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

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

CASE NO. 64 OF 2016

DATE OF HEARING : 07.02.2017
DATE OF ORDER : 23.03.2017

IN THE MATTER OF: **An application for approval of Aggregate Revenue Requirement and determination of Transmission Tariff for FY 2017-18 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 2017-18.**

AND
Case No. 10/2017

In the matter of: **An application for truing up of capital expenditure for the FY 2015-16 in compliance with the Regulation 7.1 of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014**

O R D E R

M/s. Odisha Power Transmission Corporation Limited, Bhubaneswar, (for short OPTCL) the present petitioner, which carries out Intra State transmission business in the State has been notified by Clause-10 of the Govt. Notification No.6892 dated. 09.06.2005 as the State Transmission Utility (STU) under Section 39(1) of the Act with effect from 01.04.2005. By virtue of the 2nd Proviso to S.14 of the Electricity Act, 2003 (hereinafter referred to as “the Act”) OPTCL has been a deemed Transmission Licensee under the Act. It is now governed by License Conditions set forth in OERC (Conduct of Business) Regulations, 2004, at Appendix 4B issued u/S.16 of the Act and as modified by Commission’s Order dated. 27th October 2006.

2. M/s OPTCL had submitted an application for its Aggregate Revenue Requirement (ARR) and determination of its Transmission Tariff for the FY 2017-18 on 30.11.2016. The said application observing due process was admitted for hearing as Case No.64 of 2016. In the consultative process, the Commission heard the applicant, objectors, Consumer Counsel, representative of the State Government along with the application for truing up of capital expenditure for the FY 2015-16 in Case No.10 of 2017 and orders as follows:

PROCEDURAL HISTORY (PARA 3 TO 10)

3. As per OERC (Conduct of Business) Regulations, 2004 and OERC (Terms and Conditions for Transmission Tariff) Regulations, 2014 (hereinafter called OERC Regulations, 2014) licensees/deemed licensees are required to file their Aggregate Revenue Requirement within 30th November in each year in the prescribed formats. OPTCL as a deemed licensee had submitted its ARR application for 2017-18 before the Commission on 30.11.2016. 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 language in one issue each of a daily English and Odia daily newspaper and in Odia language in one issue of daily Odia newspaper and also the matter was posted in the Commission's website in order to invite objections/views from the intending objectors. The Commission had also directed the applicant to file its rejoinder to the objections filed by the various objectors and to serve copy to them.

4. In compliance with the Commission's aforesaid order the OPTCL published the said public notice in the leading daily English and Odia newspaper in one issue each. The Commission issued individual notice to the applicant, objectors and to the Govt. of Odisha represented by Department of Energy to send their authorized representative to take part in the ensuing tariff proceedings.

5. 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.

   Shri G.N. Agrawal, Convenor-cum-Gen. Secy, Sambalpur District Consumers Federation, Balaji Mandir Bhawan, Khetrajpur, Sambalpur-768003,(2) M/s. Swain & Sons Power Tech Pvt. Ltd., Swati Villa, Surya Vihar, Link Road,Cuttack-753012, (3) Shri M. V. Rao, M/s. Ferro Alloys Corporation Limited, GD-2/10, Chandrasekharpur, Bhubaneswar-751023,(4) M/s. Adhunik Metaliks Limited, IPICOL House, 3rd Floor, Annexe Building, Janapath, Bhubaneswar-751022, (5) Shri Ananda Kumar Mohapatra, Power Analyst, S/o-Jachindranath Mohapatra, Plot No. L-II/68, SRIT Colony, Budharaja, Ps-Ainthapali, Dist-Sambalpur-768004,(6) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour, Plot No.302(B), Beherasahi, Nayapalli,Bhubaneswar-751012,(7) Shri Devashis Mahanti, President, North Odisha Chamber of Commerce and Industry (NOCCI), Ganeswarapur Industrial Estate, Januganj, Balasore-756019, (8) M/s. Visa Steel Limited, Kalinganagar Industrial Complex, At/Po. Jakhapura-755026, Dist-Jajpur, (9) M/s. Facor Power Limited, At/Po-Randia, Dist-Bhadrak-756135, (10) M/s. Grasim Industries Limited (Chemical Division Ganjam), Po-Jayashree-761025, Dist-Ganjam. All the above named objectors/their representatives along with the representative of Dept. of Energy, GoO were present during tariff hearing except objector No. 6 but the written submission filed by him was taken on record and also considered by the Commission.

6. The applicant submitted its reply to issues raised by the various objectors.

7. In exercise of the power under Section 94(3) of the Electricity Act, 2003 and to protect the interest of the consumers, the Commission appointed WISE, Pune as Consumer Counsel for objective analysis of the licensee's Aggregate Revenue Requirement and Determination of Transmission Tariff proposal for FY 2017-18. The Consumer Counsel presented his views in the hearing.

8. The date for hearing was fixed as 07.02.2017 at 11.30 AM and it was duly notified in the leading newspaper mentioning the list of the objectors. The Commission also issued individual notice to the applicant, objectors and the Government of Odisha through Department of Energy informing them about the date time of hearing and requesting to send the Government's authorized representative to take part in the proceeding.

9. In its consultative process, the Commission conducted a public hearing at its premises on 07.02.2017 and heard the Applicant, Objectors, Consumer Counsel and the Representative of the Dept. of Energy, Government of Odisha along with the application for truing up of capital expenditure for the FY 2015-16 in Case No.10 of 2017 at length.

10. The Commission convened the State Advisory Committee (SAC) meeting on 20.02.2017 at 3.30 PM at its premises to discuss about the Aggregate Revenue Requirement applications and tariff proposals of licensees for FY 2017-18. The Members of SAC, Special Invitees, the Representative of DoE, Govt. of Odisha actively participated in the discussion and offered their valuable suggestions and views on the matter for consideration of the Commission.

OPTCL's ARR & TARIFF PROPOSAL FOR FY 2017-18 (PARA 11 TO 45)

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 30th 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 2017-18 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 is one 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 are treated to be the long term customers of OPTCL.

East Coast Railway (ECoR) has 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 has filed an petition before the Hon'ble Commission on 26.10.2016 in the above matter. Therefore, OPTCL in the present ARR application for FY 2017-18 has projected the demand of ECoR separately as furnished by each DISCOM as one LTOA Customer, subject to approval of the Commission.

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 provision to apply again on expiry of the term.

Formulation and Computation of Transmission Charges:

13. OPTCL has formulated its present ARR & Transmission Tariff application for FY 2017-18 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

Costs from (a) to (d) above are considered as fixed cost. The Commission also acknowledges incentive for System Availability as other costs.

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 Spares (R&M Expenses), GCC and CSR expenses, OPTCL has proposed sum of Rs. 648.65 Cr. under the head of O&M expenses for FY 2017-18.

Salaries, Wages, Pension Contribution and Other Employee Costs

15. OPTCL Submitted that, presently (as on 28.10.2016) the Men in Position (MIP) of OPTCL is 3226 against sanctioned strength of 4929 (Executive-1847 + Non-

Executive 3082). A significant number of posts are lying vacant in different ranks affecting organizational performance. Therefore, it plans to fill up the vacancies in a phased manner and accordingly the recruitment process has been initiated.

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 etc.

17. OPTCL has proposed Rs. 462.33 Cr towards Employee Cost, Terminal Benefits and possible impact of 7th Pay Commission including arrear for FY 2017-18. The details are given below:

Table -1
Employee Cost Proposed by OPTCL for FY 2017-18

Particulars	Rs. Crore
Salary and Allowance, Bonus, Stipend and Arrear Salary (7th Pay Commission Impact)	256.98
Additional Employee Cost , Arrear Salary (up gradation impact) , Outsourced Engagements	7.44
Other Employee Cost, Medical Expenses, LTC etc	19.75
Terminal Benefits, Arrear Pension (7th Pay Commission Impact)	188.03
Less : Employee Cost Capitalized	9.87
Net Employee Cost	**462.33**

Administrative and General (A&G) Expenses

18. OPTCL has proposed Rs. 26.11 Cr towards A&G Expenses for FY 2017-18. 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 2017-18 is Rs.155.11 Cr , as shown in the Table below:

Table 2
Repairs and Maintenance Expenses for FY 2017-18 (Rs.Cr)

Particulars	OERC Approval (FY 2015-16)	OERC Approval (FY 2016-17)	Projection (FY 2017-18)
(i) O&M	108.00	110.59	138.04
(ii) Telecom			2.06

Particulars	OERC Approval (FY 2015-16)	OERC Approval (FY 2016-17)	Projection (FY 2017-18)
(iii) Civil Works			11.46
(iv) Information Technology and Other			3.55
Total R&M Expenses			**155.11**

R&M Expenses Related to O&M

20. As on 01.04.2016 OPTCL owns 125 nos. grid sub-stations of different voltages and EHT transmission lines of 12,835,463 ckt kms, as shown in table below:

Table - 3
Substation and Line Details

Sub-Station and Line Details		
400/220kV S/S	1	
400/220/132/33kV S/S	2	
220/132/33kV S/S	17	
220/33kV S/S	5	
220/132kV S/S	1	
132kV Sw.Stn.	20	
132/33kV S/S	76	
132/33/25kV S/S	1	
132/33/11kV S/S	2	
Total No. of Sub-Stations	**125**	
Voltage Level	**Lines (ckt. km.)**	**Bays**
400kV	1129.434	35
220kV	5877.734	272
132kV	5828.295	786
33kV		917
25kV		2
11kV		18
Total	**12,835.463**	**2030**

Expenses related to auxiliary energy consumption in the sub-stations

21. The auxiliary energy consumption in the sub-stations for the FY 2014-15, FY 2015-16 and FY 2016-17 (up to Sept-16) is 10.75MU, 12.19 MU and 5.10 MU respectively. It is estimated that the auxiliary energy consumption for the FY 2017-18 will be about 13 MU. OPTCL proposes **Rs. 3.55 Cr** towards auxiliary energy consumption in the sub-stations.

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

22. **Grid Coordination Committee (GCC) Expenses:** Under (GCC) expenses, OPTCL proposes of Rs. 0.97 Cr towards annual GCC Expenses for FY 2017-18 in line with the said provisions.

23. **Corporate Social Responsibility (CSR):** Under this head, OPTCL proposes of Rs.0.59 Cr for FY 2017-18 considering 2% of the average profit of about Rs. 29.29 Cr during last 3 years which is included in miscellaneous expenditure under A&G expenses in 2017-18.

Interest and Financial Charges

Interest on Loan

24. OPTCL in its ARR application has proposed Rs.87.95 Cr as interest on loan for FY 2017-18.

Interest on Working Capital

25. OPTCL has estimated Rs.238.32 crore towards Working Capital requirement for FY 2017-18. Considering rate of interest @ 12.30% per annum, OPTCL estimated interest on working capital of Rs.29.31 Crore and claimed 50% of of the same i.e. Rs.14.66 Cr in the ARR of FY 2017-18.

Rebate

26. OPTCL has proposed 2% rebate amounting to Rs.20.27 Cr. calculated on the basis of the projected ARR for the FY 2017-18.

Depreciation

27. OPTCL Submitted that, the book value of the assets at the beginning of the FY 2017-18 is estimated as Rs.5597.60 Cr. (Rs.4242.07 Cr. as on 01.04.16 + Rs.1355.53 Cr.: projected addition during FY 2016-17). For 2017-18, Depreciation is estimated as Rs.192.59 Cr. which includes Rs.0.66 Cr. towards cost of premium/rent on leasehold land. OPTCL prays the Commission to allow Rs. 192.59 Cr towards depreciation in the ARR of FY 2017-18 in order to enable OPTCL to repay the loan availed for CAPEX in time.

Return on Equity

28. 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. 410.07 Cr as on 31.03.2016 as per the Provisional Account. Government of Odisha has committed to provide funds of Rs. 300 Cr. as equity over the five year period FY 2011-16 i.e. Rs. 60 Cr. annually. Till date OPTCL has received Rs. 400.00Cr. Accordingly, OPTCL proposes Return on Equity (RoE) of Rs. 62.00 Cr. during FY 2017-18 @ 15.5% on Rs. 400.00 Cr. (Rs. 460.07 Cr - Rs. 60.07 Cr) i.e. on opening balance of FY 2017-18.

Income tax

29. As per the Regulation 8.43 of OERC Regulations, 2014, Income tax of the Transmission Licensee shall be recovered from the beneficiaries. The Hon'ble Commission in the ARR of 2016-17, vide para 239, has allowed the actual tax expenses Rs.7.79 Cr. booked in the audited accounts for FY 2014-15 which is also claimed by OPTCL in the ARR. It is submitted that OPTCL has projected Rs. 8.15 Cr. for the FY 2015-16 towards Income Tax under section 115JB of Income Tax Act, 1961. For the FY 2017-18 same amount of Rs. 8.15 Cr is projected to be considered in the ARR.

Other Costs & Receipts

Incentive for system availability:

30. 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 2015-16 as 99.96%. 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. 9.35 Cr. towards system availability for the year 2015-16 using approved ARR figure of Rs. 630.94 Cr. for the said year. Hence, OPTCL proposes Rs. 9.35 Cr towards Incentive for System Availability to be allowed in the ARR for FY 2017-18.

Miscellaneous receipt:

31. OPTCL submitted that during 1st six months of FY 2016-17, miscellaneous receipt from different sources is about Rs. 14.83 Cr. In line with the trend of revenue earning during FY 2016-17, OPTCL expects the miscellaneous receipt of Rs. 30.00 Cr during FY 2017-18.

Summary of ARR proposed by OPTCL for FY 2017-18

32. Considering all the proposed expenses and receipts as explained in foregoing paragraphs, OPTCL has filed its Aggregate Revenue Requirement of **Rs.1034.28 Cr** for FY 2017-18 for approval of the Commission. Details are shown in the table below:

Table - 4
Summary of Aggregate Revenue Requirement of OPTCL for FY 2017-18

ITEMS	Amount (Rs.Crore)	
A) FIXED COST		
1. O&M Expenses		**648.65**
(i) Employees Cost including Terminal Benefits	462.33	
(ii) A&G Cost	26.11	
(iii) R&M Cost	155.11	
(iv) Expenses related to auxiliary energy consumption	3.55	
(v)Other misc. expenses, statutory levies and taxes (GCC+ CSR)	1.56	
2. Interest & Financial Charges		**122.88**
(i)Interest on Loan Capital	87.95	
(ii) Interest on Working Capital	14.66	
(iii) Rebate	20.27	
3. Depreciation		**192.59**
4. Return on Equity		**62.00**
5. Income Tax		**8.15**
Sub-Total (A)		**1034.28**
B) Others		
Incentive for system availability		9.35
Total Trans. Cost (A+B)		**1043.63**
C) Less: **Misc. Receipts**		**30.00**
D)ARR to be recovered from LTOA Customers i.e. **OPTCL's Aggregate Revenue Requirement**		**1013.63**

Transmission loss

33. OPTCL submitted that, the actual transmission loss in the transmission system was 3.58% during the period from April'16 to September'16 as against Commission's

approval of 3.70% for FY 2016-17. OPTCL expects the loss level to remain around 3.60% in the current year. The Commission at Para 27 (page 11) of the revised Business Plan order dated 30.07.2016 (Case No. 05/2016) has approved transmission loss of 3.50% for FY 2017-18. Accordingly, OPTCL proposes 3.50% transmission loss during FY 2017-18.

OPTCL revenue receipt and deficit in the proposed ARR for FY 2017-18

34. OPTCL has proposed to transmit 25877 MU power to all four DISCOMs plus Railways during FY 2017-18. OPTCL envisages 150 MU of energy to be transacted in DISCOMs 33kV & 11 kV 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 25727 MU (25877-150) from the total demand projection of DISCOMs and Railways. The revenue to be earned by OPTCL from wheeling of 26282 MU (25727 MU of DISCOMs and Railways + 550 MU of wheeling surplus power of LTOA consumers like IMFA & NALCO + 5 MU for supply of emergency and backup power to LTOA like IMFA & NALCO) at the existing transmission tariff of 25 P/U will be Rs.657.05 Crore. Accordingly, there will be a revenue deficit of Rs.356.58 crore (Rs. 1013.63 Cr.-Rs. 657.05Cr.) for OPTCL for FY 2017-18 at the existing transmission tariff of 25 P/U.

Proposal for revision of Transmission Tariff/ Wheeling Charges

35. OPTCL submitted that as the same cannot be met from the existing transmission tariff of 25 P/U; Therefore OPTCL has requested to the Commission for approval of :

1. Aggregate Revenue Requirement of Rs.1013.63 Cr.
2. Recovery of Transmission Charge @ 38.57 P/U.
3. Transmission Loss for wheeling as 3.50% 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 2017-18 as shown in table below.

Table 5
Open Access Charges Proposed by OPTCL for FY 2017-18

DETAILS	Rs. Per Unit
Net Aggregate Revenue Requirement (Rs. Cr.)	1013.63

Proposed Energy to be transmitted in OPTCL Network (MU)	26282
Proposed Transmission Tariff (P/U)	38.57
Power Flow (Equivalent of 26282MU) in MWs	3000
Long term Open Access Charges in terms of Rs./MW/Day	9256
Short term Open Access Charges in terms of Rs./MW/Day	2314

Reactive energy charges

37. OPTCL is in the process of finalization of application for determination of Reactive Energy Charges for FY 2016-17 and the same will be filed before the Hon'ble Commission very shortly. The charges have been worked out as 3 paise/KVARh based on the investment of Rs. 8.9224 Cr. made by OPTCL for procurement and installation of 275 MVAR Capacitor Banks at 20 grid sub-stations (commissioned at 18 S/S and to be commissioned by Dec-2016 at balance 2 S/S). Since during FY 2017-18, there is no plan to install Capacitor Banks at any other grid S/S, OPTCL proposes that 3 paise/kVARh may be approved provisionally as Reactive Energy Charges FY 2017-18.

Rebate

38. 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

39. 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

40. 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.

