 14 nos.

Projects completed in FY 2019-20: 09 nos.

Projects to be completed in FY 2019-20: 15 nos.

Projects under construction & planned to be completed in FY 2020-21: 44 nos.

158. “Conversion of S/C Lines to D/C Lines” and “Conversion of Radial System to Ring System” for redundancy in the supply system as well as for meeting the future load growth are also carried out.

159. Augmentation of Installed Capacity at existing sub-stations keeping in view the additional load requirement projected for different years is going on. The augmentation plan is inclusive of the n-1 & n-2 contingency conditions. In FY 2018-19, 600 MVA transformation capacity has been added at 15 sub-stations. Similarly, in FY 2019-20 till date, 170 MVA has been added at 04 sub-stations. Further, capacity addition of 477.5 MVA shall be taken up in 15 nos. of Grid Substations during FY2019-20.
160. Uprating of conductors in the stressed EHT lines from conventional ACSR to state-of-the-art HTLS (High Temperature Low Sag) conductor have been taken up.
161. Installation of 33kV Capacitor Banks for improvement of voltage profile at identified sub-stations have been undertaken. Till date, 275MVA<sub>r</sub> has been added at 20 sub-stations.
162. The Transmission System Availability figures attained by OPTCL over the last Seven years are: 99.89% (2012-13), 99.96% (2013-14), 99.95% (2014-15), 99.96% (2015-16), 99.97% (2016-17), 99.98% (2017-18) and 99.98% (2018-19). The Commission has acknowledged this achievement of OPTCL.
163. OPTCL is continuously monitoring the load growth and is accordingly planning its Transmission System. In order to improve system availability, quality of power and reliability, measures are being taken for new/augmentation of lines and substations.
164. OPTCL raises transmission charge bills on long-term customers (DISCOMs, NALCO & IMFA) at the per unit rate approved by the Commission for transmitting/wheeling power from the generating stations including CGPs and state share of power from IPPs to load centres/destination of use by long-term customers. Hence, revenue earned by OPTCL from exclusive use of above lines cannot be ascertained.
165. OPTCL submitted a perspective Transmission Plan till the end of 12th Plan period (up to FY 2016-17) and got the Hon'ble Commission's approval vide Case No.79/2012. The Commission vide order dated 30.07.2016 in Case No. 05/2016 has approved the 5-year revised Business Plan of OPTCL (FY 2014-15 to FY 2018-19). The updated Transmission Plan for the said 5-year period is embedded in the Revised Business Plan. The Commission vide order dated 09.04.2019 (Case No. 18/2017) has approved the balance period of 13<sup>th</sup> Transmission Plan (FY 2019-20 to FY 2021-22) in which 22 projects have been approved out of 30 projects submitted for approval.

166. OPTCL submitted the Transmission Plan connecting Inter-state lines & Intra-state plans for 220kV & above to CEA in 18th Standing Committee. CEA has approved the following 400kV projects for the state of Odisha:
- 400/220kV Meramundali-B S/S with associated line
  - 400/220kV Narendrapur S/S with associated line
  - 400/220kV Khuntuni S/S with associated line
  - 400/220 kV Bhadrak S/S with associated line
  - 400/220 kV Paradip S/S with associated line
167. OPTCL has already started the construction of 400/220kV Meramundali-B S/S with associated lines looking at the maximum fault level of Meramundali-A which has been approved by Commission.
168. The perspective transmission plan up to FY 2021-22 has already been approved by the Commission and M/s PRDC have been engaged for preparing a the perspective intra-state transmission plan of OPTCL till the end of the 14<sup>th</sup> Plan period. In these perspective transmission plans, the action plans for drawal of Odisha share as well as the evacuation of surplus power from IPPs has been taken care of.
169. The updated Transmission Plan for the period up to end of FY 2021-22 is adequate enough to receive Odisha share of power without paying any CTU charges.
170. As per decision of the State Government, two Joint Venture Companies (JV) namely M/s Kalinga Bidyut Prasaran Nigam Pvt. Ltd. (KBPNL- promoted by OPTCL & POWERGRID) & M/s Neelachal Power Transmission Company Pvt. Ltd. (NPTCL- promoted by OPTCL & MCL) were formed for implementing intra-state transmission system in the state of Odisha. Both these Joint Venture Companies could not start any commercial operation as they could not obtain the Intra-State transmission Licence from OERC. In case of KBPNL, application has been filed under the Companies Act, 2013 for winding-up of the company and in case of NPTCL, the company has been struck-off by Registrar of Companies due to non-commencement of business.
171. OPTCL has managed to extend alternative power supply during interruptions, even though some of them are attributed to the faults occurring in the HT / EHT systems owned by other utilities connected with OPTCL system. Substantial steps have been taken to minimise interruptions in the transmission system. Substantial tangible steps have been taken by OPTCL to address issues of line constraints.

172. Work has been completed for conversion of S/C Lines D/C Lines for 132kV New Bolangir-Patnagarh ckt. and 132kV Jajpur Road-Anandpur ckt., which has improved the loading capacity. Work has been in progress for conversion of S/C Lines to D/C Lines for 132kV Akhusingh-Paralakhemundi ckt., 132kV New Bolangir-Sonepur ckt. & 132kV Paradeep-Jagatsinghpur which can further improve the loading capacity.
173. Loading Constraints of 132kV Chandaka-Mancheswar and Chandaka- Ranasinghpur lines have been solved by conversion of ACSR conductor to HTLS conductors.
174. OPTCL has commissioned Unit-8, Bhubaneswar, GIS substation with UG cabling connectivity from Chandaka-B grid S/S, energised 400kV Meramundali-IBTPS line, 400kV Meramundali-Lapanga line, 400kV Meramundali-New Duburi DC line and installed 220/132 Auto-Transformer at Therubali to address the n-1 contingency at Therubali. Further, commissioning of Potangi Grid and ongoing Podagada-Potangi line will definitely going to improve the evacuation of Odisha Share power from Machhakund PH. Commissioning of Dhenkikote and Keonjhar Sub-stations has improved the area load and industrial load growth in Keonjhar industrial zone. Commissioning of Muniguda and Kantabanji Sub-stations has facilitated for extending power requirement for East Coast Railway RTSS. Commissioning of Jayapatana, Kasipur, Betanati, Agarapada substations has improved the quality of power supply in those areas.
175. A number of schemes like “Conversion of Radial to Ring System”, “Conversion of S/C Lines to D/C”, “Uprating of Conductors” etc. have been planned by OPTCL for enhancement of capacity as well as reliability of the transmission system.
176. The contention of the objector that the audited data of OPTCL for the FY 2016-17 excludes the revenue component of SLDC and unaccountable in the financial statement are purely imaginary and unjustified. Commission has directed that the entire amount approved in SLDC’s ARR and remaining unspent shall be transferred and deposited in the “SLDC Development Fund”. Accordingly, any surplus derived from the SLDC operation has been transferred to SLDC Development Fund.

#### **Delays in Project Execution**

177. The main reasons of delay in completion of few projects (Sub-station & line work) are mentioned below:

- The ongoing and the newly awarded projects are executed with a particular schedule completion period varying from 24 to 36 months from the date of award of the contract.
- The scheduled completion period in respect of a project is fixed based on the length of the associated line with the proposed sub-station.
- Delay in completion of the associated line work is attributed to delay in completion of the entire project awarded on turnkey basis.
- Delay in obtaining advance possession of sub-station land also is one of the primary causes for delay in the completion of project. Some allotted land is being cancelled due to implementation of new law for verification of land records (forest land) in HAL & SABIK.
- Acute RoW problems are encountered during construction of the line.
- Non-availability of clear corridor for construction of the line due to gap between survey and execution requiring change in route alignment during execution.
- Court cases filed by the land owners at different locations of the line during construction and status-quo maintained on the disputed land by the Hon'ble Court.
- Delay in getting statutory clearances such as railway crossing clearance, NHAI clearance forest clearance etc.

178. Due to the above reasons, although the sub-station work is completed in all respect within the schedule period, commissioning of the sub-station gets delayed due to delay in completion of the line work. Further, projects are taken up as per the transmission plan and business plan of OPTCL approved by the Hon'ble Commission which creates a gap between work-in-progress and completion, ultimately leading to inflation in cost. Nevertheless, OPTCL with its experience & expertise in project management and contract not only handles a large number of projects under different schemes but also always monitors and aims to complete within the time schedule to avoid time and cost over-run. Though in certain cases the project commissioning gets delayed but there is no cost overrun as the price variation of the project is allowed only up to the schedule completion period.

179. The recruitment plan of OPTCL up to 2018 has been approved by the Government of Odisha. However, keeping in view the actual physical progress and revised

commissioning schedule of the ongoing projects, the recruitment plan arising out of new creation, retirement and attrition year wise, OPTCL has accordingly phased the recruitment and planned to fill the vacancies in a staggered manner.

### **Quality, Adequacy and Reliability of Power Supply in the State**

180. OPTCL is planning and implementing substantial number of projects under the categories outlined below to strengthen its transmission system for ensuring quality, adequacy & reliability of power supply in the State.

- i. Construction of new sub-stations & lines are planned taking into consideration the loading constraint of the existing system as well as demand projections by the DISCOMs.
- ii. Additional Grid substations and EHT Lines for the growth of OPTCL Network are undertaken as per the due approval from Hon'ble commission through the Five Year Business Plan from time to time. Additional new Grid Substations, augmentation of existing Grid substations and EHT Lines are undertaken in order to improve the power quality, meeting additional load growth, requirement for industrial growth and in compliance to the N-1 and N-1-1 contingencies as prescribed in CEA Guidelines
- iii. The expansion of transmission network of OPTCL is being done considering the future demand, upcoming generation sources, evacuation of State share of power from IPPs, drawal of central sector share of Odisha, reliability margin, grid security considerations and the associated transmission plan is accordingly approved by the Hon'ble Commission taking into account the views/suggestions of all stakeholders.

181. The contention of the Objector that OPTCL has failed to disclose the actual payment of terminal benefit liability to the employees in any of its petitions and replies to the Commission is not true and justified. In this regard it is submitted that OPTCL has been providing the month wise cash outflow towards terminal benefit liabilities regularly to the Hon'ble Commission during ARR hearing and performance review of OPTCL.

182. In absence of the actuarial valuation, the Commission has been allowing the terminal liabilities based on the actual payment made by the OPTCL. As per the IND AS-19, current service cost as well as past service cost are to be derived and provisions are to be made. Accordingly, these costs are to be funded every year to reduce the financial

burden on the employer during the actual payment. Thus, the contention of the Objector to dismiss the claims is against the provision of IND AS and unjustified.

183. The schemes like RGGVY, APDRP, DDUGJY, IPDS, BGJY, ODSSP, ODAFF, SCRIPS (DISCOMS portion) are purely DISCOMS Projects. As per the Government guidelines the assets to be created against these schemes will be handed over to the Government /DISCOMS as per the schemes. Hence, OPTCL has not considered these schemes for determination of Tariff.

#### **OBSERVATION OF THE STATE ADVISORY COMMITTEE (SAC) (PARA 184)**

184. The Commission convened the State Advisory Committee (SAC) meeting on 26.02.2019 at 10.30 AM in OERC. The Members of SAC deliberated on different issues related to power sector and the Annual Revenue Requirement of various licensees. Some members pointed that the proposal of increase of transmission tariff about 35% is primarily due to the increase in employee cost including terminal benefits, depreciation, RoE etc. The expenditure of per unit transmission by OPTCL is high in comparison to other states. Therefore, there should be cost optimization instead of allowing further increase in transmission tariff and OPTCL should envisage the kind of business model which will be suitable for efficient operation of its system. The transmission loss should have been reduced further since a lot of investment has been made by OPTCL for commissioning of new substations, up-rating/up-gradation of lines/substations, implementation of Substation Automation Schemes(SAS) etc. Further, the charges for Short Term Open Access (STOA) customers and Long Term Open Access (LTOA)customers should be equal instead of charging STOA customers at the rate of 25% of that for LTOA customers, since the latest transmission charge pricing methodology i.e. Point of Connection (PoC) charges has already been introduced by Ministry of Power, Government of India.

#### **VIEWS OF GOVERNMENT OF ODISHA ON TARIFF ISSUES (Para 185)**

185. The Commission had written to Government of Odisha vide Letter No.319 dated 28.02.2020 to submit their views on up-valuation of assets. The reply of Government of Odisha is awaited. However, Government of Odisha had earlier communicated their views as a part of proceeding for tariff determination of OPTCL for FY 2019-20 vide their letter No. 2283 dated 12.03.2019 which is stated as follows:

*Keeping in abeyance of Up-Valuation of assets:*

*Regarding the issue of up-valuation of assets pertaining to OPTCL, Generators and other licensees, the Government for the time being agrees with the views of the Commission to keep in abeyance the up-valuation of assets like previous years. Considering the prevailing situation, the Government agrees to extend the status-quo on up-valuation till FY 2019-20.*

The Commission presumes that the Government has same views as that of previous years for FY 2020-21.

#### **COMMISSION'S VIEWS AND ORDER (PARA 186 TO 265)**

186. The Commission had notified OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014. As per the said Regulation, the controllable and non-controllable costs have been defined under Regulation 6.3 which is valid till 31<sup>st</sup> March, 2019. Now, in exercise of power conferred under Regulation 9.1 of above Transmission Regulation, 2014 the Commission extend the same until further order.
187. Therefore, the Commission while approving ARR and transmission tariff of OPTCL for the FY 2020-21, 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.
188. OPTCL has inherited a transmission network from GRIDCO on "as is where is" basis. Continuous up-gradation and regular repair & maintenance are required to keep the network in a safe and operational condition and to meet the growing requirements of DISCOMs' demand 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 this, 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 undertake regular and adequate maintenance.
189. The tariff policy notified by the Ministry of Power on dated 28.01.2016 stipulates that in transmission the following objectives should be achieved:

- (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.
190. 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 the same 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.
191. 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 available information, particularly 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 2020-21**

192. 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 GRIDCODE. Transmission loss, therefore, has been determined on the basis of principle of 'As the System Operates'.
193. OPTCL submitted that the transmission loss is purely a technical loss and dependent upon the location of generation sources, system configuration and power flow requirements at different load centres. Further, in view of the increasing demand for power due to ongoing industrialisation and implementation of central and state sponsored schemes like RGGVY, DDUGJY, BGJY, 24X7 Power for All, IPDS etc. in Odisha, there will be increase in the flow of power in the OPTCL transmission network contributing to increased transmission loss. Over the year, OPTCL has been able to

reduce the transmission loss by commissioning a number of new transmission projects and adopting innovative schemes under Master Maintenance Plan. The actual transmission loss in the OPTCL's transmission system from April'19 to September'19 is 3.24% against Commission's approval of 3.00% for FY 2019-20. In view of this trend of transmission loss level, OPTCL expects the loss level to remain around 3.25% in the current year. Accordingly, OPTCL has proposed 3.20% transmission loss during FY 2020-21.

194. The approved and actual transmission loss for the year 2012-13 to 2019-20 is furnished in the table below:

**Table-15**

<b>FY</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>
Approved (%)	3.80	3.80	3.75	3.75	3.70	3.50	3.00	3.00
Actual audited (%)	3.84	3.79	3.73	3.67	3.58	3.34	3.28	3.24 (Provisional for April 19 to Sept 19)

195. 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 etc. Further, the Commission in its Business plan order vide case No. 05/2016 dated 30.07.2016 had approved the Transmission loss as 3.00% during the year 2018-19 basing on submission of OPTCL. The Commission considering the submission of the stakeholders had approved the transmission loss of 3% for the FY 2019-20. Therefore, the contention of OPTCL that increase in transmission loss due to increase in the flow of power in the OPTCL transmission network and consideration of loss at the level of 3.2% is not acceptable. Further, OPTCL has yet to file its Business Plan for the control period

beginning from FY 2019-20 as mandated under OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014.

196. It is observed that OPTCL has not achieved the loss target approved by the Commission FY 2018-19 and FY 2019-20. OPTCL in its submission has submitted that the approved loss level could not be achieved due to ongoing industrialisation and implementation of Central & State sponsored schemes like RGGVY, DDUGJY, BGJY, 24X7 Power For All, IPDS etc. in Odisha. However, the neighbouring states such as Andhra Pradesh and Chhattisgarh, where similar type of schemes are being implemented, the respective electricity Regulatory Commissions' have considered the intra state transmission loss at the level of 3.1% and 3% respectively for the FY 2019-20. Further, keeping in view the licensees track record in reduction of the losses, the huge investment have been made in the transmission network for system strengthening. Considering the submission of objectors as well as OPTCL, the Commission approves 3.00% as transmission loss for FY 2020-21 which is same as that of FY 2019-20. Further, the Commission directs that OPTCL should 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. Effort should be made by OPTCL to reduce the loss further.