Additional Submissions by OPTCL

Equating LTOA and STOA charges and introduction of MTOA regime:

41. As per existing OERC Regulations, STOA customers are liable to pay 25% of the long term transmission charge. Hon'ble Commission may kindly consider to equate long term and short term rates to enable OPTCL to earn more revenue which would be accounted for under Miscellaneous Receipt so as to relieve the long term open access customers resulting downward effect on Retail Supply Tariff. Further, in line with CERC regulations MTOA regime may be introduced in Odisha to have compatibility in inter-state and intra-state Open Access Regulations**.**

Additional Charges from ECoR:

42. Energy meter data from the power drawal points have to be collected on weekly basis by deploying additional manpower. Hence, OPTCL proposes to collect 10 P/U for the said purpose. Besides drawing unbalanced power, drawal of ECoR will also generate harmonics which shall be absorbed by the OPTCL system. Hence, OPTCL proposes to collect 15 P/U towards compensation.

Hon'ble Commission may approve the proposed charges in the present transmission tariff application to be additionally collected from Railways in FY 2017-18

Introduction of Reliability Support Charge for Connectivity

43. Presently 39 nos. CGPs with total installed capacity of 9460MW are connected to OPTCL system. They are availing start-up/emergency power and accordingly pay the monthly charges as approved by the Hon'ble Commission. But they do not pay any amount to OPTCL availing reliability support of the grid.

In this regard, OPTCL proposes Rs. 1 lakh/MW/annum to be levied on the installed capacity of the CGP for 10 years. The amount so collected from CGPs would be utilised for upstream EHT system upgradation with a view to provide and sustain most reliable services to the CGPs. The expected revenue earning under this head would be about Rs.95 Crore and this amount would cross subsidize the long-term users of the transmission system.

Steps taken by OPTCL to reduce interruption

44. The following actions have been taken by OPTCL to reduce interruption and improve system loss.

- Predictive maintenance of sub-station & line equipment using diagnostic testing kits.
- Thermo-vision scanning of lines and subsequent remedial measures.
- Provision of double jumpers at tension locations of lines.
- Replacement of disc insulators with long rod insulators in saline prone areas.
- Improvement of earthing system for lines.
- Replacement of old conductors of some identified lines is in progress such as 220 KV TTPS-Joda Ckt-I, 220 KV Meramundali-Bhanjanagar Ckt-I, 132 KV Bhadrak-Jajpur Road, 132 KV Burla PH-Sambalpur, 132 KV TTPS-Duburi Ckt-II, 132 KV Khurda-Puri, 132 KV Berhampur-Digapahandi, 132 KV Kendrapada-Paradeep DC.
- Further reconductoring of the identified lines to be started after the monsoon. The lines are 132 KV Chainpal-Choudwar Ckt-I, 132 KV Digapahnadi-Mohana, 132 KV Budhipadar-Rajgangpur, 132 KV Burla-Budhipadar Ckt-I, 220 KV TTPS-Joda Ckt-II, 220 KV Meramundali-Bhanjanagar Ckt-II and 132 KV TTPS-Duburi Ckt-I.
- For quick restoration of power supply, OPTCL has deployed emergency restoration gangs at strategic locations to attend breakdown with minimum time delay. Further, adequate stock of ERS Towers has been maintained for use during contingent situation arising out of tower failures.
- Tangible steps have been taken by OPTCL to address issue of congestion in critically loaded lines. These are enumerated below :
  - ✓ Loading constraints on 132 KV Chandaka-Mancheswar and Chandaka-Ransinghpur lines have been solved by conversion of ACSR conductors to HTLS conductors.
  - ✓ In order to increase power transfer capacity of identified lines, it has been planned to replace the existing line conductor with HTLS. Those lines are 132 KV Mendhasal-Khurda, 132 KV Joda-Barbil, 132 KV Ransinghpur-Badagada, 132 KV BadagadaNimapada and 132 KV Nimapada-Chandaka.

- ✓ OPTCL has awarded contracts for up-rating of conductors from ACSR to HTLS of 132 KV Joda-Barbil and 132 KV Mendhasal-Khurda Lines.
- ✓ Work is in progress for conversion of SC lines DC lines in respect of 132 KV Akhusingh-Paralakhemundi, 132 KV New Bolangir-Patnagarh, 132 KV New Bolangir-Sonepur, 132 KV Jajpur Road-Anandpur, 132 KV Paradeep-Jagatsinghpur which would further improve the loading capacity.
- ✓ 400 KV Meramundali-Vendanta DC line has been commissioned.
- ✓ 400 KV Meramundali-New Duburi DC line has been commissioned.
- ✓ 220 KV Atri-Samangara(Puri) line has been commissioned and LILO of 220 KV Atri-Samangara (Puri) line at Pandiabil is in progress.
- ✓ Besides above, a number of schemes like “Conversion of Radial to Ring System”, “Conversion of S/C lines to D/C”, “Up-rating of Conductors” etc. have been planned by OPTCL for enhancement of capacity as well as reliability of the transmission system.

CAPEX for New Projects

45. In addition to this petition for approval of ARR, OPTCL has proposed to spend Rs.1144.01 crore towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works during FY 2017-18. The detail proposal of OPTCL for CAPEX are shown in **Annexure-I.**

VIEWS OF CONSUMER COUNSEL, ON TRANSMISSION TARIFF PROPOSAL OF OPTCL FOR 2017-18 (PARA 46 TO 50)

46. 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 2017-18. World Institute of Sustainable Energy (WISE), Pune appointed as Consumer Counsel put up queries and objections regarding ARR and tariff filing of OPTCL. The objectors also placed their views before the Commission.

Analysis of the Proposal by Consumer Counsel

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

Annual Revenue Requirement

48. OPTCL has projected its revenue requirement for FY 2017-18 at about 62.64% more than that approved for FY 2016-17. In FY 2016-17, the total ARR was reduced by 1.22% from approved ARR for FY 2015-16.

49. It includes the increase in Employee Cost (58.03%) R&M Cost (40.26%), A&G cost (5.88%), interest on loan capital (48.97%), depreciation (89.84%) and incentive (87.00%). The comparative figures of components of ARR are given in the table below.

Table 6
Comparative Annual Revenue Requirement of OPTCL (Rs. Crore)

ITEMS	Approved for FY 2015-16	Approved for FY 2016-17	Proposal for FY 2017-18	FY 2016-17 vs FY 2015-16	FY 2017-18 vs FY 2016-17
Employees Cost incl. Terminal Benefits	305.23	292.55	462.33	-4.15%	58.03%
A&G Cost	24.37	24.66	26.11	1.19%	5.88%
R&M Cost	108	110.59	155.11	2.40%	40.26%
Expenses related to auxiliary energy consumption	0	0	3.55		
Other misc. expenses, statutory levies and taxes (GCC+ CSR)	1.22	0.98	1.56	-19.67%	59.18%
Interest on Loan Capital	40.93	59.04	87.95	44.25%	48.97%
Interest on Working Capital	0	0	14.66		
Rebate	12.61	12.5	20.27	-0.87%	62.16%
Depreciation	107.48	101.45	192.59	-5.61%	89.84%
Return on Equity Including Income Tax	52.1	62.03	70.15	19.06%	13.09%
Incentive for system availability	5	5	9.35	0.00%	87.00%
Total	**656.94**	**668.8**	**1043.63**	**1.81%**	**56.05%**
Less Misc. Receipts	26	45.55	30	75.19%	-34.14%
ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement	**630.94**	**623.25**	**1013.63**	**-1.22%**	**62.64%**
Transmission Charges (P/U)	25	25	38.57	0.00%	54.28%

50. 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, A&G expenses, Interest on new loan to be disbursed to OPTCL and old state govt. Loans, depreciation, RoE and Interest on working capital.

VIEWS OF OBJECTORS ON TRANSMISSION TARIFF APPLICATION OF OPTCL FOR FY 2017-18 (PARA 51 TO 88)

Transmission Loss

51. 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.

52. 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 to be adopted as 3%, the objectors added.

53. As the load growth in last few years has not been substantial and number of 132kV, 220 kV lines have been commissioned; OPTCL should have achieved transmission losses of 2.5% by now. Hence it is requested not to allow transmission losses more than 2.5% at least from this year onwards.

54. One of the objectors submitted that OPTCL is not planning for strengthening the transmission system to reduce the losses. The Commission may direct a proper study, through independent agency to determine actual transmission loss.

55. One objector submits that the Commission may allow transmission loss @1.50% (national level of transmission loss as done by PGCIL).

Human Resource Expenses/ Employee Cost

56. Objectors proposed that OPTCL may submit the audited balance sheet, P/L Statement and along with auditor report for FY 2015-16. Till then the commission may consider manpower cost as adopted in FY 2016-17 and approve for FY 2017-18. Hence Employee Cost for FY 2017-18 may be approved at Rs. 292.55 Crore.

57. Another objector submitted that the Commission may direct OPTCL to submit an action plan for recruiting the sanctioned strength and filling up the Director level posts.

58. They added that, while performance of OPTCL is poor because of inefficiency, it is not wise to go for new recruitments and hence proposal to add new manpower as well as expenditure on account of 7th pay commission may be rejected.

A&G expenses

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

60. Another submitted that WPI index for electricity fell by 2 i.e. 1.15% from its base value at FY 2015-16. Hence the Commission may allow only 1.15% reduction and A&G expenses may be approved at Rs. 24.38 Crore.

Interest on loan capital

61. Out of projected interest on loan capital, State Govt. loan (Rs.0.26 crore) and Govt. of Odisha Bond (Rs.26 crore) may not be considered for interest on loan as per earlier tariff orders. Interest on new loan, during 2017-18, it anticipated may be trued up as per audited accounts pertaining to that period. The Commission may approve to the extent of Rs. 58.04 Crore towards Interest on Loan Capital.

62. One of the objectors submitted that 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 swap loans to lower interest rates.

Depreciation

63. The huge increase in depreciation is due to artificial increase in capital base which is based on proposed expenditure to be made during year 2017-18. Objectors requested not to allow any capitalization unless the work is completed and commissioning has been declared.

64. One objector submitted that no depreciation should be calculated on the projected cost of Rs. 1419.08 Crore to be spent in FY 2017-18. Depreciation may be approved below Rs.107.48 crore i.e. at Rs. 90 Crore for FY 2017-18.

R&M expenses

65. 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. R&M expenses may be approved at Rs. 55.29 Crore or below against proposed Rs. 155.11 Crore.

66. 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.

67. 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

68. OPTCL has to produce why funds allotted for O&M are not fully utilized.

Return on Equity

69. At present only Rs. 350 Crore equity has been received by OPTCL from state government till date. Hence, RoE to be calculated on Rs.350 Crore @15.5% and accordingly may be approved at Rs. 54.25 Crore for FY 2017-18.

Interest on working capital

70. Transmission charges is the first charge being recovered from monthly BSP bill of DOSCOMs. There is no need for working capital as OPTCL has surplus fund available with it. So, interest on working capital may be disallowed.

Incentive for System Availability

71. 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, this revenue is not required by OPTCL and hence may not be approved.

Misc receipt

72. Actual revenue earned from wheeling, STOA, STU charges is much lower than approved in 2015-16. OPTCL is requested to submit the details of further scrutiny and prudence check. Also OPTCL is requested to submit detail note on various projects implemented by its PMU, supervision charges (6%) payable by government and actual received.

73. One objector submits that; the commission may calculate ‘Misc. Receipts’ on higher side (@ Rs. 60 Crore) and pass the same for FY 2017-18.

Annual Revenue Requirement and Transmission Charges

74. One objector submitted that ARR for FY 2017-18 may be approved at Rs 514.51 crore against proposed Rs. 1013.63 Crore. The proposed tariff is very high and will adversely affect the RST resulting in huge burden on consumers. Considering energy to be handled as 30177 MU as approved by OERC in case of LTDF for the period FY 2015-16 to FY 2023-24 the transmission charges would be 17.05 P/U.

75. The Commission may critically examine the proposal of OPTCL and reduce Transmission Charges to 23 P/U for FY 2017-18. R&M expenses should be considered after verifying actual expenses till end of 3rd quarter of FY 2016-17.

76. Another submission was that the Commission may allow the transmission charges of 20 P/U for FY 2017-18.

Open access charges

77. 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.

78. OPTCL’s proposal to equate STOA and LTOA charges contravenes the Open Access regulations. 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.

79. One objector submits that SLDC is making reference to OPTCL, before permitting Open Access leading to considerable delay.

Reliability Support Charge for Connectivity

80. One objector submitted that there is no such provision in the Transmission Tariff Regulation and against the spirit of The Electricity Act 2003; hence the proposal should be rejected.

Other Issues

81. Sum Objectors submitted that, application submitted by OPTCL are supported by falsified facts/figures/data.

82. 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.

83. OPTCL should try to harness state's share power (50%) from Machhkund Hydro Electric Project.

84. The Commission may also crosscheck the annual rate of failure and burnt of DTRs and initiate proper investigation about purchase of substandard DTRs as deemed fit.

85. 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 2016-17. All lines and substations are well equipped to give quality power supply and evacuate all the state quota from IPPs and CGPs during FY 2017-18.

86. OPTCL has to produce details of S/s already being constructed and connected to the grid for better voltage. S/s and lines have not yet replaced since 10 years, expenditure on above under different schemes and overloaded lines and S/s. 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

87. OPTCL has to produce the status report about the joint venture companies formed by OPTCL to evacuate power inside the State of Odisha.

88. Unless sufficient reason exist, the inflation in cost due to delay should not be allowed.

REJOINDER BY OPTCL TO THE QUERY OF OBJECTORS (PARA 89 TO 148)

89. In response to the views of objectors on the ARR and Tariff Application of OPTCL for 2017-18, OPTCL had filed rejoinders for the same. The response of OPTCL has been broadly classified into the following issues.

Transmission Loss

90. The Table below indicates the transmission loss approved by the Commission for the last 9 years vis-à-vis actual transmission loss occurred in OPTCL's EHT network is given in the table below.

Table - 7
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%

91. The detailed calculation of Transmission Loss of 3.67% for 2015-16 and 3.58% for the period April to September'16 (1^{st} 6 months of FY 2016-17) in OERC approved format T-6 have been enclosed with the ARR application at pages 125-126 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 3.50% for the ensuing year 2017-18.

92. The transmission loss is purely a technical loss and is a function of real time injection of power by a number of generators, system configuration and power flow requirements at different load centres. 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 Regional 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 DDUGJY, BGJY, BSVY, 24x7 Power For All etc. in Odisha, there will be increased flow of power in the OPTCL transmission network contributing to increased transmission loss.

93. Over the years OPTCL has been continuously undertaking construction of new lines & sub-stations, up-gradation of capacity of the existing system, installation of capacitor banks for strengthening of the transmission infrastructure with an objective

of meeting the future demand, reliability as well as quality of power supply and reduction of transmission loss. As a result, the transmission loss is gradually reducing over the years as evident from the data on transmission loss shown in the above Table.

94. OPTCL would like to further submit that the transmission loss in OPTCL system is one of the lowest in the country compared to other transmission utilities.

95. The Commission at Para 27 (page 11) of the revised Business Plan order dated 30.07.2016 (Case No. 05/2016) has approved transmission loss of 3.50% for FY 2017-18. In view of the reducing trend of transmission loss level, OPTCL expects the loss level to remain around 3.60% in the current year. Accordingly, OPTCL proposes **3.50%** transmission loss during FY 2017-18.Hence, OPTCL does not agree with the suggestion of the Objector to approve transmission loss of 3% or lesser.

Steps taken for Energy Audit

96. OPTCL have already installed 580 nos., 0.2s accuracy class, ABT Compliant Energy Meters at identified points to meet the requirement for Energy Auditing as well as Billing. Monthly data enables OPTCL for assessing the individual transmission element wise losses (i.e. across Power Tfr., Auto Tfr. & EHT lines etc.) and accordingly remedial action is taken. However, discrepancies in respect of Metering Convention & Accuracy Class of Instrument Transformers have been identified at certain locations and are being sorted out.

Conversion of SC lines to DC lines

97. OPTCL acknowledges the suggestions of the Objector to convert all SC lines to DC lines. OPTCL has already taken up said initiative and work in respect of the following 6 nos. 132kV SC lines will be completed during 2016-17.

1. 132kV Jajpur Road-Anandpur
2. 132kV New Bolangir-Patnagarh
3. 132kV New Bolangir-Sonepur
4. 132kV Akhusingh-Paralakhemundi
5. 132kV Paradeep- Jagatsinghpur
6. 132kV Jayanagar-Sunabeda

98. Complying N-1 Contingency: Considering overloading of transformers in certain sub-stations like Nayagarh & Sundargarh, augmentation of transformer capacity has already been done. Capacity upgradation of Phulnakhara, Jajpur Road and Purusottampur sub-stations will be done in FY 2016-17 through transformer upgradation or additional transformer installation in order to comply with n-1 contingency in the system

Human Resource Expenses/ Employee Cost

99. OPTCL has projected Rs. 462.33 Cr. towards Employee Cost in the ARR application which is based on actual cost incurred in FY 2015-16 &FY 2016-17, facts and evidential documents. Besides, impact of 7th Pay Commission w.e.f.01.01.2016 is also considered while estimating the projection for FY 2017-18.

100. The recruitment plan of OPTCL upto 2018 has been approved by Govt. of Odisha. However, OPTCL has phased the recruitment and planned to fill the vacancies. The recruitment status of OPTCL in 2016-17 is given in the table below:

Table 8
Recruitment Status of OPTCL in FY 2016-17

<table>
<tr><th>Designation</th><th>No. of Posts to be filled up</th><th>Posts filled up</th></tr>
<tr><td>Office Assistant Grade-III</td><td>100</td><td>100</td></tr>
<tr><td>MT-Electrical</td><td>100</td><td rowspan="6">Computer based Test (CBT)scheduled to be held on 5thMarch 2017</td></tr>
<tr><td>MT-HRD</td><td>14</td></tr>
<tr><td>MT-IT</td><td>7</td></tr>
<tr><td>MT-CIVIL</td><td>4</td></tr>
<tr><td>JR-MT-IT</td><td>3</td></tr>
<tr><td>JR-MT-CIVIL</td><td>2</td></tr>
<tr><td>TOTAL</td><td>230</td><td></td></tr>
<tr><td>JMOT</td><td colspan="2">150 (to be advertised in March-2017)</td></tr>
</table>

The tentative recruitment plan of OPTCL for 2017-18 is submitted as per the details given in the table below.