#### **Execution of Projects**

197. Objectors have submitted that OPTCL should have full control over its transmission system to meet the power flow requirement of the State. It is observed that OPTCL is not completing the projects approved by the Commission 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, they mentioned that the strategy of OPTCL in execution of Projects is not synchronised with downstream network expansion of the State. In some cases downstream infrastructure of DISCOMs is not ready to receive power from OPTCL network though they are completed. The Commission directs OPTCL to co-ordinate with DISCOMs for evacuation of power from new/augmented grid s/s by building their own downstream distribution lines. Prior discussion with the DISCOMs is required before submission of transmission project for approval of OERC in order to avoid idle investments. The Commission also directs OPTCL to clear outstanding issues related to RoW in

consultation with local elected representatives and District Administration before incurring any expenditure in transmission project.

198. Electrical safety hazards are increasingly posing higher 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. Lots of incidents on electrical accidents with fatalities have come to the notice of the Commission. The primary reasons of such incidents are due to non-adherence to safety rules, no/improper maintenance of transmission/distribution system elements, non-maintenance of proper line 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, maintenance of switchgear, maintenance of appropriate clearances etc. In this connection, the Commission is in the process of finalising 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.

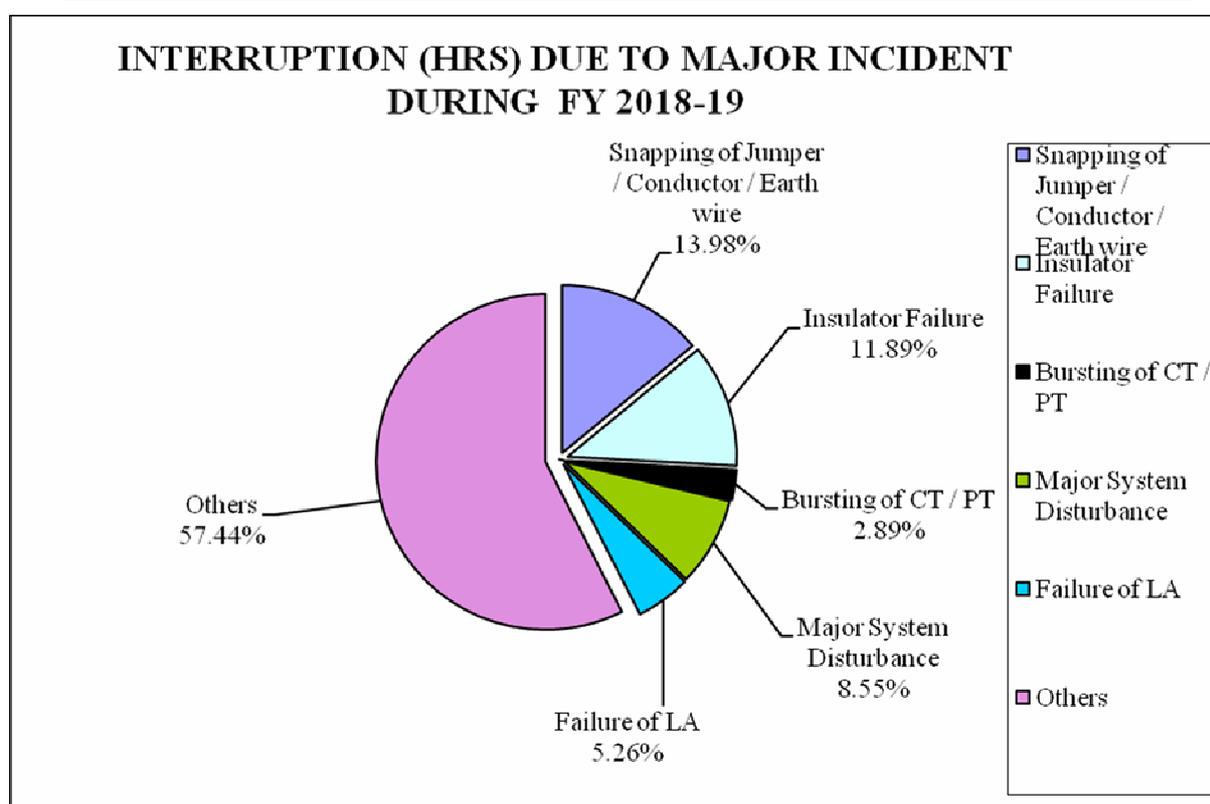
**System Interruptions due to Major Incident:**

199. OPTCL's system has faced aggregated annual interruptions varying from 4 hours to 81 hours at different locations on account of conductor/jumper/earth wire snapping, insulator failure, bursting of Current Transformer/Potential Transformer, breaker problem, system disturbance, Lightning Arrester failures and others. However, OPTCL has claimed that it has arranged to maintain power supply without resorting to total power failure. The same effort has been made by OPTCL in maintaining uninterrupted power supply even in the event of generation failures. OPTCL has reported about 3.50, 12 and 6 hours of load restriction during the first, second and third quarter respectively for the FY 2018-19 on rotation basis. Though the load restriction had been imposed to curtail the demand, OPTCL claims that there was no black out experienced in the State during the FY 2018-19. Duration of interruption in the year is given in table below:

**Table-16**  
**Interruption due to Major Incident**

Incident	Duration of Interruption	No. of Interruption	Percentage
Snapping of Jumper / Conductor / Earth wire	19:51:00	39	13.98
Insulator Failure	16:53:00	25	11.89
Bursting of CT / PT	4:06:00	11	2.89
Breaker Problem	0:00:00	0	0.00
Major System Disturbance	12:09:00	9	8.55
Failure of LA	7:28:00	10	5.26
Others	81:35:00	172	57.44

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 2018-19.



200. It is observed that during FY 2018-19 the daily peak demand touched at 5427 MW maximum on dt.23.08.2018 and a minimum of 3186 MW on dt.17.12.2018. The peak demand of 5427 MW in 2018-19 is about 912 MW higher than the peak demand experienced during the previous year 2017-18 (4515 MW). The total energy drawl is 26269 MU in FY 2018-19 against 25392 MU in FY 2016-17, which indicates the enhancement in electricity consumption of around 877 MU in the State.

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 voltage at 132 kV, 198-245 kV for voltage at 220 KV and 380-420 kV for 400 kV level. OPTCL has however experienced 200 kV minimum and 241 kV maximum in its 220 kV system and 115 kV minimum and 145 kV maximum in its 132 kV system. As reported, the voltage level at few 132 KV S/Ss have been lower than the allowable limits. The maximum and minimum voltage levels at different major GRID substations of OPTCL are given in table below:

**Table-17**

Sl. No.	Name of the 220/132 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	Atri	236	208
2	Balasore	236	201
3	Bhadrak	239	204
4	Bhanjanagar	238	213
5	Bidanasi	240	213
6	Budhipadar	234	201
7	Chandaka	235	206
8	Duburi	238	212
9	Jaynagar	240	221
10	Joda	235	209
11	Katapalli	235	205
12	Lapanga	236	204
13	Laxmipur	240	220
14	Mendhasal	238	208
15	Meramundali	229	216
16	Narendrapur	241	204
17	Paradeep	235	204
18	Sadeipali	232	200
19	Tarkera	248	220
20	Theruvai	236	210

Sl. No.	Name of the 132/33 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	Cuttack	141	115
2	Berhampur	145	119
3	Puri	138	116
4	Khurda	139	122

201. OPTCL is advised to take suitable remedial measures and to keep the OLTC of the power transformers in healthy condition and all the field engineers should be trained to operate it during peak and off-peak load condition to maintain voltage. OPTCL should also monitor the reactive drawl of DISCOMs from its grid S/S and wherever DISCOM draw excessive reactive load at low voltage condition, it shall take up with them for remedial measure.