Table - 9
Tentative Recruitment Plan FY 2017-18

Sl. No.	Designation	No of posts to be filled up
1	Assistant Manager	100
2	Office assistant	40

101. However, the recruitment will be done as per the actual requirement and in a phased manner both in Executive and Non-Executive category.

102. As regards to filing up the vacant Director Posts, the Department of PE, Govt. of Odisha has already advertised on 27.12.2016 for selection to the posts of Director(Project) & Director(Operation) in OPTCL.

103. OPTCL has already submitted the Audited Annual Accounts for FY 2015-16 along with the Statutory Auditors Report to the Hon'ble Commission vide letter No 449(5) dated24.12.2016.

104. In view of the above, OPTCL does not agree with the projection of Rs.292.55 Cr. made by the Objector due to non-availability of Audited Accounts of OPTCL for FY 2015-16.

A & G Expenses

105. The actual expenditure as per audited accounts is always higher than the OERC approved figures. The table, give below, indicates the A&G expenses for the last 6 years.

Table - 10
A & G Expenses (Rs. Crore)

Year	OERC Approval (Rs. Cr.)	Actual (Audited) (Rs. Cr.)
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

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 2015-16, the details of A&G expenses are as under:

Table - 11
Details of A&G Expenses (Audited Accounts FY 2015-16)

Sl. No.	A&G & Other Expenses	Rs. Cr.
1	Loss on theft material	2.03
2	Insurance	0.02
3	Rates & taxes	0.16

Sl. No.	A&G & Other Expenses	Rs. Cr.
4	Legal & Professional Fees	2.29
5	Office Maintenance	0.90
6	Telephone & Internet Charges	0.77
7	Traveling Expenses	2.72
8	Rent	1.95
9	Watch & Word Expenses	2.13
10	License & related fees	1.51
11	Power & Fuel	1.47
12	Hire charges on vehicles	6.51
13	Audit Fee	0.09
14	Other professional charges	0.49
15	Miscellaneous Expense	4.61
16	Fees and Subscriptions	0.41
17	Advertisement for Tenders etc.	0.24
18	Provision for bad & doubtful debts	0.00
19	Corporate Social Responsibility Expenditure	1.22
20	Provision against Expenditure on Project	10.30
Total		**39.82**

109. OPTCL has proposed the A&G Cost for FY 2017-18 as Rs.35.58 Cr. [(F-12), page 168 of ARR application]. However, OPTCL has claimed Rs. 26.11 Cr. based on Regulation 8.14 of OERC Transmission Tariff Regulations, 2014 and principle adopted by the Commission.

110. Further, as per Regulation 8.14 of OERC Transmission Tariff Regulations, 2014, the escalation factor is equal to WPI over the amount approved by the Commission in the previous year. Here the WPI means WPI of whole commodities not for a particular item. The nature of expenditure booked under A& G expenses cannot be linked to any particular commodity like electricity.

111. The WPI as on January, 2016 was 175.40; whereas, WPI as on 31st October, 2016 was 182.9. Considering the average WPI of 179.89 from January, 2016 to October, 2016 the escalation is calculated as (+) 4.49.The month-wise WPI from Jan-16 to Oct-16 is as under:

Table - 12

Month/ Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Average	Advance (Avg.-Jan)
2016	175.40	174.10	175.30	177.80	180.20	182.90	184.20	183.30	182.80	182.90	179.89	4.49

In view of the above, OPTCL does not agree with the projection of Rs. 24.38 Cr. made by the Objector.

Interest on Loan Capital

112. The projection towards interest on loan capital is very much realistic as it is based on facts and evidential documents that need full consideration.

113. Till date State Govt. has not granted any relaxation and waived the interest on Bonds. OPTCL has been making provision towards interest on State Govt. Loan Bonds from FY 2011-12 onwards and is liable to pay the same if the State Govt. demands.

114. The loans proposed to be availed from REC/PFC/Commercial Banks are in respect of various projects which have been approved by the Hon'ble Commission. Accordingly, an amount of Rs.1144.01 Cr. has been proposed as CAPEX for the FY 2017-18. For financing the above CAPEX and loan already availed, OPTCL proposes Rs.87.95 Cr. towards interest on loan capital for FY 2017-18 based on Regulation 8.24 of OERC Transmission Tariff Regulations, 2014.

115. The interest rate of the bank is computed based on Marginal Cost of fund based Lending Rate (MCLR) as per the RBI guidelines. Hence, demonetization cannot directly be linked with reduction of interest rate. The interest rate on REC and PFC loan has already been furnished in the Page 169 to 171 of 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; where OPTCL has to pay Prepayment Premium @2.50%, Loss of Tax benefit u/s 36(1)(viii) of the I T Act, Service Tax @15% etc.

116. Further, the loan may not be available at the MCLR rate but the commercial bank will charge MCLR plus spread which may vary upto 6%. In view of the above, OPTCL does not agree with the projection of Rs. 58.04 Cr. made by the Objector.

Depreciation

117. The Commission has approved depreciation of Rs.112.42 Cr. for FY 2016-17 computing at Pre-92 rate as per GoI notification dated 31.01.1992. For the FY 2017-18, OPTCL has projected depreciation of Rs.192.59 Cr. based on the audited accounts for FY 2015-16 considering the depreciation rate as prescribed under OERC Transmission Tariff Regulations, 2014 and taking into account up-valued asset base and projected additions thereto during FY 2016-17. OPTCL does not agree with the

contention of the Objector that the projected depreciation is high due to artificial increase of capital base.

118. Further, OPTCL has not proposed any Special Appropriation for the FY 2017-18. Similarly, no depreciation has been claimed on any capital assets unless it is completed and put in use.

119. Hence, the Objector's contention to approve the depreciation of Rs. 90 Cr. does not merit consideration.

Repair and Maintenance (R&M) Expenditure

120. OPTCL intends to keep its transmission system available to the highest possible % of time in a year by undertaking preventive and proper maintenance of its lines and grid sub-stations for which Rs.155.11Cr. is proposed towards R&M expenses during FY 2017-18.

121. For OPTCL, Regulation 8.16 is applicable. For FY 2016-17, OERC has allowed Rs.110.59 Cr. against which OPTCL has already incurred expenditure of Rs.91.82 Cr. up to Dec-2016. Hence, OPTCL's proposal needs full consideration by the Hon'ble Commission. OPTCL does not agree with the projection of Rs. 55.29 Cr. made by the Objector.

122. Year wise OERC approval and actual expenditure towards R&M for the period from FY 2013-14 to FY 2016-17 (up to Dec'16) are given in the table below. The actual figures are as per audited accounts up to the year 2015-16. For the FY 2016-17 (up to Dec'16), the figures are based on cash flow statement. By the end of FY 2016-17 the approved amount of Rs. 110.59 Cr. will be utilised.

Table - 13
R&M Expenditure (Rs. Cr.)

Financial Year	OERC Approved	Actual
2013-14	60.00	70.20
2014-15	93.00	100.31
2015-16	108.00	111.51
2016-17 (up to Dec-16)	110.59	91.82 (prov.)

123. From the above it is evident that OPTCL has been effectively utilizing the R&M amounts approved by Hon'ble Commission. Hence the concern raised by the Objector is not appropriate.

124. 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 works under 'Conversion of existing S/C lines to D/C lines', augmentation of installed capacity is also proposed under Capital Works category.

125. 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.

126. Requirement of the sub-station specific equipment is proposed under the R&M Plan as the cost involvement is not substantial.

127. To ensure quality as well as competitive price for these sub-station specific equipment, OPTCL takes the bulk procurement action against the consolidated requirement of different sub-stations and executes installation of those at different sub-stations through separate contracts in order to avoid delay.

128. For enhancement of life span of existing EHT lines and sub-station equipment, following measures are being carried out in a phased and planned manner:

<u>For EHT Lines</u>

- Painting and replacement of tower members
- Replacement of conductors and double jumpering of towers
- Strengthening of earthing system
- Insulator replacement by long rods
- Conversion of SC lines to DC lines for load sharing

<u>For sub-station equipment</u>

- Earth resistance measurement and renewal of earthing system wherever 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 and structures
- 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

Interest on Working Capital

129. Interest on Working Capital may be allowed as per norms specified in Regulation 8.25 of OERC Transmission Tariff Regulations, 2014. OPTCL does not agree with the suggestion of the Objector as this is contrary to the provisions of OERC Regulations.

130. Hence, the projection towards Interest on Working Capital of Rs. 14.66 Cr. is very much realistic which needs full consideration. OPTCL does not agree with the contention of Objector for not allowing any amount under this head.

Incentive for System Availability

131. OPTCL has proposed an amount of Rs. 9.35 Cr. towards incentive for system availability following Regulation 6.5 of OERC Transmission Tariff Regulations, 2014. Hon’ble Commission may consider OPTCL’s proposal in this regard. OPTCL does not agree with the suggestion of the Objector as this is contrary to the provisions of OERC Regulations.

Misc. Receipts

132. 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.

133. OPTCL could have generated more revenue towards transmission charges on account of STOA and Power Trading through Energy Exchange if the STOA and LTOA rates would have been equal. The higher revenue thus earned could have benefited the consumers of Odisha. The current projection towards Misc. Income is in line with the present trend and existing rates. However, if there is any surplus/deficit, the same would be considered in truing up exercise.

134. Till date OPTCL has not received any amount towards PMC from the State Govt. Therefore, the assumption of huge amount receivable from State Govt. @ 6% of the project cost under Misc. Income is not tenable.

135. 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.30.00 Cr. during FY 2017-18. The Objector's contention to consider Rs.60 Cr. under this head is not justified.

Aggregate Revenue Requirement

136. The projections made by OPTCL as per the OERC Transmission Tariff Regulations, 2014 are very much realistic which need full consideration. OPTCL does not agree with the estimation of Objector with regard to ARR of Rs. 514.51 Cr. against OPTCL's proposal of Rs. 1013.63 Cr.in view of component wise rejoinder made in foregoing paragraphs against objections made by the Objector

Transmission Charges

137. The proposed transmission tariff is derived considering the energy demand projection of DISCOMs and the ARR figure arrived by OPTCL justifying component wise projection as per OERC Transmission Tariff Regulations, 2014. OPTCL does not agree with the ARR estimated by the Objector. Hence, working out the Transmission Charge @ 17.05 p/u does not merit consideration.

138. OPTCL had furnished all requisite information and details as per the prescribed formats of the Hon'ble Commission with full justifications

139. OPTCL has a concrete plan of action to complete the projects within the scheduled time period. During the last 6 months, substantial progress is made and the target of CAPEX will be achieved. Hence, the Objector's contention to reduce the transmission charge to 23 p/u for FY 2017-18 without proper justification and supporting calculation does not merit consideration.

Open Access and Charges

140. Regarding OPTCL's proposal to equate LTOA and STOA rates, elaborate and justified grounds have been furnished at page 39-40 of the ARR application. This is proposed to appreciably add to the Misc. Receipts of OPTCL which would provide

relief to the long term customers. The Commission may kindly consider OPTCL's proposal in the interest of the state consumers

141. The Guideline & Procedure for reservation of Transmission / Distribution Capacity for Short Term Open Access Customers states as follows:

2.2.3. (i) While processing the applications, SLDC shall seek the consent of each of the DISTCO / STU involved in the transaction where required.

Accordingly, SLDC seeks for technical clearance from the STU i.e. OPTCL in approved format. Hence, there is absolutely no delay on the part of OPTCL in issuing technical clearance for open access transaction.

Introduction of Reliability Support Charge for connectivity

142. In reply to Query No. 13 of the Commission, OPTCL has submitted the justification for introduction of Reliability Support Charge for connectivity. The Commission may kindly consider the proposal of OPTCL in this regard.

Other Issues

Drawal of share Machhkund HEP

143. Since Machhkund HEP is not synchronized with the State's system, the State's share is being drawn radially by providing matching load on real time basis. Further, Machhkund HEP is not allowing to draw State's share in case two units are on the bus. At present, only one feeder from Machhkund to Jaynagar is available. The second feeder connected to the traction sub-stations has been isolated from Machhkund PH to avoid impact of unbalanced load on its machines which are very old. In case of breakdown of Machhkund-Jaynagar ckt. / any transmission element failure inside Machhkund PH switchyard, Odisha is not able to draw its share. Machhkund authorities are not taking any action to attend the breakdown of transmission elements at their end. In addition to the above, the State is not able to provide matching load in case of maintenance of downstream sub-stations / feeders of OPTCL network.

144. However, all efforts have been taken up by SLDC in co-ordination with field sub-stations to optimize Machhkund drawal. The month wise generation and drawal by Odisha & Andhra Pradesh during the FY 2016-17 (Apr-Dec'2016) are indicated in the Table below:

Table - 14
Month-wise Generation and Drawal for Machhkund HEP

Month	**Total Generation**	**Odisha Drawal**	**AP Drawal**
	MU	**MU**	**MU**
April'16	42.784	19.714	21.032
May'16	54.998	19.860	33.100
June'16	52.601	22.143	28.162
July'16	61.250	27.531	31.460
August'16	65.386	30.816	31.871
September'16	66.248	31.835	31.739
October'16	67.765	31.269	33.822
November'16	66.324	30.673	32.982
December'16	68.371	32.236	33.356
TOTAL	**545.727**	**246.077**	**277.524**

From the above data, it is amply clear that OPTCL has been able to draw energy very close to 50% as Odisha share from Machhkund HEP. There is constant effort to draw more energy and hence Objector's contentions are not correct.

145. 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. 92 nos. new transmission projects (lines & sub-stations) were approved by the Hon'ble Commission in the revised Business Plan in the 12thplan period (2012-13 to 2016-17) & part of 13th Plan period (2017-18 to 2018-19). In addition Conversion of "S/C Lines to D/C Lines'' and 'Conversion of "Radial System to Ring System" for redundancy in the transmission system as well as for meeting the future load growth. The Transmission System Availability figures attained by OPTCL over the last four years are – 99.89% (2012-13), 99.96% (2013-14), 99.95% (2014-15) and 99.96% (2015-16).

<u>Delays in Project</u>

146. 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 schedule 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.
- 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 resulting 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 forest clearance etc.

147. 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 & aims to complete within the time schedule to avoid time and cost over-run.

Quality, Adequacy and Reliability of Power Supply in the State

148. 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.

a) 92 nos. new transmission projects (lines & sub-stations) were approved by the Hon'ble Commission in the revised Business Plan vide order dated 30.07.2016 in Case No.05/2016 in the 12thplan period (2012-13 to 2016-17) & part of 13th Plan period (2017-18 to 2018-19). Out of the above, the following projects have been completed till date and the projects targeted to be completed in FY 2016-17 &FY 2017-18 are indicated below.

- Completed Projects during FY 2013-14 to FY 2015-16: 30 nos.
- Projects completed / to be completed in FY 2016-17: 10 nos.
- Projects under construction and targeted to be completed in FY 2017-18: 22 nos.
- Projects to be taken up and completed in FY 2018-19: 30 nos

b) Augmentation of installed capacity at existing sub-stations keeping in view the additional load requirement projected for different years:

- The augmentation plan is inclusive of the n-1& n-2 contingency conditions. In FY 2015-16, 620MVA transformation capacity has been added at 19sub-stations. Similarly in FY 2016-17(till Jan-17), 55MVA has been added at 4sub-stations.

c) Uprating of conductors in the stressed EHT lines from conventional ACSR to state-of-the-art HTLS (High Temperature Low Sag).

d) Installation of 33kV Capacitor Banks for improvement of voltage profile at identified sub-stations-

- In FY 2016-17 (till Jan-17), 245MVAr has been added at 17sub-stations. Balance 30MVAr is under installation at 3sub-stations and scheduled to be commissioned within FY 2016-17.

e) Substantial steps have been taken to minimise interruptions in the transmission system. The same are detailed below:

- Replacement of old, obsolete and defective equipment like Breakers, CT, PT, CVT, LA etc.
- Predictive maintenance of sub-station & line equipment using diagnostic testing kits.
- Thermo-vision scanning of sub-stations & lines and subsequent remedial measures.
- Replacement / uprating of bus system in the sub-stations including replacement of old & damaged conductors of lines.
- Provision of double jumpers at tension locations of lines.
- Replacement of disc insulators with long rod insulators in saline prone areas.
- Improvement of earthing system of lines.
- Application of silicon rubber coating on insulators inside sub-stations located in saline belts.

f) For quick restoration of power supply:

- OPTCL has deployed emergency restoration gangs at strategic locations to attend breakdown with least time delay.
- Adequate stock of ERS towers has been maintained for use during contingent situation arising out of tower failures.

g) Substantial tangible steps have been taken by OPTCL to address issues of line constraints. These are enumerated below:

- Loading Constraints of 132kV Chandaka-Mancheswar and Chandaka-Ranasinghpur lines have been solved by conversion of ACSR conductor to HTLS conductors.
- Also, OPTCL has awarded contracts for uprating of conductors from ACSR to HTLS in 132kV Joda-Barbil and 132kV Mendhasal-Khurda lines.
- Work is in progress for conversion of S/C lines D/C lines for 132kV Akhusingh - Paralakhemundi, 132kV New Bolangir-Patnagarh, 132kV New Bolangir-Sonepur, 132kV Jajpur Road-Anandpur, 132kV Paradeep - Jagatsinghpur lines which would further improve the loading capacity.
- 400kV Meramundali-Lapanga line has been energised.
- 400kV Meramundali-New Duburi DC line has been energised.
- 220kV Atri-Pandiabil and Pandiabil-Samagara lines have been energised.
- By installation of 220/132 Auto-Transformer at Mendhasal, loading constraints of Khurdahas been addressed.
- Commissioning of Dabugaon and Umerkote sub-stations has improved the power supply and power quality in those areas.
- Besides above steps, 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.