202. OPTCL should find out latest technical methods for effective utilization of existing level transmission system to increase power transfer capacity and reliability using FACT devices. OPTCL should identify the frequently overloaded line and find out feasibility of employing FACTS there. This would not only relieve congestion but also improve voltage profile of the lines. OPTCL is required to develop appropriate system to ensure power supply without interruptions in any part of the State and ISGS of Eastern Region. The Commission expects OPTCL to plan O&M and 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.
203. OPTCL should avoid under loading of lines and substations resulting in losses and should conduct comprehensive system study before proceeding for further network expansion plan. 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.
204. 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 dt.03.01.2007. The Commission directs OPTCL to report all the major incidents for which any part of the transmission system is affected. In this connection, OPTCL is to submit a detailed report on the damage to the transmission infrastructure caused by the severe cyclonic storm 'FANI' which lashed on 03.05.2019 in the State along with other incidents and expenditure made thereto for restoration. The financial support received from the Government or any other body to undertake the restoration work should also reported to the Commission.
205. The coastal districts of Odisha have repeatedly been battered by natural disasters like cyclone and flood. In the recent past the cyclonic storm 'FANI' lashed the coastal belt of Odisha and caused extensive damage to the transmission/distribution system. OPTCL should therefore, prepare a comprehensive plan for Disaster Resilient Transmission System (DRPS) and place the same before the Government for their consideration.
206. OPTCL, after conducting system studies, should take necessary action to uprate ACSR conductors to HTLS conductors, wherever required. Further, OPTCL should find out the latest technical methods for effective utilization of existing/proposed higher level

transmission system by upgrading the existing substations/transmission lines and equipments to increase power transfer capacity and avoid RoW problem. Strengthening of the existing network, multi voltage level and multi circuit transmission lines may also be considered for the purpose.

207. OPTCL should also avoid under loading of lines resulting in losses and conduct comprehensive system studies & discuss with distribution licensees before proceeding for further network expansion plan. OPTCL should have in place an efficient and holistic monitoring/management system of its transmission network. 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.
208. The Commission has analysed the application of OPTCL for Aggregate Revenue Requirement (ARR) for FY 2020-21 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**

209. Operation and Maintenance expenses includes (1) Salary, Wages, Pension contribution and other employee costs. (2) A & G expenses (3) Repair & Maintenance cost and (4) other miscellaneous expenses, statutory levies and taxes.
210. OPTCL has claimed an amount of Rs.466.22 crore for FY 2020-21 under Salary, Wages, Pension contribution and other employee costs. While projecting the employees cost, the petitioner has considered the following assumptions:-
- i. The Basic Pay plus Grade Pay (GP) has been projected as per the 7<sup>th</sup> pay recommendations. OPTCL effected the 7<sup>th</sup> pay recommendations and wage Board revisions with effect from June 2018. Accordingly the Basic Pay for FY 2019-20 has been projected at Rs.175.85 cr and after considering the number of employees with 3% hike in the annual increment the Basic pay for FY 2020-21 is projected at Rs. 163.00 cr.

- ii. OPTCL vide Office Order No.AW-LW-II-2/2016/23919 dated 17.11.2018 has notified to release 40% of arrear amount arising out of pay revision of Executives and Non-Executives of OPTCL for the period from 01.01.2016 and 01.04.2015 respectively. The Commission allowed Rs. 35.28 Cr. towards 40% towards arrear pay (40% of Rs. 88.22 Cr.) in the ARR for the FY 2019-20. OPTCL has submitted that it is expected that State Govt. will issue further notification towards release of the balance 60% by the end of current FY 2019-20. Therefore, OPTCL has proposed Rs.52.94 Cr. towards balance 60% arrear pay to be considered in the ARR of 2020-21.
- iii. Dearness Allowance (DA): OPTCL has estimated that the DA rate for the FY 2020-21 would be around 27% (average).With this assumption, the DA for FY 2020-21 has been estimated to Rs. 44.01Cr.
- iv. Presently the rate of HRA for Executives is 18-20% on pre-revised pay and for Non-Executives is 18-20% on revised pay. Accordingly, OPTCL has projected Rs.15.11 Cr.HRA for FY 2020-21.
- v. OPTCL has submitted that the Executives and Non-executives of OPTCL are entitled to get Medical Allowance @ 5% on pre-revised pay and revised pay respectively. Accordingly, OPTCL has projected Rs.5.22Cr. for FY 2020-21 towards Medical Expenses including projection of Rs.1.16 Cr. towards reimbursement of medical expenses.
- vi. Under staff welfare expenses, OPTCL has projected Rs. 2.79 Cr. towards Uniform, Liveries, GIS, Sports, Recreations & Cultural Activity, and Hospital Expenses etc. for FY 2020-21.
- vii. At present, OPTCL is functioning with 57% approximately of manpower against sanctioned strength. For smooth functioning, OPTCL has engaged personnel in different streams through outsourcing. Accordingly, Rs.3.17Cr. has been proposed towards payment to outsourced personnel.
- viii. OPTCL has proposed Rs.5.71 Cr. towards stipend for the new recruitees for the FY 2020-21.
- ix. OPTCL proposesRs.11.95 Cr. towards Bonus, Other allowances (Shift, Handicap, City, ABT etc.), LTC, Honorarium, Ex-gratia, Conveyance (both allowance and reimbursement) etc. for FY 2020-21.

### **Basic Pay**

211. OPTCL in the reply to queries of the Commission submitted that the actual cash outflow on Basic Pay + GP from April 2019 to December 2019 (for a period of 9 month) was Rs.119.13 crore averaging Rs. 13.24 crore per month. The Basic pay and GP for FY 2019-20 as submitted by OPTCL has been extrapolated to arrive at Basic pay for FY

2020-21 taking into consideration the number of employees during such year. The OPTCL has proposed the number of employees in the ARR in the following manner.

**Table -18**  
**Information on number of Employees**

<b>OPTCL</b>	<b>Proposed</b>
No. of employees as on 31.03.2019	2896
Add: Addition during 2019-20	139
Less: Retirement/Expired Resignation during 2019-20	202
No. of employees as on 31.03.2020	2833
Add: Addition during 2020-21	214
Less: Retirement/Expired/ Resignation during year 2020-21	194
No. of employees as on 31.03.2021	2853
Average no. of employees for FY 2019-20	2865
Average no. of employees for FY 2020-21	<b>2843</b>

212. The commission after prudence check finds that the number of employees as projected by OPTCL is reasonable and accordingly allows the same as shown in the above table. The average number of employees during FY 2019-20 and FY 2020-21 works out to be 2865 Nos. and 2843 nos. respectively as shown in the above table. The calculated Basic Pay for FY 2019-20 comes to Rs. 158.84 crore after prorating the average of Basic Pay + GP from April 2019 to December 2019 i.e. Rs. 13.24 crore per month. For calculating basic pay for 2020-21, the basic pay for 2019-20 is factored with the average number of employees for FY 2019-20 and FY 2020-21 considering retirement and inductions and enhanced increment at the rate of 3%. The said calculation is shown in the following table:

**Table –19**

**(Rs in Crore)**

<b>Cash outgo</b>	<b>Amount</b>
Basic+GP drawn in 04/2019	13.46
Basic+GP drawn in 05/2019	13.37
Basic+GP drawn in 06/2019	13.37
Basic+GP drawn in 07/2019	13.29
Basic+GP drawn in 08/2019	13.24
Basic+GP drawn in 09/2019	13.17
Basic+GP drawn in 10/2019	13.13
Basic+GP drawn in 11/2019	13.09
Basic+GP drawn in 12/2019	13.01
Avg Basic Pay + GP	13.24
Pro-rated for FY 2019-20	158.84
<b>Approved for FY 2020-21</b>	<b>162.35</b>

213. OPTCL has submitted that a significant number of posts are lying vacant in different ranks due to retirement, death, promotion etc. as a result of which functioning of the organization has been seriously affected. The Men in Position (MIP) of OPTCL is 2914 against sanctioned strength of 5149 (Executive-1916 + Non-Executive-3233). OPTCL 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.
214. The commission observes that the Employees cost is a controllable cost and is a component of total O&M expenses. Rising employee cost also inflates the A&G cost. Therefore, arbitrary growth in employees cost and A&G cost is likely to have pressure and impact on tariff. Since no norms have been prescribed for employees cost and is a pass through, the Commission may not allow indiscreet rise of employee cost in tariff fixation at some stage. Considering all these issues the Commission feels any upward increase shall be on the basis of prudent check from time to time.