OBSERVATION OF THE STATE ADVISORY COMMITTEE (SAC) (PARA 149)

149. The Commission convened the State Advisory Committee (SAC) meeting on 20.02.2017 at 3.30 PM at the Conference Hall of 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 OPTCL has come up with a massive investment plan to take up various transmission projects and have requested the Commission to increase the transmission tariff. In this regard members of SAC have suggested that OPTCL instead of availing loans can divest a portion of its equity and utilize the amount in capital expenditure. Further, Grid substations of OPTCL may be contracted out to competent operators instead of maintaining and manning them departmentally, so that cost of maintenance will come down which will have a beneficial effect on the consumer tariff.

COMMISSION'S VIEWS AND ORDER (PARA 150 TO 270)

150. The Commission, for approval of ARR and determination of transmission tariff for OPTCL for the FY 2017-18, has followed the principles as laid down in OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 and is guided by the provisions of the National Tariff Policy as well as other Statutory Notifications and Directives, while giving due considerations to the ground realities of the Odisha Power Sector.

151. OPTCL has inherited a transmission network from GRIDCO on as is where basis. Continuous up-gradation and regular repairs and 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 Commission's and consumers' expectations on quality of supply, performance standards and availability of transmission network. In view of this, the Commission, over the past several years, has been allowing a significant amount for R&M expenses for encouraging the Licensee to undertake regular and adequate maintenance.

152. The tariff policy notified by the Ministry of Power on dated 28.01.2016 stipulated 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.

153. Further, the Tariff Policy, 2016 framed under the Electricity Act 2003, has embeded the National Tariff Framework which provides that the transmission tariff is to be sensitive to distance, direction and related to quantum of power flow in a transmission service network. Para 7(1) (3) of the National Tariff Policy provides for Transmission charges to be determined on MW per circuit kilometre basis, zonal Postage Stamp basis, or on the basis of some other pragmatic variant, the ultimate objective being to get the transmission system users to share the total transmission cost in proportion to their respective utilization of the transmission system. The ‘utilization’ factor should duly capture the advantage of reliability reaped by all. The spread between minimum and maximum transmission rates should be such as not to inhibit planned development/augmentation of the transmission system but should discourage non-optimal transmission investment.

154. 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 should be shared with intending users by the CTU/STU and the load dispatch centers, particularly information on available transmission capacity and load flow studies.

Computation of Transmission Loss for FY 2017-18

155. 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 to 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 ‘As the System Operates’.

156. 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. In view of the increasing demand for power at an accelerated pace due to industrialization and implementation of central & state

sponsored schemes like RGGVY, DDUGJY, BGJY, 24x7 Power For All etc. in Odisha, an increased flow of power in the OPTCL transmission network contributing to increased transmission loss is anticipated.

157. 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'16 to September'16 is 3.58% against Commission's approval of 3.70% for FY 2016-17. The Commission in the revised Business Plan order dated 30.07.2016 (Case No. 05/2016) has approved transmission loss of 3.50% for FY 2017-18. In view of the reducing trend of transmission loss level, OPTCL expects the loss level to remain around 3.60% in the current year. Accordingly, OPTCL has proposed **3.50%** transmission loss during FY 2017-18.

158. The approved and actual transmission loss for the year 2009-10 to 2016-17 is furnished in the table below:

Table – 15

FY	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (April 16 to Sept 16)
Approved (%)	4.00	3.90	3.80	3.80	3.75	3.75	3.70
Actual audited (%)	3.93	3.88	3.84	3.79	3.73	3.67	3.58 (Prov.)

159. Some objectors have suggested for identification of maximum loss prone areas and conduct energy audit to know the quantum of loss in the system. Moreover, many CGP's have been synchronized and distributing additional power in local areas and also in the meantime numbers of additional 132, 220 KV lines have been commissioned. We have taken note of the views of objectors to limit the transmission loss between 2.5% to 3% somewhat similar to that of PGCIL. We also observe that OPTCL transmits energy at much lower voltage compared to PGCIL and therefore a direct correlation to loss level by PGCIL is not possible. We agree with OPTCL on gradual reduction of loss levels.

160. Therefore, basing on the submission of OPTCL and loss trajectory approved by the Commission in the Business Plan for the period from FY 2014-15 to FY 2018-19, the Commission approves 3.50% for FY 2017-18 as transmission loss for wheeling and

directs that OPTCL shall continuously monitor the operation of the transmission system, prevent overloading wherever possible by suitable measures and take up innovative action for improving system loading of the existing network. Effort should be made by OPTCL to reduce the loss further to bring it to the level that of CTU.

Execution of Projects

161. Objectors have submitted that all lines and substations of OPTCL should be well equipped to give quality power supply and evacuate the entire state quota from IPPs and CGPs during FY 2017-18. OPTCL is not completing the projects approved by the Commission within the approved time frame. Some projects have been inordinately delayed due to poor monitoring mechanism and absence of accountability in OPTCL. They pointed out that the strategy of OPTCL in execution of Projects is not matching to the downstream network planning of the State. In some cases downstream infrastructure of DISCOMs is not ready beyond OPTCL network. The Commission is not inclined to appreciate the reason cited by OPTCL on the delay in completion of its ongoing projects. Project Managers have failed to take steps for completion of the Projects as per the schedule and it appears that the management have not placed adequate safeguards and accountability mechanism to prevent delays. The Commission also direct OPTCL to inform DISCOMs for evacuation of power from new/augmented grid s/s and build their own downstream distribution lines. Prior discussion with the DISCOMs before submission of transmission project for approval of OERC need to be done to avoid idle investments being made due to non-completion of inter-linking transmission/ distribution lines/networks.

162. OPTCL has submitted that the delayed execution of projects and cost & time overrun there-to are primarily due to severe RoW issues and Court cases. The Commission directs OPTCL to clear outstanding issues before incurring any expenditure in consultation with local elected representatives and District Administration to resolve the local RoW issues. Local/ regional benefits of better quality of supply should be informed to the public through mass communication.

163. The Commission directs that OPTCL should regularly monitor the progress of all its on-going projects to avoid delay.

164. The Commission had observed in its earlier orders that there was a substantial loss to the OPTCL transmission system due to severe natural calamities. Odisha has been

vulnerable to natural disasters mostly on account of cyclone and flood. Transmission system being the backbone of power supply system should be designed and maintained in a manner so as to withstand it with minimal damage. The Commission notes the submission of OPTCL on an institutional mechanism to develop disaster mitigation strategy, preparedness and early response including adequate training to employees.

Efficient Operation of Transmission System:

165. OPTCL submitted that SCADA is fully operational in all the 220 KV grid sub-stations except the 220 KV substation commissioned during FY 2015-16. As per Regulation 4.11 of the Odisha Grid Code-2015, the SCADA communication facilities should be made available in every 220 KV grid S/S by OPTCL. Hence in order to ensure the safe operation, integrity and reliability of the grid, the Commission directs OPTCL to complete the SCADA provision work in all the 220 kV and above S/S for proper monitoring and efficient functioning of the power system. PERT chart on the programme shall be submitted to the Commission. OPTCL has proposed to provide OPGW connectivity in vital 132 KV grid substations in order to make SCADA system more reliable and to have its utilization in various IT applications like ERP, operational requirement for assets management system, contacts management, finance management etc. OPTCL also expects to earn revenue by leasing the dark fibers to private telecom providers. The commission feels that the proposal may be viable. However, a detailed submission may be made before the Commission for approval indicating projects to be undertaken, cost benefit analysis, source of fund, annual O&M cost, manpower required etc. through a separate petition for approval.

System Interruptions due to Major Incident:

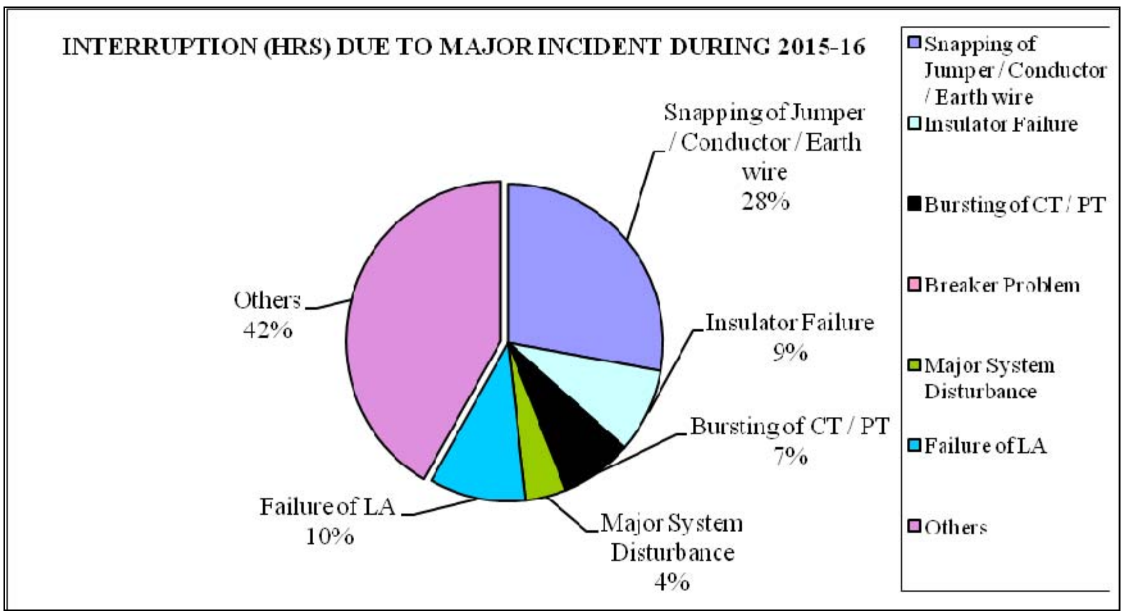
166. OPTCL’s system has faced aggregated Annual interruptions varying from 6 hour to 64 hours at different locations on account of conductor/jumper snapping, insulator failure, bursting of Current Transformer/Potential Transformer, breaker problem, system disturbance, Lightening Arrester failures etc. OPTCL submitted that it has arranged to maintain power supply (without resorting to total power failure due to non-availability of transmission capacity) from alternative transmission facilities during interruption. In spite of this it has reported that about 27 hours of load restriction has occurred in the second quarter of the FY 2015-16 due to non-

availability of generation and failure of generating stations. OPTCL claimed that there was no black out experienced in the State during the FY 2015-16. Duration of interruption during 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	42:46:00	48	28%
Insulator Failure	13:15:00	29	9%
Bursting of CT / PT	11:27:00	7	7%
Breaker Problem	0:00:00	4	
Major System Disturbance	6:33:00	6	4%
Failure of LA	15:28:00	21	10%
Others	64:06:00	141	42%

167. 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 2015-16.



168. It is observed that during FY 2015-16 the daily peak demand touched 4175 MW maximum on dt.25.03.2016 and a minimum of 2976 MW on dt.28.04.2015. The peak demand of 4175 MW in 2015-16 is about 194 MW above the peak demand experienced during the previous year 2014-15 (of 3981 MW). But the total energy drawl is 24615 MU in FY 2015-16 against 24436 MU in 2014-15, which indicates a growth in electricity consumption of around 179 MU in the State. In the OPTCL

system, 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 170 kV minimum and 259 kV maximum in its 220 KV system and 87 KV minimum and 148 KV maximum in its 132 KV system. The Maximum and Minimum Voltage Level at different GRID substations of OPTCL are given in table below:

Table - 17

Allowable Range (245-198 KV)

Sl. No.	Name of the 220/132 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	Jaynagar	251	214
2	Theruvali	241	200
3	Bhanjanagar	251	205
4	Chandaka	237	181
5	Narendrapur	233	170
6	Joda	245	209
7	Tarkera	238	214
8	Budhipadar	239	216
9	Duburi	241	197
10	Balasore	242	197
11	Meramundali	233	203
12	Bidanasi	238	206
13	Katapalli	259	204
14	Bhadrak	241	183
15	Paradeep	239	182
16	Bolangir	248	194
17	Mendhasal	239	200

Allowable Range (145 -122 KV)

Sl. No.	Name of the 132/33 kV Grid Sub-station	Maximum Voltage in kV	Minimum Voltage in kV
1	Cuttack	142	97
2	Berhampur	146	100
3	Puri	141	96
4	Khurda	148	87

169. OPTCL is advised to take suitable remedial measures to improve the voltage profile and monitor the reactive drawl of DISCOMs from its grid S/s. Wherever any DISCOM draws excessive reactive load at low voltage condition in grid S/S, corrective action must be taken. OPTCL should keep its on-line Tap Changer of the Power Transformers in healthy condition and all the field engineers should be trained to operate OLTC during peak and low load condition of the day.

170. **Initiatives for Operation and Maintenance and safety:** OPTCL is required to develop appropriate ring system so that power supply to the affected areas can be made easily available from the neighbouring areas fed from other generating stations of the state and Odisha share from Inter State Generating Stations of Eastern Region.

In order to have a more reliable and efficient transmission system, the Commission directs OPTCL to plan renovation of the old grid s/s with provision of advanced metering/protection/communication system and to install or expand control rooms. Further, as a part of O&M activity, OPTCL should upgrade the overloaded grid S/Ss in consultation with DISCOMs. The said plan shall be submitted to the Commission.

171. OPTCL has submitted that repair and maintenance works have been optimized to ensure healthy sub-stations and lines with available manpower. Bi-monthly review is conducted by Zonal Heads for monitoring of preventive works and necessary steps required for system improvement in respective areas. Maintenance Manual has been prepared in line with CBIP Manual. The best R&M practices in transmission sector as adopted by the Central as well as other State Transmission Utilities have been widely circulated among the field units for strict adherence. Further, OPTCL Safety Manual-2015 has been released and Mock safety drills are regularly conducted in sub-stations.

172. In order to have a more reliable and efficient transmission system, OPTCL is implementing sub-station Automation System (SAS) to renovate the old sub-stations with provision of advanced metering/protection system and new/expanded control rooms.

173. 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.

OPTCL FINANCE

Truing up of OPTCL for the FY 2015-16

174. OPTCL has filed truing up proposal for the FY 2015-16 as per Regulation 7.1 of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2014 on 28.01.2017 along with the audited accounts for the FY 2015-16. This was registered in Case No.10 of 2017. This case was heard analogously with OPTCL tariff hearing in Case No.64 of 2016 on 07.02.2017. The analysis of expenditure and income of OPTCL and its submission for considering in truing up is discussed below:

Employees Cost & Terminal benefits:

175. OPTCL has made the submission to consider an amount of Rs.301.50 crore towards employees cost including terminal benefit for FY 2015-16. The approved amount vis-à-vis actual expenditure as per audited accounts are mentioned in the table below:

Table – 18
Employees Cost & Terminal benefits

Particulars	Approved	Audited Actuals
Employee cost	171.86	165.36
Terminal benefits including differential pension and pensionary benefits	138.65	141.42
Less capitalization	5.28	20.83
Total	**305.23**	**285.95**

176. The difference of figures between the audited actual and the amount proposed by OPTCL is due to booking of the lesser amount towards capitalization than what has been booked in the audited accounts. As per audited accounts the capitalization of employees costs amounts to Rs.20.83 crore whereas OPTCL requested to consider Rs.5.28 crore as allowed in the tariff order. The Commission do not agree with the proposal of OPTCL and accepts only the audited figures as mentioned in the table above for true up.

Terminal liability for past period

177. OPTCL submitted that the Commission has been allowing the terminal liability for the past years based on cash outflow pending periodical actuarial valuation. But, the actual amount as per the actuarial valuation is more than what has been allowed by the Commission. The figures of the terminal liability are shown in the table below:

Table - 19

Particulars	Amount (Rs. Cr.)
Terminal liabilities as on 31.03.2016 (As per the Actuarial valuation)	2002.64
Less: Amount allowed by the Commission upto FY 2014-15	1436.57
Less: Amount allowed for FY 2015-16	138.26
GAP as on 31.03.2016	427.81

178. OPTCL has proposed to allow the amount of Rs.427.81 crore as true up.

179. Regarding terminal liability, the Regulation 8.9 of OERC Tariff Regulations, 2014 states as under:

"Terminal liabilities would be provided based on a periodic actuarial valuation to be made by the Commission in line with the prevailing Indian accounting standards." The Commission had allowed the terminal benefits based on the cash flow statement of OPTCL and not on the basis of actuarial valuation. Therefore, the present requirement of Rs.427.81 crore is allowed on provisional basis till Commission makes its own actuarial valuation of the fund requirement. The above amount is allowed to be adjusted against the past years accumulated truing up surplus as shown in Table-20.

Repair & Maintenance Expenses:

180. OPTCL has submitted to consider the audited figure of Rs.113.35 crore as against the approved amount of Rs.108 crore during 2015-16. A concern is being raised by objectors that some of the R&M expenses actually need to be taken as capital deployed and need not be considered as pass through. This issue needs appropriate attention of management and appropriate transparency should be maintained to avoid such incidents. The Commission approves the audited figures of Rs.113.35 crore for the purpose of truing up. The Commission directs that all R&M expenses on any single item costing over Rs.5.00 crores shall be placed in the website of OPTCL in tabular form with the name of s/s, line segment annually.

A&G Expenses:

181. OPTCL claimed an amount of Rs.39.82 crore booked under the above head in the audited accounts of 2015-16 as against the approval of Rs.24.37 crore by the Commission. With regard to A&G expenses, Regulation 8.14 states the following:

In case of S.T.U. (OPTCL), 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.

182. Accordingly, the Commission approves an amount of Rs.24.37 crore towards A&G expenses for the FY 2015-16 as true up.