**Dearness Allowance:**

215. The Govt of Odisha implemented the 7<sup>th</sup> Pay Commission with effect from 1.1.2016. Accordingly, DA was also changed as per the 7<sup>th</sup> pay recommendations and the following table shows the notified DA by Govt of Odisha and projected DA thereof for FY 2020-21.

**Table-20**

<b>Effective Date</b>	<b>Rate</b>	<b>Status</b>
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	22%	Projected
01.07.2020	27%	Projected
01.01.2021	32%	Projected

216. As per the above table the DA rate for FY 2020-21 is assumed to be 27%. The DA for employees for FY 2020-21 works out to Rs. 43.85 crore considering the DA rate of 27%.

#### **House Rent Allowance**

217. House rent allowance has been allowed as provided in the actual un-audited account for the year 2016-17 since there is no provision of increment in the 7<sup>th</sup> pay recommendations and the HRA would be a fixed amount equalling to the amount received on the date of implementation of 7<sup>th</sup> pay recommendations. The commission accordingly approves the HRA of Rs. 15.07 crore.

#### **Stipend for new contractual recruitment**

218. OPTCL has submitted that they have planned to recruit 214 Nos. employees during FY 2019-20 and 512 Nos. in FY 2020-21. Accordingly, OPTCL has proposed Rs.5.71 Cr. towards stipend for the new recruits for the FY 2020-21. The details are as below:

**Table –21**

<b>YEAR</b>	<b>Post</b>	<b>No. of Candidates Recruited/to be Recruited</b>	<b>Stipend per person per month (Rs.)</b>	<b>Total stipend per month (Rs. Lakh)</b>	<b>Remarks</b>
2019-20	JMOT (El.)	151	10000	15.10	
	JTTT (Telecom)	18	10000	1.80	
	Jr. Manager	18	18000	3.24	
	Asst. Manager	13	24000	3.12	
	Office Assistant	13	12000	1.56	
	Office Assistant	31	12000	3.72	On Extension
2020-21	Jr. Manager	16	18000	2.88	
	Asst. Manager	96	24000	23.04	
	JMOT( El.)	365	10000	36.50	
	Office Assistant	35	12000	4.20	
	Total	756	-	95.16	
	Total stipend for FY 2019- 20 & FY 2020-21 = Rs. 11.42 Cr. and average is Rs. 5.71 Cr.				

219. The Commission after prudence check allows Rs 5.71 crore towards stipend for new recruitments. It is directed that OPTCL should follow State Govt models on contractual appointment as a State Govt. entity.

220. Medical reimbursement and all other items such as outsourced engagement, LTC, honorarium, ex-gratia and staff welfare expenses have been accepted by the Commission appropriately. Further, the commission has allowed only 10% of the seventh pay arrear as per State Govt. notification as against OPTCL proposal of 60% which comes to Rs. 8.82 crore.

**Terminal Benefit including NPS**

221. 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.
222. Accordingly, based on the report of independent actuary M/s Charan Gupta Consultants Pvt. Ltd., Noida, U.P. OPTCL has made provision towards terminal liabilities and recognised the same in Profit & Loss Account in each of the accounting period. For FY 2018-19, the actuary has recommended the following amount to be recognised in P&L Account as shown in following table:.

**Table-22**

Year	(Rs. Cr.)
Pension	156.13
Gratuity	4.47
Leave	7.03
Total	Rs. 167.63 Cr.

223. For FY 2020-21, OPTCL has proposed Rs.167.63 Cr. towards terminal liabilities (Pension, Gratuity & Leave Encashment). Besides OPTCL has projected Rs.9.77 Cr. towards employer's matching contribution for employees who have joined under NPS and Non-Pensioner Category.
224. The commission analysed the same and find that the projection made by the OPTCL of Rs.167.63 cr. for FY 2020-21 is reasonable, which is allowed towards terminal liabilities to OPTCL for FY 2020-21. Besides the above, an amount of Rs.9.77 crore towards NPS is allowed for FY 2020-21.
225. 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-23**  
**Approved Employees Cost for FY 2020-21 (Rs. crore)**

<b>Sl No</b>	<b>Particulars</b>	<b>FY 2019-20 Approved</b>	<b>FY 2020-21 Proposed</b>	<b>FY 2020-21 Approved</b>
<b>A</b>	<b>Salary &amp; Allowance</b>			
1	Basic Pay and Grade Pay	168.25	163.00	162.35
2	Dearness Allowance	21.87	44.01	43.83
3	House Rent Allowance	15.65	15.11	15.07
4	Other Allowance	1.36	1.03	1.03
5	Bonus	0.01	0.01	0.01
6	Stipend for New Recruitment	2.98	5.71	5.71
7	Arrear Salary for 7th Pay Commission	35.28	52.94	8.82
	<b>Sub-total (A)</b>	<b>245.40</b>	<b>281.81</b>	<b>236.82</b>
<b>B</b>	<b>Additional Employee Cost</b>			
1	Out Sources Engagement	2.71	3.17	3.17
	<b>Sub-total (B)</b>	<b>2.71</b>	<b>3.17</b>	<b>3.17</b>
<b>C</b>	<b>Other Employee Cost</b>			
1	Medical Expenses (allowance+ Reimbursement)	3.70	5.22	5.22
2	Leave Travel Concession	0.60	0.50	0.50
3	Honorarium	0.09	0.05	0.05
4	Ex-gratia	5.00	7.00	5.00
5	Staff Welfare Expenses	2.45	2.79	2.79
6	Miscellaneous		3.25	-
	<b>Sub-total (C)</b>	<b>11.84</b>	<b>18.81</b>	<b>13.56</b>
<b>D</b>	<b>Terminal Benefits</b>			
1	Pension	165.12	167.63	167.63
2	Gratuity			
3	Leave Salary			
4	Other (including contribution to NPS)	7.84	9.77	9.77
5	Arrear pension for 7th Pay Commission			
	<b>Sub-total (D)</b>	<b>172.96</b>	<b>177.40</b>	<b>177.40</b>
<b>E</b>	<b>Total Employees Cost (A+B+C+D)</b>	<b>432.91</b>	<b>481.19</b>	<b>430.95</b>
F	Less: Employees Cost Capitalized	13.14	15.08	15.08
<b>G</b>	<b>Net Employee Cost ( E- F)</b>	<b>419.77</b>	<b>466.11</b>	<b>415.87</b>

### **Repair & Maintenance Expenses**

226. 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.140.59 crore towards R&M expenses and the summary of proposed R&M Expenses under these four heads is given in the following table :

**Table-24**

(Rs. Cr.)			
Particulars	OERC Approval (FY 2018-19)	OERC Approval (FY 2019-20)	Projection (FY 2020-21)
(i) O&M	<b>111.00</b>	<b>115.22</b>	123.51
(ii) Telecom			3.09
(iii) Civil Works			10.00
(iv) Information Technology			3.99
<b>Total R&amp;M Expenses</b>			<b>140.59</b>

227. 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.’*

As per the submission in the ARR Form F-17, the opening balance of the Gross block as on 1-4-2020 is shown as Rs.6808.59 crore. The commission after scrutiny of the audited accounts for the FY 2018-19 and further additions of assets during FY 2019-20 approves the assets as shown in the table below.

**Table-25**

(Rs. in crore)					
Transmission Assets	Deemed Cost as on 01.04.2019 (Audited)	Addition during FY 2019-20	Cost as on 01.04.2020 (Approved)	Up valuation effect	Pre-upvalued value of assets as on 01.04.2020
Free Hold Land	51.03	5.10	56.13		56.13
Lease Hold Land	44.01	4.72	48.73	5.64	43.09
Buildings	83.04	11.17	94.21	1.35	92.86
Plant and Machinery (other civil works)	30.48	3.28	33.76	1.58	32.18
Plant and Machinery	2361.58	243.54	2605.12	70.87	2534.25
Plant and Machinery (By Beneficiary)	184.28	180.95	365.23	193.28	171.95
Plant and Machinery: (Lines, Cables and Network)	1348.19	149.60	1497.79	451.29	1046.5
Vehicles	1.17	0.25	1.42	0.44	0.98

<b>Transmission Assets</b>	<b>Deemed Cost as on 01.04.2019 (Audited)</b>	<b>Addition during FY 2019-20</b>	<b>Cost as on 01.04.2020 (Approved)</b>	<b>Up valuation effect</b>	<b>Pre-upvalued value of assets as on 01.04.2020</b>
Furniture, Fixture	5.32	0.68	6	1.20	4.8
Office Equipment & Others	28.94	4.19	33.13	2.21	30.92
Capital stores and spares	0.36	0.04	0.40		0.40
<b>Grand Total</b>	<b>4138.40</b>	<b>603.52</b>	<b>4741.92</b>	<b>727.86</b>	<b>4014.06</b>

228. As per the OERC Transmission regulation, the R&M expenses are allowed at the rate of 2.5% on opening GFA and also basing on the actual expenditure incurred during the previous year. The Pre-up valued value of assets as on 01.04.2020 is assessed at Rs.4014.06 crore. The OPTCL was asked to submit the actual expenditure incurred under R&M during the previous year 2018-19 and the current year i.e. FY 2019-20. The OPTCL has submitted the actual expenditure incurred during the year 2018-19 which is shown in the following table:

**Table-26**

Actual expenditure incurred during FY 2018-19	
O&M	84.78
Construction	2.72
E&MR	0.92
Telcom	3.11
Stores	1.39
Civil units	16.02
DDO	2.91
SLDC	0.53
<b>Total for FY 2018-19</b>	<b>112.38</b>

The OPTCL has also submitted the actual expenditure incurred during the year 2019-20 which is shown in the following table:

**Table-27**

Actual Expenditure on R&M incurred during March 2019 to Sep'2019	
O&M	25.69
Construction	1.02
E&MR	0.06
Telcom	0.88
Stores	0.22
Civil units	8.07
DDO	0.55
SLDC	0.16
<b>Total for FY 2019-20</b>	<b>36.65</b>
<b>Prorated for FY 2019-20</b>	<b>73.30</b>

As analysed from the above tables the expenditure actually incurred during the FY 2018-19 is Rs.112.38 cr. and the actual expenditure if prorated for the current year 2019-20 is calculated to be Rs.73.30 cr. During the ensuing year i.e. FY 2020-21 out of the total projection of Rs.140.59 cr. we find that there is a substantial expenditure shown towards the head 'Watch and Ward' to the tune of Rs.53.67 cr. The OPTCL was asked to furnish the details of the actual expenditure of watch and ward during the year and the justification towards the increased projection. As analysed from their statement OPTCL have incurred an expenditure of Rs.32.48 cr. during FY 2018-19 and during the current year till September, 2019, OPTCL have incurred expenditure of Rs.11.81 cr. under the head watch and ward. On such analysis the Commission is not inclined to allow such huge expenditure projected under the head watch and ward. The Commission observes that with technological intervention and decrease in the manual intervention, there seems to be no justification to increase such cost which should rather come down over the years. In view of this the Commission basing on these observations allows the R&M of Rs.115.22 cr. for FY 2020-21 as was allowed for the previous year.

#### **Administration & General Expenses**

229. For the FY 2020-21, the petitioner has proposed an amount of Rs.28.65 Crore under the head Administration & General Expenses. Item-wise break up of expenses is given in table below:

**Table-28**

<b>A &amp; G proposed for FY 2020-21</b>	
Normal A&G approved during 2019-20	22.70
Escalation as per WPI ( upto Oct' 2019 @2.31%)	0.52
Normal A&G for 2020-21	23.22
Add licensee fees to Commission	1.90
Add: Inspection fees	2.78
SLDC charges	0.75
<b>Total A&amp;G Expenses proposed for FY 2019-20</b>	<b>28.65</b>

230. 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.

231. Therefore, the Commission allows escalation of 2.76% (rate of inflation measured by WPI for the period up to Jan 2020) over the approved amount of previous year. The calculation for determining the A&G expenses is given in table below:

**Table-29**

(Rs. Crore)

<b>A &amp; G Approved 2020-21</b>	
Normal A&G approved during 2019-20	22.70
Escalation as per WPI (upto Jan'2020 @ 2.76%)	0.59
Normal A&G for 2019-20	23.29
Add licensee fees to Commission	1.90
Add: Inspection fees	2.78
SLDC charges	0.75
<b>Total A&amp;G Expenses approved for FY2020-21</b>	<b>28.72</b>

232. The Commission approved an amount of Rs. 28.72 crore towards A&G expenses for the FY 2020-21. The Commission also directs OPTCL to keep the A&G cost under control and in comparison to business volume.

### **Interest and financial charges**

#### **A. Interest on loan**

233. OPTCL has projected Interest on loan at Rs.53.53 Cr. for FY 2020-21. Details of interest on loan capital projected by OPTCL is shown in following table:

**Table-30**

<b>Projection for Interest on loan for FY 20-21(Rs. Cr.)</b>							
		<b>Rate of interest</b>	<b>Principal as on 01.04.2020</b>	<b>Loan to be received (FY 2020-21)</b>	<b>Loan to be redeemed (FY 2020-21)</b>	<b>Interest payment (FY 2020-21)</b>	<b>Total Payment (FY 2020-21)</b>
<b>A</b>	<b>Govt. Loans</b>						
	State Govt.(CRF)	0	15			0	0
	GoO Bonds	13.00%	400			0	0
	<b>Sub-Total</b>		<b>415</b>			<b>0</b>	<b>0</b>
<b>B</b>	<b>Institutional Loans</b>						
	Bank of India	9.33%(Avg.)	70.62	85.53	6.75	7.62	14.37
	REC Loan	12.02%(Avg.)	174.49		32.07	18.84	50.91
	PFC Loan	12.03%(Avg.)	37.75		6.74	4.23	10.97
	Union Bank of India	8.10%	38.11	85.53		7.04	7.04
	JICA	0.80%	168.32	310.00		15.80	1.11
	<b>Sub-Total</b>		<b>489.29</b>	<b>481.06</b>	<b>45.56</b>	<b>53.53</b>	<b>84.40</b>
<b>C</b>	<b>Grand Total</b>		<b>904.29</b>	<b>481.06</b>	<b>45.56</b>	<b>53.53</b>	<b>84.40</b>

234. The Commission in the last tariff order had allowed interest on loan availed from Bank of India, REC, PFC for capital works only up to 31.03.2017. Interest on the Government loans are not allowed as per earlier orders in the ARR. This year OPTCL has submitted (in Form F-3) that the anticipated receipt of loan during FY 2019-20 would be total to the tune of Rs.171.70 crore and during FY 2020-21 would be to the tune of Rs.481.06 cr. Such details are given in the above table.
235. The loan position submitted above by OPTCL was analysed on the basis of the audited accounts for FY 2018-19 available with the Commission.
236. The amount proposed to be availed during FY 2020-21 has not been considered for calculation of interest. OPTCL shall make effort to reduce interest cost through swapping of loan wherever possible.
237. Source wise break up on loan as on 31.03.2020 and 31.03.2021, average rate of interest on the above loan and the amount of interest determined and approved for 2020-21 is given in table below:

**Table-31**

**(Rs. Crore)**

Source	Average rate of interest (%)	Loan as on 31.03.2020	Anticipated Payment (FY 20-21)	Loan as on 31.03.2021	Average Loan amount	Interest amount
Bank of India	8.60%	70.62	6.75	63.87	67.25	5.78
REC	10.63%	174.49	32.07	142.42	158.46	16.84
PFC	10.63%	37.75	6.74	31.01	34.38	3.65
Total		282.86	45.56	237.3	260.08	26.28

The Commission allows Rs.26.28 crore towards interest on Loan for FY 2020-21.

#### **B. Interest on Working Capital**

OPTCL has not proposed any amount under the head interest on working capital.