Rebate

183. OPTCL claimed an amount of Rs.10.75 crore during 2015-16 towards rebate against the approved amount of Rs.12.61 crore. The Commission approves the audited figure of Rs.10.75 crore under the head 'rebate'.

Depreciation

184. Under this head OPTCL claimed an amount of Rs.141.00 crore as true up. OPTCL has submitted the audited account for FY 2015-16 as per which the depreciation is shown at Rs.140.94 crore. In the notes to account it is mentioned that the depreciation is provided on straight line method as per the rates as well as methodology notified under Electricity Act, 2003. Regulation 8.38 of OERC Transmission Tariff Regulations, 2014 states as under:

For STU (OPTCL, Depreciation shall be calculated/for each year of the Control Period, on the original book value of the assets considering applicable depreciation rate as determined by the Commission from time to time.”

185. The Commission, in view of the direction and order of the High Court of Odisha, is duty bound to compute depreciation for the purpose of determination of ARR and Tariff on the basis of pre-92 rates on the original book value of asset (i.e. after rolling back the effect of revaluation of 1996 from the value of the assets). Therefore the Commission on the basis of same principle approves an amount of Rs.107.48 crore as true up for FY 2015-16.

Finance cost

186. OPTCL has claimed an amount of Rs.75.02 crore (including interest capitalized amount of Rs.8.82 crore) towards interest for the purpose of truing up, based on the audited accounts for FY 2015-16.

187. Regarding interest to be capitalized for an amount of Rs.8.82 crore, OPTCL has submitted that although as per accounting standard, interest during construction (IDC) is to be capitalized, OPTCL in reality has paid the interest for the FY 2015-16 out of which 90% will be recovered through depreciation in 25 to 35 years. Hence, OPTCL submits to consider the same in the truing up exercise.

Para 8.22 of the Regulations, 2014 states – *For normative loans outstanding at the beginning of the year on the revenue account, the licensee shall indicate in its filing the expected interest outgo for each year. This will be considered towards revenue requirement of the licensee for such years.*

The Commission opines that OPTCL is entitled for true up on interest charge to revenue accounts only and not on capital account as per commercial principles. Therefore, we do not agree with OPTCL on this.

188. In view of the above, the Commission allows an amount of Rs.66.20 crore (75.02 – 8.82) as true up for FY 2015-16.

Grid Co-ordination Committee Expenses and SLDC charges

189. OPTCL has submitted that there is no separate accounting head for GCC since all expenditure made under this head is towards A&G expenses. The commission during 2015-16 has allowed Rs.1.22 crore towards GCC expenses and SLDC charges for the year 2015-16. The same amount is allowed as true up for FY 2015-16.

Incentive for System Availability

190. OPTCL claimed an amount of Rs.5 crore towards incentive for system availability as the same was approved by the Commission in the ARR of 2015-16. The Commission approves the same since the system has recorded 99.96% availability.

Income Tax

191. During 2015-16 OPTCL has made a provision of Rs.8.15 crore towards income tax liability under the MAT. The same amount is also shown as a component of truing up for FY 2015-16. The Commission scrutinized the audited accounts for FY 2015-16 and found that an amount of Rs.8.15 crore is booked under tax expenses. In the present ARR order of 2017-18 in para 255 (Table 46), the Commission has considered the tax expenses of Rs.8.15 crore as a pass through. Hence the Commission is not inclined to consider the tax expenses of Rs.8.15 crore again as true up for the FY 2015-16.

Return on Equity

192. OPTCL submitted that the Commission in the ARR of 2015-16 has approved an amount of Rs.45.41 crore towards return on equity. The Commission allowed the same for the purpose of truing up as claimed by OPTCL on an equity base of Rs.293 crore.

Other Miscellaneous Income

193. OPTCL requests the Commission to consider Rs.46.56 crore towards miscellaneous receipt as against the approved amount of Rs.26 crore. The Commission allows an amount of Rs.46.56 crore towards inter-state wheeling and miscellaneous revenue for the purpose of truing up, as per audited accounts for FY 2015-16. In summary the items considered towards miscellaneous receipt are given below:

Table - 20

Particulars	Rs. In Cr.
Short-term open access charges	27.32
Supervision charges	10.10
Interest income	2.25
Sale of scrap	1.99
Miscellaneous receipt	4.90
Total	**46.56**

194. With the above observation the figure proposed by OPTCL and approved by the Commission for the purpose of truing up for the FY 2016-17 is given in the table below:

Table - 21

(Rs. crore)

Particulars	OERC approval in ARR OF 2015-16	Actual as per audited accounts	True up proposed by OPTCL	True up approved by the Commission
A. Employee Cost (Net)	**305.23**	**285.95**	**301.50**	**285.95**
Employee Cost	171.86	165.36	165.36	165.36
Terminal Liabilities	138.65	141.42	141.42	141.42
Less: Capitalization	5.28	(-) 20.83	(-)5.28	(-)20.83
B. R&M cost	108.00	113.35	113.35	113.35
C. A&G cost	24.37	39.82	39.82	24.37*
Sub-total (A+B+C)	**437.60**	**439.12**	**454.67**	**423.67**
D. Depreciation and Special Appropriation	107.48	141.00	141.00	107.48*
E. Interest on long-term liability	40.93	75.02	75.02	66.20*
F. Rebate	12.61	10.75	10.75	10.75
G. GCC Expense and SLDC Charges	1.22	-	-	1.22
H. Incentive for system availability	5.00	-	5.00	5.00
Sub-total (A to H)	**604.84**	**665.89**	**686.44**	**603.57**
I. Special appropriation/ Income Tax	6.68	8.15	8.15	-
J. Return on Equity	45.41	-	45.41	45.41*
Grand Total (A to J)	**656.93**	**674.04**	**740.00**	**648.98**

Particulars	OERC approval in ARR OF 2015-16	Actual as per audited accounts	True up proposed by OPTCL	True up approved by the Commission
Less: Inter-state Wheeling & Misc. Revenue	26.00	68.11	46.56	46.56*
Net Transmission Cost	**630.93**	**605.93**	**693.44**	**602.42**
Revenue from Transmission charges	**630.93**	**613.48**	**613.48**	**613.48**

* Normally in the truing up exercise the figures are accepted by the Commission as per the audited accounts. Wherever there is deviation of figures from the audited accounts the approval by the Commission in the truing up are as per the normative based on the Regulation.

195. The summary of truing up exercise of OPTCL from its inception is depicted in the table below:

Table - 22
Summary of Truing Up Exercise of OPTCL

(Rs. crore)

FY	Cost of Trans. Charges approved in the ARR	Cost of Trans. Charges (audited) considered for true up	Revenue from LTOA charges approved in ARR	Revenue from LTOA Charges (audited)	Revenue from LTOA Charges (True up)	Difference in Trans. Charges (Col 2-3)	Difference in Revenue from LTOA charges (Col 6-4)	Total Difference Considered for True up	Cumulative True up
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
2006-07	333.27	323.01	333.27	355.34	355.34	10.26	22.07	32.33	32.33
2007-08	373.73	334.70	373.73	399.76	399.76	39.03	26.03	65.06	97.39
2008-09	376.57	308.07	376.57	678.93	413.15	68.50	36.58	105.08	202.47
2009-10	394.15	375.68	394.15	305.16	438.06	18.47	43.91	62.38	264.85
2010-11	480.93	431.90	480.93	405.19	538.08	49.03	57.15	106.18	371.03
2011-12	572.50	541.02	572.5	570.54	570.54	31.48	-1.96	29.52	400.55
2012-13	587.02	506.10	587.02	549.73	549.73	80.92	-37.29	43.63	444.18
2013-14	585.87	568.21	585.87	598.89	598.89	17.66	13.02	30.68	474.86
2014-15	624.50	639.73	624.50	634.34	634.34	-15.23	9.84	-5.39	469.47
2015-16	630.93	602.42	630.93	613.48	613.48	28.51	-17.45	11.06	480.53

196. It is seen from the above table that OPTCL posted a cumulative surplus of Rs.480.53 crore at the end of 2015-16. As stated above, the Commission had approved an amount of Rs.427.81 crore towards differential terminal liability of the past period. After adjustment of the amount from surplus as mentioned above the net surplus works out to Rs.52.72 crore (480.53 – 427.81). Hence, we conclude that OPTCL does not require any regulatory asset to be amortized.

ARR of 2017-18

197. The Commission has analysed the application of OPTCL for Aggregate Revenue Requirement (ARR) for FY 2017-18 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 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.

Operation and Maintenance Expenses

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

(i) **Salary, Wages, Pension contribution etc.**

Under this head the petitioner has claimed an amount of Rs.462.33 crore as detailed in the table below:-

Table – 23
Component of Employees Cost

(Rs. crore)

Sl. No.	**Particulars**	**FY 2016-17 (Approved)**	**FY 2017-18 (Proposed)**
1.	Basic pay + GP	59.10	167.02
2.	Dearness allowance	77.43	16.70
3.	House Rent Allowance	8.87	33.40
4.	New recruitment (Stipend)	2.60	7.54
5.	Terminal benefits including NPS	143.98	188.03
6.	Arrear 7th Pay	0.00	31.38
7.	Other expenditure	12.78	28.13
	Total	**304.76**	**472.20**
8.	Less Employees Cost capitalized	12.21	9.87
9.	**Net employees cost to be passed in ARR**	**292.55**	**462.33**

199. While projecting the employees cost, the petitioner has considered the following assumptions:-

i) Basic Pay and GP are determined basing on the actual cash flow of the first seven months of the current financial year 2016-17, which is extrapolated for a period of 12 months. Factoring in the impact of 7th pay Commission the licensee multiplied the basic pay and GP by 2.57 times.

ii) 3% towards annual increase over the Basic Pays and GP determined for the FY 2016-17 has been considered.

iii) Arrear impact of 7th pay commission for the period from 01.01.2016 to 31.03.2017 has been considered.

iv) 3% incremental benefit has been sanctioned to Asst. Managers and Dy. Managers due to upgradation from PB-2 to PB-3.

v) Average Nos. of employees has been factored in.

vi) Rate of DA has been considered at 10% of the basic pay and GP as determined taking the impact of 7th Pay Commission.

vii) Medical allowance and HRA has been assumed at 5% and 20% of the Basic pay+GP respectively.

viii) Impact of stipend for new recruitment of 520 nos. and outsourcing of manpower has been considered.

ix) Other allowances like Bonus, Shift allowance, handicapped, city allowance, ABT, etc and expenses towards LTC, honorarium, ex-gratia, conveyance, etc. have been considered.

x) Terminal benefits have been projected as per the report of the actuary.

200. We have considered the submission of OPTCL along with views from the objectors. The impact of 7th Pay Commission as proposed by the licensee in determining the basic pay and GP of the employees is not acceptable to the Commission as the same has not been accepted by State Govt. till date. With this observation, the Commission considers the existing Basic Pay+GP for a period of 8 months of the Financial year 2016-17 at the existing 6th Pay structure, based on the cash flow submitted by the petitioner in the reply to queries. The information submitted in the table is detailed below:-

Table – 24
Basic Pay & GP

(Rs. Crore)

Months	Basic Pay	Grade Pay	Total	Dearness Allowance	House Rent Allowance
Apr-16	4.01	1.03	5.04	5.99	0.72
May-16	4.00	1.02	5.02	6.28	0.72
Jun-16	4.00	1.03	5.03	6.29	0.72
Jul-16	3.97	1.01	4.98	6.23	0.71
Aug-16	3.97	1.01	4.98	6.23	0.71
Sep-16	3.97	1.01	4.98	6.22	0.71
Oct-16	3.96	1.01	4.97	6.21	0.71
Nov-16	3.95	1.01	4.96	6.20	0.71
Total	31.83	8.13	39.96		5.71

201. As revealed from the above table the basis pay + GP for a period of 8 months is Rs.39.96 crore. Extrapolating the same for a period of 12 months the annual impact of pay +GP worked out to Rs.59.94 crore.

202. Regarding number of employees, OPTCL in its submission furnished the following information as given in table below:-

Table - 25
Information on number of Employees

Sl. No.	Particulars	Nos.
1	No of employees as on 01.04.2015	3106
2	Induction of new employees during FY 2015-16	263
3	Retired during 2015-16	161
4	No of employees as on 31.03.2016	3208
5	Induction of new employees during 2016-17 (6 regularized + 380 stipendiary / to be recruited)	386
6	Retired/ to be retired during 2016-17	177
7	No of employees as on 31.03.2017	3417
8	Induction of new employees during 2017-18	140
9	To be retired during 2017-18	207
10	No. of employees as on 31.03.2018	3350

203. The Commission examined the proposal of OPTCL. It is found that for the planned induction of employees during 2016-17 and 2017-18 (380 Nos. & 520 Nos.) M/s OPTCL has claimed an amount of Rs.7.54 crore towards stipend. The Commission is not inclined to consider the above employees for determining the average Nos. of employees for FY 2017-18 as the costs are different. The average number of employees approved by the Commission for computation of salaries is given below:

Table - 26

Sl. No.	Particulars	Nos.
1	No of employees as on 31.3.2016	3208
2	Addition during the year	6
3	Retired during 2016-17	177
4	Position as on 31.3.2017	3037
5	Addition during the year	0
6	Retired during the year	207
7	No of employees as on 31.03.2018	2830

204. The average of employees during FY 2016-17 and FY 2017-18 works out to 3123 Nos. (3208+3037)/2 and 2933 nos. (3037+2830)/2 respectively.

Considering the above, the basic pay + GP is determined as under:-

Average annual impact	-	Rs.59.94 crore
Add 3% annual increment	-	Rs. 1.80 crore
Pay + GP after increment	-	Rs.61.74 crore
Factoring in average no. of employees the pay + GP	-	Rs.58.00 crore.

The Commission approves Rs.58.00 crore towards Pay + GP during FY 2017-18.

Dearness allowance

205. The prevailing rate of D.A. as on 01.7.2016 is 132%. The incremental D.A. allowed by Government of Odisha last time was 7%. Prior to the above, the rise in the rate of DA was 6% w.e.f. 01.01.2015, 01.07.2015 and 01.01.2016. Assuming the level of rise at same at 6% percentage on January 2017, June 2017 and January, 2018, the Commission allows the weighted average rate of DA at 144% during FY 2017-18. Accordingly an amount of Rs.83.52 crore is allowed towards DA as a pass through for FY 2017-18.

House Rent Allowance

206. For the FY 2017-18 OPTCL proposed the rate of HRA at 20% of basic pay + GP. From the cash flow statement submitted by the licensee in the table mentioned above the percentage of house rent to the basic pay and GP works out in the order of 15%. The Commission in line with the orders of the previous years approves the rate at 15% of the basic Pay+GP amounting to Rs.8.70 crore.

Stipend for new recruitment

207. Under this head OPTCL claimed an amount of Rs.7.54 crore for the FY 2017-18 as detailed in table below:

Table - 27
Stipend for new recruitment

Year	Post	Proposed No. of candidates recruited/ to be Recruited	Stipend per person per month (Rs.)	Total stipend per month (Rs. Lakh)
2016-17	ITI Technician	150	7000	10.50
	Jr. Manager	5	12000	0.60
	Asst. Manager	125	18000	22.50
	Office Assistant	100	8000	8.00
2017-18	Office Assistant	40	8000	3.20
	Asst. Manager	100	18000	18.00
	Total	**520**		**62.80**
	Total stipend for FY 2017-18 = Rs. 7.54 Cr.			

208. The Commission examined the proposal. OPTCL proposed addition of 380 nos. of employees during 2016-17. As per the information from OPTCL the process of recruitment is going on. The financial impact of stipend to proposed 380 nos. is to the tune of Rs.5 crore. The Commission after being satisfied approves the amount of Rs.5 crore as a pass through in the ARR for 2017-18. During FY 2017-18 OPTCL proposed addition of 140 nos. of manpower the impact of which works out to Rs.2.54 crore. The Commission in line with previous year do not consider the financial impact of such new addition in the ARR for 2017-18.

209. The Commission observes that OPTCL shall adopt a judicious employees addition policy keeping in view the level of automation to be introduced, improved efficiency of the employees operation and balancing with network expansion. It should not be higher than the national average figures. Best practices are to be adopted. Employees cost is to be maintained at a justifiable level show as to avoid long term liability to the organisation and burden on consumers. The life cycle cost of employees vrs. Automation shall be prepared by OPTCL.

210. The revised figure of the amount of stipend to the new recruit as proposed and as approved is given in the table below:

Table - 28

(Rs. in crore)

Year	No. of candidates to be recruited	Monthly impact of stipend as proposed by OPTCL (Rs. in lakh)	Annual impact as proposed by OPTCL	Amount approved by the Commission
2016-17	380	41.60	5.00	5.00
2017-18	140	21.20	2.54	0.00
Total	**520**	**62.80**	**7.54**	**5.00**

211. Thus the Commission approves Rs.5.00 crore towards stipend for new recruitment during FY 2017-18.

Terminal Benefit including NPS

212. Under this head OPTCL has proposed an amount of Rs.148.00 crore and Rs.4.06 crore towards terminal liability and NPS respectively. Over and above this amount, the licensee has proposed arrear pension (impact of 7th Pay Commission) to the tune of Rs.35.97 crore. As mentioned in the para above, the Commission is not considering the impact of 7th Pay Commission towards pension at present. As directed by the Commission, OPTCL submitted the cash flow statement upto January, 2017 as per which an amount of Rs.116.32 crore has been disbursed towards terminal benefits within 10 months of the FY 2016-17. Extrapolating the above figure for a period of 12 months the Commission approves an amount of Rs.139.58 crore towards terminal benefit for the FY 2017-18. Besides the above, an amount of Rs.4.06 crore as proposed by OPTCL is also allowed as a pass through towards NPS during 2017-18.