#### **Depreciation**

238. OPTCL has estimated that the Gross Fixed Assets at the beginning of the FY 2020-21 at **Rs.6808.59cr.** (Rs.6025.08 cr. as on 01.04.19+Rs.783.51 cr. projected addition during FY 2019-20). For FY 2020-21, Depreciation is accordingly estimated as **Rs.207.02 cr.** which includes Rs.1.57 Cr. towards cost of premium/rent on leasehold land. The detailed

Statement of Fixed Assets and block-wise computation of depreciation as proposed is shown in the following table:

**Table-32**

<b>Transmission Assets</b>	<b>OERC Depreciation Rate as per Regulations, 2014</b>	<b>Gross Fixed Assets as on 01.04.2020</b>	<b>(Rs. Cr.)</b>	
			<b>Addition</b>	<b>Depreciation</b>
Free Hold Land		56.14	7.96	
Lease Hold Land		51.91	7.36	1.57
Buildings	3.34%	122.83	17.42	4.05
Electrical Installation		4.28	0.61	0.20
Plant and Machinery (Other Civil Work)	3.34%	36.08	5.12	1.13
Plant and Machinery	5.28%	3778.60	535.78	103.72
Plant and Machinery (By Beneficiary)	0.00%	180.95	174.50	
Plant and Machinery: (Lines, Cables & Network)	5.28%	2525.43	358.09	92.05
Vehicles	9.50%	2.77	0.39	0.14
Furniture, Fixture	6.33%	7.44	1.05	0.38
Office Equipment & Others	6.33%	41.77	5.92	3.78
Capital stores and spares		0.40	0.06	
<b>Grand Total</b>		<b>6808.59</b>	<b>1114.25</b>	<b>207.02</b>

239. OPTCL has proposed Rs.207.02 Cr towards depreciation for the FY 2020-21. 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-33****(Rs. Crore)**

<b>Transmission Assets</b>	<b>Assets as on 31.03.2016 as per audited report (up valued)</b>	<b>Assets as on 31.03.2016 as approved by commission (pre-upvalued)</b>	<b>Difference (Up valuation effect)</b>
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 (By Beneficiary)	193.28	-	193.28
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
<b>Total</b>	<b>4241.66</b>	<b>3513.80</b>	<b>727.86</b>

240. OPTCL was asked to submit the completed projects /works and amount of asset addition till date. It is submitted that actual expenditure on completed projects/works is Rs.377.49 Cr. till December, 2019. Accordingly, the Commission had approved the asset addition for the FY 2019-20. The depreciation is allowed as per the rate prescribed in the OERC Transmission Regulation 2014. A statement of Fixed Asset and block wise computation of depreciation allowed for FY 2020-21 given in the following table :

**Table-34****(Rs. Crore)**

<b>Transmission Assets</b>	<b>Deemed Cost as on 01.04.2019 (Audited)</b>	<b>Addition during FY 2019-20 (approved)</b>	<b>Cost as on 01.04.2020 (Approved)</b>	<b>Up valuation effect</b>	<b>Pre-upvalued value of assets as on 01.04.2020</b>	<b>OERC Depreciation Rate as per Regulations, 2014</b>	<b>Depreciation (Approved for the FY 2020-21)</b>
Free Hold Land	51.03	5.10	56.13	-	56.13	0.00%	0.00
Lease Hold Land	44.01	4.72	48.73	5.64	43.09	0.00%	0.00
Buildings	83.04	11.17	94.21	1.35	92.86	3.34%	3.10
Plant and Machinery (other civil works)	30.48	3.28	33.76	1.58	32.18	3.34%	1.07

Transmission Assets	Deemed Cost as on 01.04.2019 (Audited)	Addition during FY 2019-20 (approved)	Cost as on 01.04.2020 (Approved)	Up valuation effect	Pre-upvalued value of assets as on 01.04.2020	OERC Depreciation Rate as per Regulations, 2014	Depreciation (Approved for the FY 2020-21)
Plant and Machinery	2361.58	243.54	2605.12	70.87	2534.25	5.28%	133.81
Plant and Machinery (By Beneficiary)	184.28	180.95	365.23	193.28	171.95	0.00%	-
Plant and Machinery: (Lines, Cables and Network)	1348.19	149.60	1497.79	451.29	1046.5	5.28%	55.26
Vehicles	1.17	0.25	1.42	0.44	0.98	9.50%	0.09
Furniture, Fixture	5.32	0.68	6	1.20	4.8	6.33%	0.30
Office Equipment & Others	28.94	4.19	33.13	2.21	30.92	6.33%	1.96
Capital stores and spares	0.36	0.04	0.40	-	0.40	0.00%	-
Grand Total	4138.40	603.52	4741.92	727.86	4014.06		195.59

241. Accordingly, Commission approves an amount of Rs.195.59 crore towards depreciation for the FY 2020-21.

#### **Return on Equity**

242. OPTCL has proposed an amount of Rs.123.95 crore during FY 2020-21 as per clause 8.28 of Regulation, 2014 on equity share capital of Rs.799.70 crore @ 15.50%.

243. As per the Regulation 8.28 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. The amount of equity infused by State Govt. till the date of filing application amounts to Rs.799.70 crore. The sanction order and date of Govt. fund as filed by OPTCL is given in table below:

**Table-35**

<b>Sl. No.</b>	<b>Sanction Order No. and Date</b>	<b>Amount (Rs. cr.)</b>
1	1.R&R-I-01/2009-3560 dt.25.03.09	23.04
2	2.R&R-I-01/2009-2003 dt.24.02.09	0.01
3	3.R&R-I-01/2009-9464 dt.11.09.09	5.00
4	4.R&R-I-01/2009-4826 dt.01.06.10	20.00
5	5.R&R-I/73/2010-2438 dt.23.03.2011	51.95
6	6.R&R-6/12-685 dt.31.01.2012	1.00
7	7.R&R-6/12-690 dt.31.01.2012	39.00
8	8.R&R-6/12-695 dt.31.01.2012	3.00
9	9.R&R-6/12-629 dt.22.01.2013	25.76
10	10.R&R-6/12-634 dt.22.01.2013	16.60
11	11.R&R-6/12-624 dt.22.01.2013	7.64
12	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

<b>Sl. No.</b>	<b>Sanction Order No. and Date</b>	<b>Amount (Rs. cr.)</b>
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 dtd.19.12.2018	15.00
37	BT(P)-04/2018(pt)-10439/En dtd.19.12.2018	15.00
38	BT(P)-04/2018(pt)-10446/En dtd.19.12.2018	15.00
39	R&R -40/2019-5100/En dt.27.06.2019	3.67
40	R&R -40/2019-6530/En dt.06.08.2019	11.03
41	ENG-BUD-BUD-0009-2019/2703 dt.27.02.2020	55.00
	<b>Total</b>	<b>799.70</b>

244. The Commission allows return on equity at the rate of 15.50% on the equity value of Rs.799.70 crore amounting to Rs.123.95 crore. The Commission approves the same as a pass through in the ARR of 2020-21.
245. Further, OPTCL has proposed an amount of Rs.8.15 Crore towards income tax for 2020-21. The Commission allows the actual income tax expenses of Rs.0.13 crore booked in the audited accounts by OPTCL for FY 2018-19 as a pass through in the ARR of 2020-21.

**Other miscellaneous expenses**

246. **Grid Co-ordination Committee Expenses:** OPTCL proposed an amount of Rs.0.50 crore under the head GCC expenses for the FY 2020-21 against the Commission's approval of Rs.0.43 crore for FY 2019-20. The said expenditure for GCC is in general a part of A&G expenses. Therefore, the Commission allows an amount of Rs.0.50 crore towards GCC expenses for the year 2020-21 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**

247. OPTCL in its submission has proposed an incentive of Rs.9.92 crore to be passed on the ARR of FY 2020-21 as the system availability of OPTCL Transmission Network. The transmission system availability factor (TAFY) for FY 2018-19 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 checked & certified by SLDC.

248. 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 2018-19 and is expected to maintain NATAF more than 98.50% during FY 2019-20, pending verification, the Commission approves an amount of Rs.5.00 crore as an incentive in the ARR of OPTCL for FY 2020-21 with a rider that this incentive amount approved by the Commission should be spent in the Grid substations only where the EHT voltage is not within the allowable limits as per the standards specified by the Central Electricity Authority. The Commission desires that this incentive amount of Rs.5.00Cr. should be spent in such a way that its secondary side 33 KV supplies to DISCOMs should be within permissible range of 33 KV. OPTCL is directed to submit the breakup of the amount spent under this.

#### **Rebate**

249. 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 19.33 crore towards rebate for FY 2020-21. The Commission approves an amount of Rs.14.28 crore towards rebate as a pass through in the ARR.