7th Pay Commission Impact

213. OPTCL has claimed an amount of Rs.67.35 crore (existing and pensioners) towards 7th Pay Commission due for the year 2016-17. The Commission does not agree with the proposal of OPTCL as it has not been implemented yet by the State Govt.

Other Employees Cost and allowances

214. OPTCL has claimed Rs.28.13 crore towards other Employees Cost and Allowances such as additional employees cost towards contractual/outsources engagement, medical expenses, leave travel concession (LTC), honorarium, ex-gratia, bonus, staff welfare expenses and other miscellaneous expenses. The Commission in line with earlier years approves 5% towards medical allowance on basic pay and GP which works out to Rs.2.90 crore. Regarding other allowances claimed by OPTCL to the tune of Rs.0.93 crore, the Commission allows Rs.0.63 crore as per audited actual of

2015-16. OPTCL has claimed an amount of Rs.1.35 crore towards arrear salary due to the impact of upgradation from PB-2 to PB-3. To justify the same OPTCL submitted the approval of the 75th Board Meeting (Item 20). The Commission approves the same as a pass through in the ARR for 2017-18. Under the head outsource engagements, OPTCL has claimed an amount of Rs.6.09 crore for the year 2017-18. The Commission allows an amount of Rs.3.76 crore as per the actual available from the audited accounts for the year 2015-16. Amount claimed by OPTCL under the head LTC, Honorarium, ex-gratia and staff welfare expenses is allowed by the Commission as a pass through in the ARR. Regarding the claim of miscellaneous expenses to the tune of Rs.3.09 core, the Commission disallows the same in absence of detailed break up.

215. With the above observation the amount of employees cost as proposed by the petitioner and approved by the Commission is given in the table below:

Table- 29
(Employees Cost - FY 2017-18)

(Rs. crore)

Sl. No.	Particulars	Approved (FY 2016-17)	Proposed 2017-18	Approved 2017-18
A	**Salary & Allowances**			
1	Basic Pay + Grade Pay	59.10	167.02	58.00
2	Dearness Allowance	77.43	16.70	83.52
3	House Rent Allowance	8.87	33.40	8.70
4	Other Allowance	1.00	0.93	0.63
5	Bonus	0.01	0.01	0.01
6	Stipend for New Recruitment	2.60	7.54	5.00
7	7th Pay Commission Arrear	0.00	31.38	0.00
	Sub-Total (A)	**149.00**	**256.98**	**157.32**
B	**Additional Employee Cost**			
1	**Arrear salary for impact of upgradation of PB-2 to PB-3**		**1.35**	**1.35**
1	Contractual/Out Sources Engagement	1.99	6.09	3.76
	Sub-Total (B)	**1.99**	**7.44**	**5.11**
C	**Other Employee Cost**			
1	Medical Expenses (allowance + Reimbursement)	2.96	9.79	2.90
2	Leave Travel Concession	0.75	0.69	0.69
3	Honorarium	0.15	0.15	0.15
4	Ex-gratia	1.00	2.50	2.50
5	Staff Welfare Expenses	4.01	3.52	3.52
6	Miscellaneous	0.92	3.09	0.00
	Sub-Total (C)	**9.79**	**19.75**	**9.77**

Sl. No.	Particulars	Approved (FY 2016-17)	Proposed 2017-18	Approved 2017-18
D	**Terminal Benefits**			
1	Pension	140..0	148.00	139.58
2	Gratuity			
3	Leave Salary			
4	Other (including contribution to NPS)	3.99	4.06	4.06
5	7th Pay Commission Arrear Penson	0.00	35.97	0.00
	Sub-Total (D)	**143.98**	**188.03**	**143.64**
E	**Total Employee Cost (A+B+C+D)**	**304.76**	**472.20**	**314.37**
F	Less: Employee Cost Capitalized	12.21	9.87	9.87
G	**Net Employee Cost (E- F)**	**292.55**	**462.23**	**304.50**

Repair & Maintenance Expenses

216. For the FY 2017-18 OPTCL has proposed an amount of Rs.155.11 crore under the head repair and maintenance expenses. Item wise details is given in the table below:

Table- 30

(Rs. crore)

Particulars	OERC Approval (FY 2015-16)	OERC Approval (FY 2016-17)	Projection (FY 2017-18)
(i) O&M	**108.00**	**110.59**	138.04
(ii) Telecom			2.06
(iii) Civil Works			11.46
(iv) Information Technology			3.55
Total R&M Expenses			**155.11**

217. The objectors during hearing questioned the huge expenditure on repair and maintenance and stated that OPTCL is booking certain items of capital nature under the head repair and maintenance. The Commission scrutinized the audited accounts for FY 2015-16 and found an amount of Rs.113.35 crore booked under repair and maintenance. The Commission called for the information of actual amounts spent during 2016-17 (upto January, 2017). OPTCL submitted the cash flow as per which the total outflow towards R&M works out to Rs.102.13 crore for a period of 10 months. The trend is almost same as that of audited actuals for FY 2015-16. No report on wrong booking of capital items as revenue expenses is found out from the comments of the auditors attached to the audited accounts. The Commission therefore relied on the audited actuals produced by the licensee. In line with the tariff orders of previous year an escalation of 5% assumed annually over the audited figures to arrive at an amount of Rs.124.97 crore for FY 2017-18. The Commission approves the same as a pass through in the revenue requirement under the head R&M. Addressing

concerns of the objectors, the Commission directs that all R&M works costing over Rs.5 Lakhs for the previous half yearly period of the financial year shall be placed in the website of OPTCL in a tabular manner from the current year onwards.

Administration & General Expenses

218. For the FY 2017-18, the petitioner has proposed an amount of Rs.26.11 Crore under the head Administration & General Expenses. Item-wise break up of expenses is given in table below:

Table- 31

PARTICULARS	(Rs. Crore)
Commission approved - 2016-17	20.40
Escalation as per WPI Oct-16(4.49%)	0.92
A&G for 2017-18	21.32
Add: Licence Fees	1.50
Add: Inspection Fees	2.63
Add: SLDC Charges	0.66
Total A&G Expenses for 2017-18	**26.11**

219. 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. The annual rate of inflation based on monthly WPI stood at 5.25%(provisional) for the month of January 2017(over January 2016) as revealed from the Review report of Govt of India, Ministry of Commerce &Industry Office of the Economic Adviser.

220. In view of above the Commission allows escalation of 5.25% (rate of inflation measured by WPI of January 2017) over the approved amount of previous year. The calculation for determining the A&G expenses is given in table below:

Table - 32

(Rs. Crore)

Normal A&G approved during 2016-17	20.40
Escalation as per WPI (January 2017)	5.25%
Normal A&G for 2017-18	21.47
Add licensee fees to Commission	1.50
Add: Inspection fees	2.63
Total	**25.60**

221. The Commission approved an amount of Rs.25.60 crore towards A&G expenses for the FY 2017-18.

Interest on Loan

222. The petitioner has proposed an amount of Rs.87.95 crore towards interest on long-term loan for the FY 2017-18. Loan-wise interest payment as proposed by OPTCL is depicted in table below:

Table- 33

(Rs. Crore)

Sl No	Source :		Current Year 2016-17			Ensuing Year 2017-18			
		Opening Balance	Estimated receipts	Estimated repayment	Closing Balance	Estimated receipts	Estimated repayment	Closing Balance	Interest due
1	**Govt Loan**								
	State Govt (Cash Loan)	2.00			2.00			2.00	0.26
	State Govt Loan (CRF)	15.00			15.00			15.00	0
	State Govt Bond	400.00			400.00			400.00	26.00
	Sub Total	**417.00**	**-**	**-**	**417.00**	**-**	**-**	**417.00**	**26.26**
2	**Banks/Fis**								
	Bank of India	48.45	152.13	-	200.58	89.40	-	289.98	16.53
	PFC	54.57	20.51	6.58	68.50	-	6.24	62.27	5.73
	REC	274.05	58.28	25.25	307.08	-	32.54	274.54	37.36
	JICA		10.00		10.00	58.00	-		0.31
	New Loan		0.09		0.09	89.25	-	89.34	1.75
	Sub Total	**377.07**	**241.01**	**31.83**	**586.25**	**236.65**	**38.77**	**716.13**	**61.68**
3	**Others**								
	Infrastructure Loan	120.35		24.00	96.35		19.90	76.45	0
	Total Loan (1+2+3)	**914.42**	**241.01**	**55.83**	**1,099.60**	**236.65**	**58.67**	**1,209.58**	**87.94**

223. It is observed from the table submitted in form F-3, the quantum of loan to be availed during 2016-17 and 2017-18 is Rs.241.01crore and Rs.236.65 crore respectively. Source-wise receipt of loan is given table below:

Table – 34
Source-Wise Receipt of Loan (Rs. Crore)

Particulars	**2016-17**	**2017-18**
Bank of India	152.13	89.40
PFC	20.51	-
REC	58.28	-
JICA	10.00	58.00
New loan	0.09	89.25
Total	**241.01**	**236.65**

224. OPTCL has submitted a statement of drawl of loan indicating amount and date of sanction, amount and date of drawl loan-wise which is given in the table below:

Table – 35
Loan Statement

Source (Institutionwise/ Bankwise)	Purpose	Sanctioned by	Amount Sanctioned	Amount of Drawal	Date of Drawal	Interest Rate (%)	Tenure of Loan	Moratorium period
FY 2007-08								
150688-1	Basta	REC	0.57	0.57	28.03.2008	11.50%	10 Year	3 Year

Source (Institutionwise/ Bankwise)	Purpose	Sanctioned by	Amount Sanctioned	Amount of Drawal	Date of Drawal	Interest Rate (%)	Tenure of Loan	Moratorium period
150689-1	Karanjia	REC	0.13	0.13	28.03.2008	11.50%	10 Year	3 Year
150690-1	Barpali	REC	0.22	0.22	28.03.2008	11.50%	10 Year	3 Year
2350001-1	400 Kv DC Line Meramindali-Duburi	REC	29.62	29.62	28.03.2008	11.50%	10 Year	3 Year
	Total		**30.54**	**30.54**				
F Y 2008-09								
150689-2	Karanjia	REC	4.52	4.52	06.08.2008	12.25%	10 Year	3 Year
2350002-1	Bhadrak	REC	6.07	6.07	06.08.2008	12.25%	10 Year	3 Year
		S Total	**10.59**	**10.59**				
150688-2	Basta	REC	2.1	2.1	17.03.2009	12.50%	10 Year	3 Year
150689-3	Karanjia	REC	5.39	5.39	17.03.2009	12.50%	10 Year	3 Year
150690-2	Barpali	REC	3.82	3.82	17.03.2009	12.50%	10 Year	3 Year
2350002-2	Bhadrak	REC	4.02	4.02	17.03.2009	12.50%	10 Year	3 Year
		S. Total	**15.33**	**15.33**				
	Total		**25.92**	**25.92**				
F Y 2009-10								
150688-3	Basta	REC	3.23	3.23	12.08.2009	12.50%	10 Year	3 Year
150689-4	Karanjia	REC	0.67	0.67	12.08.2009	12.50%	10 Year	3 Year
150690-3	Barpali	REC	2.55	2.55	12.08.2009	12.50%	10 Year	3 Year
2350001-2	400 Kv DC Line Meramindali Duburi	REC	17.04	17.04	12.08.2009	12.50%	10 Year	3 Year
2350002-3	Bhadrak	REC	0.68	0.68	12.08.2009	12.50%	10 Year	3 Year
150689-5	Karanjia	REC	2.31	2.31	30.03.2010	11.00%	10 Year	3 Year
150690-4	Barpali	REC	1.62	1.62	30.03.2010	11.00%	10 Year	3 Year
2350002-4	Bhadrak	REC	0.67	0.67	30.03.2010	11.00%	10 Year	3 Year
150688-4	Basta	REC	2.19	2.19	31.03.2010	11.00%	10 Year	3 Year
2350008-1	Dabugaon	REC	2.95	2.95	31.03.2010	11.00%	15 Year	2 Year
2350009-1	Nuapada	REC	3.82	3.82	31.03.2010	11.00%	15 Year	3 Year
2350010-1	Bhawanipatana	REC	2.3	2.3	31.03.2010	11.00%	15 Year	3 Year
2350011-1	Boudh	REC	3.29	3.29	31.03.2010	11.00%	15 Year	3 Year
2350012-1	Kuchinda	REC	2.74	2.74	31.03.2010	11.00%	15 Year	3 Year
2350013-1	Padampur	REC	2.99	2.99	31.03.2010	11.00%	15 Year	3 Year
		S Total	**49.05**	**49.05**				
48703004	132/33 KV S/S Anandpur	PFC	17.93	17.93	31.03.2010	11.25%	15 Year	3 Year
		S Total	**17.93**	**17.93**				
	Total		**66.98**	**66.98**				
F Y 2011-12								
150690-5	Barpali	REC	1.4	1.4	05.03.2012	12.50%	10 Year	
2350002-5	Bhadrak	REC	5.76	5.76	06.03.2012	12.50%	10 Year	
2353194-1	Bhudipadar-	REC	22.26	22.26	07.03.2012	12.50%	15 Year	3 Year
	Bolangir							
150688-	Basta	REC	2.79	2.79	07.03.2012	12.50%	10 Year	
2350001-3	400 Kv DC Line Meramindali Duburi	REC	19.09	19.09	07.03.2012	12.50%	10 Year	
150689-	Karanjia	REC	2.18	2.18	14.03.2012	12.50%	10 Year	
2350008-2	Dabugaon	REC	2.84	2.84	30.03.2012	12.50%	15 Year	1 Year
2350009-2	Nuapada	REC	5.05	5.05	30.03.2012	12.50%	15 Year	1 Year
2350010-2	Bhawanipatana	REC	4.19	4.19	30.03.2012	12.50%	15 Year	1 Year
2350011-2	Boudh	REC	3.88	3.88	30.03.2012	12.50%	15 Year	1 Year
2350012-2	Kuchinda	REC	3.57	3.57	30.03.2012	12.50%	15 Year	1 Year
2350013-2	Padampur	REC	3.27	3.27	30.03.2012	12.50%	15 Year	1 Year
		S Total	**76.28**	**76.28**				
48703005	132 KV SC line Paradeep to Jagatsinghpur	PFC	6.98	6.98	29.03.2012	12.50%	15 Year	3 Year
48703007	132/33 KV S/S Chandpur	PFC	2.52	2.52	29.03.2012	12.50%	15 Year	3 Year
48703008	132/33 KV S/S Banki	PFC	1.98	1.98	29.03.2012	12.50%	15 Year	3 Year
487030017	132/33 KV S/S Kalunga	PFC	1.4	1.4	29.03.2012	12.50%	15 Year	3 Year

Source (Institutionwise/ Bankwise)	Purpose	Sanctioned by	Amount Sanctioned	Amount of Drawal	Date of Drawal	Interest Rate (%)	Tenure of Loan	Moratorium period
48703019	132/33 KV S/S Banai	PFC	1.65	1.65	29.03.2012	12.50%	15 Year	3 Year
		S Total	**14.53**	**14.53**				
	Total		**90.81**	**90.81**				
F Y 2012-13								
48703005-2	132 KV SC line Paradeep to Jagatsinghpur	PFC	4.24	4.24	26.03.2013	12.50%	13 Year	0
48703007-2	132/33 KV S/S Chandpur	PFC	3.53	3.53	26.03.2013	12.50%	13 Year	0
48703008-2	132/33 KV S/S Banki	PFC	5.35	5.35	26.03.2013	12.50%	13 Year	0
48703017-2	132/33 KV S/S Kalunga	PFC	2.78	2.78	26.03.2013	12.50%	14 Year	0
48703018-1	220 kV DC Line from Bidanshsi	PFC	8.13	8.13	26.03.2013	12.50%	13 Year	0
48703019-2	132/33 KV S/S Banai	PFC	0.86	0.86	26.03.2013	12.50%	15 Year	0
		S Total	**24.88**	**24.88**				
2350004-1	Purusottampur	REC	5.21	5.21	3/30/2013	12.25%	15 Year	3 Year
	Total		**30.09**	**30.09**				
F Y 2013-14								
2350008-3	Dabugaon	REC	5.61	5.61	3/27/2014	12.00%	15 Year	0
2350009-3	Nuapada	REC	10.08	10.08	3/29/2014	12.00%	15 Year	0
2350010-3	Bhawanipatana	REC	6.08	6.08	3/27/2014	12.00%	15 Year	0
2350011-3	Boudh	REC	7.7	7.7	3/27/2014	12.00%	15 Year	0
2350012-3	Kuchinda	REC	7.97	7.97	3/27/2014	12.00%	15 Year	0
2350013-3	Padampur	REC	6.69	6.69	3/27/2014	12.00%	15 Year	0
2350015-1	Karadagadia	REC	7.18	7.18	3/27/2014	12.00%	15 Year	2 Year
2350004-2	Purusottampur	REC	4.72	4.72	3/27/2014	12.00%	15 Year	3 Year
		Sub Total	**56.03**	**56.03**				
48703007-3	132/33 KV S/S Chandpur	PFC	3.09	3.09	3/21/2014	12.50%	12 Year	0
48703008-3	132/33 KV S/S Banki	PFC	2.73	2.73	3/19/2014	12.50%	12 Year	0
48703017-3	132/33 KV S/S Kalunga	PFC	2.79	2.79	3/19/2014	12.50%	13 Year	0
48703019-3	132/33 KV S/S Banai	PFC	2.77	2.77	3/19/2014	12.50%	14 Year	0
48703018-2	220 kV DC Line from Bidanashi	PFC	1.45	1.45	3/19/2014	12.50%	12 Year	0
		Sub Total	**12.83**	**12.83**				
	Total		**68.86**	**68.86**				
F Y 2014-15								
2350015-2	Karadagadia	REC	18.41	18.41	3/31/2015	12.00%	15 Year	1 Year
		Sub Total	**18.41**	**18.41**				
48703007-4	132/33 KV S/S Chandpur	PFC	1.09	1.09	8/28/2014	12.50%	11 Year	0
48703017-4	132/33 KV S/S Kalunga	PFC	5.4	5.4	3/26/2015	12.50%	12 Year	0
48703008-4	132/33 KV S/S Banki	PFC	5.01	5.01	3/26/2015	12.50%	11 Year	0
48703018-3	220 kV DC Line from Bidanshsi	PFC	1.95	1.95	3/16/2015	12.50%	11 Year	0
		Sub Total	**13.45**	**13.45**				
	Bank of India Projects	Bank of India	45.39	**45.39**	3/25/2015	9.75%	12 years	3 years
		Sub Total	**45.39**	**45.39**				
	Total		**77.25**	**77.25**				
F Y 2015-16								
2350015-3	Karadagadia	REC	47.25	10.88	31.03.2016	11.25%	10 Year	1 Year
101080-1	Transformers for (O&M)	REC	137.45	89.02	31.03.2016	11.60%	12 year	3 year
		Sub Total	**184.70**	**99.9**				
48703008-5	132/33 KV S/S	PFC	16.5	0.60	02.03.2016	11.50%	38 month	0 Year

Source (Institutionwise/ Bankwise)	Purpose	Sanctioned by	Amount Sanctioned	Amount of Drawal	Date of Drawal	Interest Rate (%)	Tenure of Loan	Moratorium period
	Banki							
48703017-5	132/33 KV S/S Kalunga	PFC	0.37	0.07	17.03.2016	11.50%	40 month	0 Year
48703019-4	132/33 KV S/S Banai	PFC	20.4	0.63	17.03.2016	11.50%	44 month	0 Year
		Sub Total	**37.27**	**1.30**				
	Bank of India Projects	Bank of India	244.61	**3.08**	31.03.2016	9.70%	12 years	2 years
		Sub Total	**244.61**	**3.08**				
		Total	**466.58**	**104.28**				
	Total							
F Y 2016-17	**To be availed during FY 2016-17 (During March-17)**							
2350001-4	400 Kv DC Line Meramindali Duburi	REC	13.97	13.97	Mar-17	11.60%	7 Year	0 Year
2353194-2	Bhudipadar-	REC	3.73	3.73	Mar-17	11.60%	10 Year	1 Year
2350004-3	Purusottampur	REC	4.20	4.20	Mar-17	11.60%	10 Year	1 Year
2350015-4	Karadagadia	REC	36.37	36.37	Mar-17	11.60%	10 Year	0 Year
		Sub Total	**58.27**	**58.27**				
48703008-6	132/33 KV S/S Banki	PFC	0.44	0.44	Mar-17	11.50%	34 month	0 Year
48703017-6	132/33 KV S/S Kalunga	PFC	0.30	0.30	Mar-17	11.50%	36 month	0 Year
48703019-5	132/33 KV S/S Banai	PFC	19.77	19.77	Mar-17	11.50%	40month	0 Year
		Sub Total	**20.51**	**20.51**				
	Bank of India Projects	Bank of India	241.53	152.13	Mar-17	9.70%	12 years	1 years
		Sub Total	**241.53**	**152.13**				
	New Loan to be availed from JICA		1,146.68	**10.00**		0.80%		
	New Loan to be availed			0.09	Mar-17	11.75%	12 Year	3 Year
		Sub Total	**1146.68**	**10.09**				
		Total	**1467.00**	**241.01**				

225. All the above loans except loan from JICA and the new loan are against the projects approved by the Commission. Therefore, the Commission allows interest impact on loan availed from Bank of India, REC, PFC for capital works only upto 31.03.2017. The amount proposed to be availed during 2017-18 has not been considered for calculation of interest. OPTCL shall make effort to reduce interest cost through swapping wherever possible.

226. Source wise break up on loan as on 31.03.2017 and 31.03.2018, rate of interest on the above loan and the amount of interest determined and approved for 2017-18 is given in table below:

Table – 36

(Rs. Crore)

Source	Average rate of interest (%)	Loan as on 31.03.2017	Loan as on 31.03.2018	Average	Interest impact
Bank of India	9.70	200.58	200.58	200.58	19.46
REC	12.25	307.08	274.54	290.81	35.62
PFC	12.25	68.50	62.27	65.39	8.01
Total		**576.16**	**537.39**		**63.09**

227. In the last year tariff order, OPTCL projected a higher figure of opening balance as on 31.03.2016. But after audit the same figure got reduced drastically. The comparative statement given below will explain the position.

Table - 37

Source	Average rate of interest (%)	Loan as on 31.03.2016 projected by OPTCL	Loan as on 31.03.2016 as per audited accounts	Difference	Excess interest impact allowed in 2016-17 ARR
Bank of India	9.75	95.39	48.45	46.94	4.57
REC	12.25	341.62	274.05	67.57	8.28
PFC	12.25	84.40	54.57	29.83	3.65
Total		**521.41**	**377.07**		**16.5**

228. The Commission opines that such excess amount of interest as determined in the table above which was allowed as pass through in the ARR of 2016-17 needs to be adjusted in AR for 2017-18. Therefore, the Commission deducts an amount of Rs.16.50 crore from the approved amount of Rs.63.09 crore (Table above) to arrive at Rs.46.59 crore as a pass through in the revenue requirement for FY 2017-18.

229. Besides the above, OPTCL claimed an amount of Rs.26.26 crore towards State Govt. loan and bond. In line with the earlier orders, the Commission disallows the same. Based on the above, the interest liability for FY 2017-18 works out to Rs.46.59 crore as mentioned in the para above. The Commission approves the same as a pass through in the ARR for FY 2017-18.

Interest on Working Capital

230. OPTCL has proposed an amount of Rs.14.66 crore towards interest on working capital under Regulation 8.26 of OERC Regulations, 2014. The table showing calculation of interest on working capital is given in table below:

Table- 38

Calculation of Interest on Working Capital	
Parameters	**Rs. Crore**
(i) Receivables equivalent to two months of fixed cost.	86.97
(ii) Maintenance Spares @ 15% of O&M expenses	97.03
(iii) Operation & Maintenance expenses for one month	54.05
Total Working Capital	238.32
Interest on Working Capital @ 12.30% for 15 days	**14.66**

231. As per the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulation, 2014 read with para 8.26 it has been mentioned that in case of STU (OPTCL) the Commission shall determine the quantum of working capital if needed depending upon the cash flow position of the licensee and shall allow interest on the same. OPTCL furnished the cash flow statement upto January 2016. According to this revenue receipt upto January is shown at Rs.566.96 crore whereas the revenue expenditure including anticipated repayment of principal is Rs.453.50 crore (Rs.421.67+Rs.31.83). The gap is Rs.103 crore positive. The Commission therefore does not feel it justified to allow the same in the revenue requirement. Further, the Transmission Charge is the first charge being recovered from monthly BSP bill of DISCOMs. Hence, the interest on working capital as claimed by OPTCL is disallowed by the Commission.

Depreciation

232. OPTCL has claimed an amount of Rs.192.59 crore towards depreciation for the FY 2017-18 on the basis of computation as per OERC Regulation, 2014 for the State Transmission Utility. A statement of Fixed Asset and block wise computation depreciation is shown in table below:

Table - 39

(Rs. Crore)

Transmission Assets	OERC Depreciation Rate as per Regulations, 2014	Gross Block as on 01.04.2017	Addition	Depreciation
Free Hold Land		41.66	8.62	-
Lease Hold Land		32.34	6.69	0.66
Buildings	3.34%	106.02	21.94	3.53
Plant and Machinery (Other Civil Work)	3.34%	10.74	2.22	0.36
Plant and Machinery	5.28%	2302.43	476.54	96.06
Plant and Machinery	0.00%	703.03	406.05	-

Transmission Assets	OERC Depreciation Rate as per Regulations, 2014	Gross Block as on 01.04.2017	Addition	Depreciation
(By Beneficiary)				
Plant and Machinery: (Lines, Cables & Network)	5.28%	2361.89	488.84	90.17
Vehicles	9.50%	2.53	0.52	0.12
Furniture, Fixture	6.33%	5.45	1.13	0.27
Office Equipment& Others	6.33%	31.52	6.52	1.42
Grand Total		**5597.60**	**1419.08**	**192.59**

233. In format F-17 (statement of fixed asset) submitted by OPTCL it is found that Rs.1355.53 crore has been added towards fixed asset during 2016-17. This includes an amount of Rs.509.75 cr. of asset booked to the account of the beneficiary. Excluding the above, the addition by OPTCL on its own account comes to Rs.845.78 cr. Opening balance of fixed asset i.e. 01.04.2016 as found out from the audited account was Rs.4242.07 crore. After addition of the completed asset during 2016-17 the gross fixed asset as on 31.03.2017 works out to be Rs.5597.60 crore which was taken into consideration for calculation of depreciation for the FY 2017-18 by OPTCL. However, OPTCL has not submitted any records showing decommissioned installations and replacements. A table showing the amount of fixed asset addition approved by the Commission in the last five years and actual addition as per audited accounts is given table below:

Table – 40

(Rs. in Crore)

	Proposed by licensee	Approved by Commission	Actual per audited accounts	Excess (+)/ shortfall (-)
2011-12	227.34	227.34	135.58	- 91.76
2012-13	416.57	416.57	219.48	- 197.09
2013-14	256.72	256.72	196.74	-59.98
2014-15	495.18	495.18	153.06	- 342.12
2015-16	963.63	506.79	636.59	+ 129.80

234. It is observed from the above that, OPTCL has always added lesser amount towards fixed assets against approval till 2014-15. For the year 2015-16 the addition of asset as per audited account exceeds the approval of the Commission. During 2016-17 the Commission approves the same audited figure of the previous year i.e. Rs.636.59 crore as asset addition for the purpose of computation of depreciation. Any excess addition of assets as per the audited accounts of 2016-17 over the approved figure shall be taken into consideration in the truing up exercise.

235. The issue of up-valuation of the fixed asset has been addressed in the previous year's tariff order in para 217 to 225. The Commission vide letter No. Dir(T)-175/02/1621 dt.21.12.2015 sought for the views of the State Govt. in this regard. The extract of such correspondence is given below:

Keeping in abeyance the upvaluation, moratorium of Debt Service

Govt. of Odisha extended the befit of keeping in abeyance of upvaluation of assets and moratorium of debt services upto FY 2012-13 vide letter No.2404 dt.21.03.2011. Thereafter, the Commission made several correspondences with the Govt. to extend the same benefit from FY 2013-14 onwards so that the effect of upvaluation will not be taken into consideration while determining the tariff. The letter No. in which Commission intimated to Govt. are furnished below:

(i) Letter No.4617 dt.28.12.2012

(j) Letter No.77 dt.16.01.2014

(k) Letter No.428 dt.13.03.2014

(l) Letter No.51 dt.13.01.2015

The State Govt. in their letter No.4323 dt.31.05.2014 sought information from the Commission on the impact of upvaluation of assets on tariff which had been kept under abeyance. The Commission in response to Govt. letter furnished the summary sheet of impact of upvaluation vide No.862 dt.12.06.2014. Reply from State Govt. on this issue is still awaited.

236. Although Govt. vide letter No.1808 dt.28.02.2015 gave item wise reply to the letter of the Commission the issue regarding upvaluation of asset of OPTCL was not addressed. Further, the Commission raised the issue before hearing of the ARR for FY 2016-17 vide letter No.1621 dated 21.12.2015. In reply, the Government vide its letter No.2091dated 11.03.2016 stated the following:-

"3. Keeping in abeyance of Up-valuation, Moratorium of Debt Service etc: The issue of up-valuation does not figure in case of GRIDCO which does not own any assets. However, regarding the issue of upvaluation of assets pertaining to OPTCL, the Government for the time being agrees with the views of the Commission to keep in abeyance the upvaluation of assets, such a benefit cannot go indefinitely. However, considering the present difficult situation, the Govt. agrees to extend the status-quo on up-valuation till 2016-17."

Accordingly, the Commission has approved calculation of depreciation based on historical cost of assets and not considering the effect of up-valuation for the year 2016-17.

237. Again the Commission brought the issue to the notice of GoO vide letter No.JD(FIN)-175/02(Vol.II)/302 dt.23.02.2017 to take a view on keeping the effect of upvaluation

in abeyance for the year 2017-18. Government of Odisha vide letter No.LC-OERC-18/2017/1929 dt.08.03.2017 replied the following:

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 present difficult situation, the Govt. agrees to extend the status-quo on up-valuation till 2017-18.

Accordingly, the Commission has not considered the effect of upvaluation of asset in determining the ARR for 2017-18.

238. The Commission has extensively dealt with the valuation of assets and calculation of depreciation in Para 5.36.1 to 5.37.5 of tariff order dated 23.6.2003 and treated transmission asset base of undivided GRIDCO at Rs.514.32 crore as on 01.4.1996.

The gross fixed assets as on 01.04.96 and year-wise asset addition thereafter till FY 2016-17 is depicted in table below.

Table – 41

(Rs. Crore)

Year	**OPTCL**
GFA as on 1.4.1996	514.32 (Pre up-valued)
1996-97	49.46
1997-98	39.94
1998-99	62.50
1999-00	111.79
2000-01	134.10
2001-02	86.44
2002-03	132.17
2003-04	69.46
2004-05	71.72
2005-06	158.91
2006-07	144.23
2007-08	206.10
2008-09	142.72
2009-10	188.49
2010-11	189.80
2011-12	135.58
2012-13	219.48
2013-14	196.74
2014-15 (Audited)	153.06
2015-16 (Audited)	636.59
Sub-Total	**3643.60**
Less Asset of beneficiary as on 31.03.2016 as per Audited Account	193.28
Gross Asset as on 01.04.2016	3450.32
Addition for the FY 2016-17 approved by the Commission	636.59
Total asset as on 01.04.2017	**4086.91**

239. In view of the directions and order of the High Court of Odisha, the depreciation for the purpose of determination of ARR and Tariff has to be calculated on the basis of Pre-92 rates on the original book value of assets (i.e. after rolling back the effect of revaluation of 1996 from the value of the assets).

240. The classification of assets has been done proportionately based on the figures approved by the Commission in the tariff order for the FY 2016-17. The calculation of depreciation for the FY 2017-18 is shown in table below:

Table –42

(Rs. Crore)

Particulars	**Pre-92 rate of depreciation as per GOI notification dated 31.01.92**	**Book Value of asset as on 01.04.2016 approved by the Commission in the Tariff Order 2016-17**	**%age to the total asset**	**Book Value as on 01.04.2016 as per actuals**	**Addition during FY 2016-17 approved by the Commission**	**Book Value as on 01.04.2017 (without considering upvaluation)**	**Depreciation for the year 2017-18**
1	**2**	**3**	**4**	**5**	**6 (7-5)**	**7**	**8**
Land and Rights		55.57	1.58	54.57	10.06	64.63	0.00
Building	1.80%	86.35	2.46	84.79	15.64	100.43	1.81
Plant & Machinery (other civil works)	1.80%	8.69	0.25	8.53	1.58	10.11	0.18
Plant & Machinery	3.80%	1832.31	52.15	1799.21	331.96	2131.17	80.98
Plant & Machinery (line, cables and network)	2.57%	1502.47	42.76	1475.33	277.20	1747.53	44.91
Vehicles	12.86%	1.65	0.05	1.62	0.30	1.92	0.25
Furniture, Fixture	4.55%	3.31	0.09	3.25	0.60	3.85	0.18
Office equipment	9.00%	23.45	0.67	23.02	4.25	27.27	2.45
Grand Total		**3513.80**		**3450.32**	**636.59**	**4086.91**	**130.76**

241. Accordingly, Commission approves an amount of Rs.130.76 crore towards depreciation for the FY 2017-18.

Return on Equity

242. OPTCL has claimed an amount of Rs.62 crore during FY 2017-18 as per clause 8.28 of Regulation, 2014 on equity share capital of Rs.400 crore @ 15.5%.

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 @15.5% to be grossed up as per Clause (2) of this Regulation. The amount of equity infused by State Govt. till 2016-17 amounts to Rs.400 crore. The sanction order and date of Govt. fund is given in table below:

Table – 43

Sl. No.	Sanction Order No. and Date	Amount (Rs. In cr.)
1.	R&R-I-01/2009-3560 dt.25.03.09	23.04
2.	R&R-I-01/2009-2003 dt.24.02.09	0.01
3.	R&R-I-01/2009-9464 dt.11.09.09	5.0
4.	R&R-I-01/2009-4826 dt.01.06.10	20.0
5.	R&R-I/73/2010-2438 dt.23.03.2011	51.95
6.	R&R-6/12-685 dt.31.01.2012	1.00
7.	R&R-6/12-690 dt.31.01.2012	39.00
8.	R&R-6/12-695 dt.31.01.2012	3.00
9.	R&R-6/12-629 dt.22.01.2013	25.76
10.	R&R-6/12-634 dt.22.01.2013	16.60
11.	R&R-6/12-624 dt.22.01.2013	7.64
12.	R&R-6/12-5693 dt.18.07.2013	29.19
13.	R&R-6/12-5698 dt.18.07.2013	11.97
14.	R&R-6/12-5703 dt.18.07.2013	8.84
15.	R&R-69/14-10445 dt.29.12.2014	10.50
16.	R&R-69/14-10450 dt.29.12.2014	27.50
17.	R&R-69/14-10455 dt.29.12.2014	12.00
18.	R&R-69/14-6823 dt.06.08.2015	19.68
19.	R&R-69/14-6818 dt.06.08.2015	17.22
20.	R&R-69/14-6813 dt.06.08.2015	20.03
21.	BT(P)-15/15-10291 dt.21.12.2015	0.07
22.	R&R-69/14-5364 dt.18.7.2016	10.00
23.	R&R-69/14-5369 dt.18.7.2016	20.00
24.	R&R-69/14-5374 dt.18.7.2016	20.00
22.	**Total**	**400.00**

244. The Commission allows return at the rate of 15.5% on the equity value of Rs.400 crore amounting to Rs.62 crore**.** The Commission approves the same as a pass through in the ARR of 2017-18.