#### **Miscellaneous Receipts**

250. OPTCL has proposed an amount of Rs.93 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-36**

<b>Source</b>	<b>Rs.Cr.</b>
Inter-State Wheeling	9.66
Short-Term Open Access& STU Charges	50.00
Bank Interest	16.00
Other Misc. Receipts	17.34
<b>Total</b>	<b>93.00</b>

The analysis of miscellaneous receipts was made by analysis of the audited balance sheet for FY 2017-18 and 2018-19. The following table represents such income from other receipts received by OPTCL for these two years:

**Table-37**

<b>Revenue from operations and other Income (Audited)</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>
Long-term Open Access Charges	631.71	643.90
Short-term Open Access Charges	33.70	47.00
Wheeling Charges	12.82	9.45
Supervision Charges	2.58	1.63
System Operation Charges	6.48	7.08
Market Operation Charges	1.62	1.77
Scheduling Charges	2.45	2.20
Registration Fees	0.02	0.01
Application Fee	0.92	0.80
Revenue from operations (A)	<b>692.30</b>	<b>713.84</b>
Interest from Bank deposits	34.58	26.61
Interest on loans to employees & suppliers	1.90	1.78
Interest from advances to suppliers	0.01	0.30
Interest on Income Tax refund	0.58	2.91
Deferred income for asset received from customer	66.49	54.88
Net gain/(loss) on disposal of property, plant etc.	6.77	14.86
Provision written back	12.86	22.05
Employee Trust provision withdrawn	7.95	0
Supervision charges of ODSSP Work	29.87	22.05
Other miscellaneous income	17.60	18.83
Total other Income(B)	<b>178.61</b>	<b>164.27</b>

251. The commission examined the other receipts earned by the OPTCL in the shape of 'Revenue from operations' and 'Other income'. Out of the various heads under which OPTCL earns other receipts the commission has excluded income from few heads while computation of miscellaneous income considered. 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. The Commission after computation of income from such heads arrived at the miscellaneous Income for the FY 2017-18 and 2018-19 which is shown in the following table:

**Table-38****( Rs. Cr)**

<b>Miscellaneous Income (Approved)</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>
Short-term Open Access Charges (considered separately)	-	-
Wheeling Charges	9.17	9.66
Supervision Charges	2.58	1.63
Interest from advances to suppliers	0.01	0.30
Interest from Bank deposits	34.58	26.61
Supervision charges of ODSSP Work	29.87	22.05
Net gain/(loss) on disposal of property, plant etc.	6.77	14.86
Other miscellaneous income	17.60	18.83
<b>Total other Income(B)</b>	<b>100.58</b>	<b>93.94</b>
<b>Average Receipts excluding STOA Charges</b>	<b>97.26</b>	

252. The average of receipts excluding STOA charges for FY 2017-18 and 2018-19 (as shown in the above table) is computed at Rs. 97.26 crore. The Commission is currently in the process of notifying new OERC Open Access Regulation where rationalisation of the LTOA and STOA charges to be paid by the Open Access customers is being envisaged. In view of such developments it is estimated that the receipts of STOA during the ensuing year 2020-21 would be substantially increased. The average receipts of STOA for last two years taken from audited account is Rs.40.35 Crs. After rationalisation of LTOA and STOA charges, the same would be Rs.161.40 Crs. Taking such aspect into account the Commission allows Rs.114.44 crore towards STOA charges to be received during 2020-21 in addition to other miscellaneous receivables of Rs. 97.26 as estimated in the above table. Any excess or shortfall of such receipts would be trued up subsequently. Therefore, the Commission allows total miscellaneous receipt of Rs. 211.70 cr for FY 2020-21.

### **Transmission Cost**

253. OPTCL in its ARR application has considered demand projection of all four DISCOMs including Railways totalling 28187 MU for FY 2020-21. It envisages 200 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 energy to be transmitted in OPTCL network for DISCOMs is reduced to 27987 MU. Further, OPTCL has proposed 610 MU towards wheeling to industries from CGP & direct sale to CGP by GRIDCO. The Commission scrutinized the proposal of OPTCL and the total energy to be transmitted in the OPTCL system is estimated at 28550 MU for FY 2020-21, the details of which are mentioned in the table below:

**Table-39**

<b>Details of Energy for Transmission</b>	<b>Proposed by OPTCL (MU)</b>	<b>Approved by OERC (MU)</b>
Total Demand of DISCOM	28187	28090
Less energy transmitted in 33KV & 11 KV network	200	200
Energy Transmitted for DISCOM	27987	27890
Wheeling to industries from CGPs	600	600
Sale to CGPs by GRIDCO	10	60
<b>Total</b>	<b>28597</b>	<b>28550</b>

254. The details of expenses proposed by OPTCL and approved by the Commission for FY 2020-21 towards transmission charges are depicted in table below:

**Table-40****ARR Proposed and Approved for OPTCL for 2020-21**

<b>ITEMS</b>	<b>Approved FY 2019- 20</b>	<b>Proposed FY 2020- 21</b>	<b>Approved FY 2020- 21</b>
Employees Cost including Terminal Benefits	419.77	466.22	415.87
R&M Cost	115.22	140.59	115.22
A&G Cost	27.55	28.66	28.72
Interest and financial charges	35.14	53.53	26.28
Depreciation	162.06	208.59	195.59
Return on Equity	106.18	123.95	123.95
Income Tax	3.01	8.15	0.13
Interest on Working Capital	-	-	-
<b>Sub-Total</b>	<b>868.93</b>	<b>1,029.69</b>	<b>905.76</b>
Special Appropriation			
Pass Through Expenses			
Contingency Reserve			
Other miscellaneous expenses (Aux.)	-		-
GCC Expenses , statutory levies & taxes	0.43	0.50	0.50
Incentive for system availability	5.00	9.92	5.00
Rebate	14.12	19.33	14.28
<b>Total</b>	<b>888.48</b>	<b>1,059.44</b>	<b>925.54</b>
Less Misc. Receipts	124.77	93.00	<b>211.70</b>
Less: Surplus True up	57.00		
Annual Revenue Requirement to be recovered from LTOA Consumers (i.e. DISCOMs & CGPs)	<b>706.71</b>	<b>966.44</b>	<b>713.84</b>
No. of Units to be handled	28,270.00	28,597.00	28,550.00
<b>Transmission Charges (Paise/Unit) (Rounded)</b>	<b>25.00</b>	<b>34.29</b>	<b>25.00</b>
Expected Revenue from LTOA Customers	706.75	714.93	713.75
Deficit	<b>0.04</b>	<b>(251.51)</b>	<b>(0.09)</b>

## **TARIFF DESIGN**

### **Transmission Tariff**

255. 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.

256. 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 25.00 paise 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. It will also be applicable for the purpose of transmission of energy from a CGP to its industries located at a separate place(s) within the State.
257. The Commission has notified the Intra-state Open Access Regulations, 2005 under Section 42 (2) of the Electricity Act, 2003. Consumers availing both long term & short term open access shall be required to pay the transmission charges for use of the Transmission Lines and Substations of OPTCL. The estimated energy for transmission in OPTCL's system is 28550 MU with an average demand of 3529 MW. The net transmission cost as indicated in the table above is Rs.713.84 crore. Accordingly, the LTOA charges work out to a rounded sum of Rs.6000.00/MW/day or Rs.250/MWh. The long term open access customer availing Open Access under relevant Regulations of OERC shall pay Rs.6000.00/MW/Day (Rs.250/MWh) towards transmission charges. STOA charges shall be as per the prevailing regulation of the Commission.

### **Transmission Loss for Wheeling**

258. OPTCL had proposed that out of the energy supplied to transmission licensee, 3.20% 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 2020-21.

### **Reactive Energy Charges:**

259. 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 2020-21.

260. In view of the above the Commission provisionally approves reactive energy charges @ 3 paise/KVArh for FY 2020-21. 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**

261. The Commission vide Para 372 & 373 in Transmission Tariff order 2010-11 had stated the principle to be followed for payment of Transmission Charges of OPTCL. The said principle followed for the past Financial Years for payment of monthly SLDC Charges to SLDC & Transmission Charge to OPTCL shall also be followed for the Year 2020-21.

#### **Rebate**

262. 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, a rebate of 1% shall be allowed.

#### **Late Payment Surcharge**

263. In case payment of bills by the licensees is delayed beyond a period of 30days 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.
264. The transmission tariff approved as above in respect of OPTCL will become effective from 01.05.2020 and shall continue to remain in force until further orders.
265. The application of OPTCL in Case No. 72 of 2019 is disposed of accordingly.

**Sd/-**

**(S. K. PARHI)**  
**MEMBER**

**Sd/-**

**(U. N. BEHERA)**  
**CHAIRPERSON**