245. Over and above this amount, the Commission allows the actual tax expenses of Rs.8.15 crore booked in the audited accounts for FY 2015-16 which is also claimed by OPTCL in the ARR.

Expenses relating to auxiliary energy consumption in the s/s

246. OPTCL claimed an amount of Rs.3.55 crore under this head for FY 2017-18. The Commission do not consider the same as a pass through in the ARR since as per Regulation 8.5 of OERC (Terms & Conditions for determination of Transmission Tariff) Regulation, 2014 the charges for auxiliary energy consumption in the sub-station for the purpose of air conditioning, lighting and consumption in other

equipment shall be borne by the transmission licensee/STU and included in the operation and maintenance expenses.

Other miscellaneous expense

247. (a) **Grid Co-ordination Committee Expenses**: OPTCL claimed an amount of Rs.0.97 under this head for the FY 2017-18. In a reply to querry OPTCL furnished the details of expenditure towards GCC during 2015-16 which recorded an amount of Rs.0.23 crore during 2015-16 on these expenses. OPTCL has incurred an amount of Rs.0.34 crore towards GCC expenses (upto December 2016). The Commission therefore allows an amount of Rs.0.34 crore towards GCC expenses for the year 2017-18.

(b) **Corporate Social responsibility**: Under this head OPTCL claimed an amount of Rs.0.59 crore during the FY 2017-18. The Commission views that this is the part of their profit and cannot be allowed as a pass through in the ARR.

Payment of SLDC Charges

248. Based on CERC (Fees and Charges of Regional Load Despatch and Other related matters) Regulations, 2009 and OERC (Fees and Charges of SLDC and other Matters) Regulation, 2010, the Commission has approved the ARR for SLDC for FY 2017-18 wherein it has been computed that OPTCL has to Pay 10% of SOC to SLDC. Accordingly, OPTCL will pay an amount of Rs.0.65 crore per annum to SLDC towards System Operation Charges for FY 2017-18. The details of SOC are available in the ARR of SLDC approved in Case No.65 of 2016. The said amount of Rs.0.65 crore is allowed in the ARR of OPTCL to be recovered through its Transmission Tariff.

Incentive for system availability

249. OPTCL in its submission has claimed an incentive of Rs.9.35 crore to be passed on the ARR of FY 2017-18 as the system availability of OPTCL Transmission Network for FY 2015-16 was 99.96%, which is more than Normative Annual Transmission System Availability Factor (NATAF) of 98.5%. The OPTCL Incentive Claim of Rs.9.35 crore has been certified by SLDC.

250. The Commission examined the relevant provision of Act & Regulations with regard to payment of incentive to OPTCL. As OPTCL has attained the System Availability of 99.96% during FY 2015-16 and is expected to maintain NATAF more than 98.5%

during FY 2015-16, pending verification, the Commission approves an amount of Rs.5.00 crore as an incentive in the ARR of OPTCL for FY 2017-18 with a rider that this incentive amount approved by the Commission should be spent in the Grid substations where the EHT voltage is not within (-) 12.5% of the normative voltage level at 220 KV /132 KV continuously suffering from low voltage. 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 at permissible range of 33 KV. OPTCL is directed to submit the breakup of the amount spent under this head.

Rebate

251. 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 20.27 crore towards rebate for FY 2017-18. The Commission approves an amount of Rs.12.80 crore towards rebate as a pass through in the ARR.

Miscellaneous Receipts

252. OPTCL has proposed an amount of Rs.30 crore towards miscellaneous receipt from inter-state wheeling, Intra-State short term Open Access, Inter-State short term Open Access, STU charges received from Energy Exchange and supervision charges. OPTCL in its submission stated the following: During 1st six months of FY 2016-17, Miscellaneous Receipt of OPTCL from different sources is about Rs.14.83 crore. As required by the Commission the OPTCL submitted its cash flow statement upto January, 2017 as per which the miscellaneous receipt for the 1st 10 months of the current financial year worked out to Rs.68.28 crore. The details are given in table below:

Table- 44

Miscellaneous Receipt during 1st ten months of FY 2016-17	
Source	**Rs. Crore**
Inter-State Wheeling	35.66
Short-Term Open Access	11.20
STU charges received from Energy Exchange	5.22
Supervision Charge	4.82
Sale of tender papers and other miscellaneous receipt	11.38
Total	**68.28**

253. Extrapolating the above amount of Rs.68.28 crore for a period of 12 month the miscellaneous receipt for the entire year works out to Rs.81.94 crore for the FY 2016-17. The Commission considers the same amount of Rs.81.94 crore towards Miscellaneous Receipt for the year 2017-18.

Transmission Cost

254. OPTCL in its ARR application has considered demand projection of all four DISCOMs totaling 25877 MU for FY 2017-18. OPTCL envisages 150 MU of energy to be transacted in DISCOMs 33kV & 11 kV 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 for DISCOMs gets reduced to 25727 MU. The Commission scrutinized the proposal of OPTCL and the total energy to be transmitted in the OPTCL system is estimated at 25545 MU for FY 2017-18, the details of which are mentioned in the table below:

Table – 45

Details of Energy for Transmission	Proposed by OPTCL (MU)	Approved by OERC (MU)
Total Demand of DISCOM	25877	25140
Less energy transmitted in 33KV & 11 KV network	**150**	**150**
Energy Transmitted for DISCOM	25727	24990
Wheeling to industries from CGPs	550	550
Sale to CGPs by GRIDCO	5	5
Total	**26282**	**25545**

255. The details of expenses proposed by OPTCL and approved by the Commission for FY 2016-17 towards transmission charges are depicted in table below:

Table – 46
ARR Proposed and Approved for OPTCL for 2017-18

ITEMS	Approved for 2016-17	Proposed for 2017-18	Approved for 2017-18
Employees Cost including Terminal Benefits	292.55	462.33	304.50
R&M Cost	110.59	155.11	124.97
A&G Cost	24.66	26.11	25.60
Interest on Loan Capital	59.04	87.95	46.56
Depreciation	101.45	192.59	130.76
Return on Equity	62.03	70.15	62.00
Income Tax			8.15
Interest on Working Capital	-	14.66	0.00
Sub-Total	**650.32**	**1008.90**	**702.54**

ITEMS	Approved for 2016-17	Proposed for 2017-18	Approved for 2017-18
Special Appropriation			
Pass Through Expenses			
Contingency Reserve			
Other miscellaneous expenses (Aux.)	0.00	3.55	0.00
GCC Expense including SLDC charges and CSR	0.98	1.56	0.99
Incentive for system availability	5.00	9.35	5.00
Rebate	12.50	20.27	12.80
Total	**668.80**	**1043.63**	**721.33**
Less Misc. Receipts	**45.55**	**30.00**	**81.94**
Annual Revenue Requirement to be recovered from LTOA Consumers (i.e. DISCOMs & CGPs)	**623.25**	**1013.63**	**639.40**
Transmission Charges (Paise/Unit) (Rounded)	**25.00**	**38.57**	**25.00**

TARIFF DESIGN

Transmission Charges

256. OPTCL in its ARR Application for FY 2017-18 has proposed Transmission Charges @ 38.57 P/Kwh for transmission of power at 400/220/132 kV only over OPTCL's EHT transmission system. 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 25545 MU with an average demand of 2916 MW. The net transmission cost as indicated in the table above is Rs.639.43 crore. Accordingly, the LTOA charges work out to a rounded sum of Rs.6000.00/MW/day or Rs.250.00/MWh. The long term open access customer availing Open Access under relevant Regulations of OERC shall pay Rs.6000.00/MW/Day (Rs.250.00/MWh)

towards transmission charges. In accordance with OERC Regulation, 2005, the short term open access customers shall pay at the rate of 25% of the long-term open access charges. Accordingly the Commission approves the rate of Rs.1500.00/MW/day (Rs.62.5 / MWh) for STOA customers. This will be in addition to other charges in accordance with Open Access Regulations, 2005 & 2006.

Transmission Loss for Wheeling

258. OPTCL had proposed that out of the energy supplied to transmission licensee, 3.50% 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 3.50% for wheeling for FY 2017-18. However, the Commission expects that OPTCL shall strive to reduce the loss further by 0.20% by adopting best practices by end of 2017-18.

Reactive Energy Charges:

259. The Commission vide para 254 (Reactive Energy Charges) of the order dated 21.03.2016 passed in Case No.55/2015 (ARR & Transmission Tariff of OPTCL for the FY 2016-17) have observed and directed OPTCL as under:

"The Commission in order dated 23.03.2015 had approved Reactive energy charges provisionally @ 6.50 Paisa/KVArh as per clause 1.7 of OGC for FY 2015-16 and directed OPTCL to discuss the matter in the Grid Co-Ordination Committee Meeting afresh and file the detailed procedure and billing of Reactive Energy Charges with full justification thereof within 30th June 2015. OPTCL submitted that monthly mock Reactive Energy bills are being served on the LTOA Customers (four DISCOMS, NALCO and IMFA) by SLDC since long. The stakeholders were requested to furnish their feedback on the mock bills for further deliberation / action by OPTCL. OPTCL has not yet received any feedback regarding the mock Reactive Energy bills from any of the stakeholders. So, the Commission directs that the same rate also be applicable provisionally for FY 2016-17 also. Further, the Commission directs the licensee to discuss the matter in the Grid Co-ordination Committee meeting afresh and file the detailed procedure and billing of Reactive Energy Charges with full justification thereof within 30th July, 2016."

260. OPTCL vide letter No. 260 dated 28.07.2016 had requested the Commission for allowing two months more time (up to 30.09.2016) to comply with the above stated directions.

261. In accordance with the aforesaid directions of the Commission, the matter regarding Reactive Energy Charges was discussed in the 13th Grid Co-ordination Committee (GCC) meeting held in Bhubaneswar on 25.05.2016. As on date, written feedback/comments/observations of the concerned entities, namely CESU, WESCO,

NESCO, SOUTHCO, NALCO & IMFA on the mock Reactive Energy Bills have not been received by OPTCL/SLDC.

262. OPTCL submits that it is in the process of finalization of application for determination of Reactive Energy Charges for FY 2016-17 and the same will be filed before the Commission very shortly. Accordingly, OPTCL is directed to submit the applications for determination of reactive energy charges for FY 2016-17 and 2017-18 within 31.07.2017.

Transmission Charge Payment Mechanism

263. 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 to be followed for the Year 2017-18.

Reliability Support Charge:

264. OPTCL has proposed to claim a Reliability Support Charge for connectivity of CGP @ Rs.1 lakh/MW/annum on the installed capacity. The claim of OPTCL appears to have a ground in this matter since CGPs are dependent on the Grid for various reasons such as emergency drawal and VAR support etc. But at this instant we are unable to address the same. However, this issue can be deliberated if OPTCL comes through a separate petition with relevant information.

Additional Charges for East Coast Railways:

265. OPTCL in its ARR proposal has proposed to collect 10 paise per unit for collection of energy meter data from 29 TSS drawal points of Railways for requirement of additional manpower and 15 paise per unit for drawal of unbalanced power & generation of harmonics by Railways in addition to intra State Transmission charges & Losses approved by the Commission. In its reply to the query of the Commission, OPTCL has submitted that additional cost will be incurred for making provision for Automated Metering Infrastructure, engagement of manpower and installation of high capacity equipment for managing unbalanced load of Railways. The Commission feels if OPTCL incurs more expenditure than the normative in this case, then it may be justified to allow the same to be recovered from Railways. Therefore, OPTCL is

advised to come through a separate petition for collection of this type of levy with supporting documents.

Rebate

266. 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 one month of presentation of bills by the Distribution Licensee, a rebate of 1% shall be allowed.

Late Payment Surcharge

267. 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.

268. The transmission tariff approved as above in respect of OPTCL will become effective from 1st April, 2017 and shall continue until further order.

269. The Tariff Order shall be made effective from 01.04.2017.

270. The applications of OPTCL in Case No. 64 of 2016 & Case No.10 of 2017 are disposed of accordingly.

Sd/-	Sd/-	Sd/-
(S.K. PARHI)	**(A.K. DAS)**	**(U.N. BEHERA)**
MEMBER	**MEMBER**	**CHAIRPERSON**

Annexure 1

CAPEX Proposed by OPTCL for New Projects (FY 2017-18)

1. OPTCL proposes to spend **Rs.1144.01 Cr.** during FY 2017-18 towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works. The summary of proposed CAPEX under various wings is furnished in the table below:

Projected CAPEX for new projects - FY 2017-18

Particulars	Amount (Rs. Cr.)
(i) Telecom Wing	82.32
(ii) Existing Assets (O&M Wing)	112.32
(iii) Information Technology (IT Wing)	30.61
(iv) Civil Wing	52.30
(v) New Transmission Projects (Construction Wing)	866.46
Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)]	**1144.01**

2. **CAPEX for telecom related projects:** The CAPEX proposal for the FY 2017-18 in respect of Telecommunication work is summarized as follows:

   a. SCADA Interface Points at vital 132kV Sub-Stations of OPTCL by laying OPGW Cable
   b. Laying of OPGW to balance 132/220/400 kV S/S of OPTCL (App. 450km)
   c. Infrastructure provision of SCADA for up-coming Industries
   d. Provision of Digital Tele-protection coupler in all 220kV lines
   e. Provision of phase wise replacement of RTU
   f. Phase wise replacement of 8 core OPGW by 24 core OPGW
   g. Installation of PMUs in all 220kV and above kV lines of OPTCL

   Provision of **Rs. 82.32 Cr** is proposed for FY 2017-18 towards CAPEX pertaining to Telecommunication Wing, the details of which are shown in the table below:

CAPEX - Telecom Projects - FY 2017-18

Item	Amount (Rs. Cr.)
SCADA interface points at vital 132kV s/s by laying OPGW cable (1745 km.)	38.00
Laying OPGW to balance 132/220/400kV s/s of OPTCL (6589 km.)	19.07
Infrastructure provision of SCADA for upcoming industries	2.40
Provision of Digital Tele-protection coupler in all 220kV lines	2.50
Provision of phase-wise replacement of old RTU	3.10
Phase-wise replacement of 8 core OPGW by 24 core OPGW	10.70
Installation of PMUs in all 220kV & above voltage level sub stations	6.55
Total	**82.32**

3. **CAPEX for Existing Assets (O&M Wing):** An amount of **Rs. 112.32 Cr.** has been proposed for the FY 2017-18 under CAPEX to meet the future load growth the details of item wise CAPEX for O&M related projects are shown in the table below.

CAPEX Existing Assets – (O&M WING) - FY 2017-18

Sl. No.	Description	Unit Rate (Lakh)	Quantity	Amount (Rs. Crore)
1	**PROCUREMENT OF TRANSFORMERS WITH COST OF ERECTION**			
(i)	Procurement of 160 MVA, 220/132kV	715.00	2	14.30
(ii)	Procurement of 40 MVA, 132/33kV	234.00	5	11.70
(iii)	Procurement of 20 MVA, 220/33kV	198.08	1	1.98
(iv)	Procurement of 20 MVA, 132/33kV	165.00	8	13.20
(v)	Cost of construction of Bays with cost of Structures and Equipments	LS		18.20
2	**UPRATING OF CONDUCTOR WITH HTLS**			
(i)	132kV Chandaka - Nimapara line (56.28 RKM)	LS		52.94
(ii)	132kV Ranasinghpur - Kesura line (24.04 RKM)			
(iii)	132kV Kesura - Nimapara line (42.55 RKM)			
	TOTAL			**112.32**

4. **CAPEX for Information Technology (IT) related projects:** Provision of Rs. 30.61 Cr. is made for FY 2017-18 towards CAPEX for infrastructure development of IT and automation related fields etc. as given in the table below:

CAPEX - IT PROJECTS - FY 2017-18

Sl. No.	Item Description	Amount (Rs. Cr.)
1	Analytics (Business Intelligence)	3.50
2	Primary Data Centre (PDC)/E-shakti	10.00
3	Disaster Recovery Data Centre	7.00
4	End-User IT Systems	3.00
5	CCTV & VC	5.06
6	DMS	0.05
7	Smart Grid AMI	2.00
TOTAL		**30.61**

5. **CAPEX for civil works:** OPTCL proposes CAPEX of **Rs. 52.30 Cr.** relating to Civil Works during FY 2017-18 for new upcoming projects which have been detailed in the table below.

CAPEX - Civil Works Projects - FY 2017-18

Sl. No.	Description of works	Amount (Rs Cr.)
1	Construction of approach road and related works	4.00
2	Construction of boundary wall and related works	2.00
3	Water supply and sewerage system and drainage related work	0.50
4	Construction of offices, staff quarters, stores	10.00
5	Construction of Tech Tower, Bhubaneswar	20.00
6	Construction of Data Centre, Bhubaneswar	15.80
TOTAL		**52.30**

6. **CAPEX for New Transmission Projects (construction wing):** It has been planned to spend an amount of Rs. 866.46 Cr. on transmission related infrastructure during FY 2017-18 to increase the overall system capacity and to strengthen the transmission system network of the state, the details of which are shown in the table below.

CAPEX For New Transmission Projects (Construction Wing) FY 2017-18

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2016-17			Projected Expenditure (FY 2017-18)
		Actual For First 6 Months	Projection For Balance 6 Months	Total	
A	**ONGOING SCHEME**				
1	2	3	4	5=3+4	6
1	132/33kV **Khajuriakata** (Hindol Road) S/S with line	1.37	3.00	4.37	-
2	Diversion of 132kV **Dhenkanal-Nuapatna** line with 132kV Bay Extn. at Nuapatna S/S	-	3.25	3.25	-
3	132/33kV **Udala** S/S with LILO	0.22	4.50	4.72	20.00
4	132kV **Bhadrak - Anandpur**S/C line	0.42	5.00	5.42	6.63
5	132/33kV **Olaver** S/S with line & Bay Extn. at Pattamundai	2.00	5.00	7.00	2.00
6	132/33kV **Agarpada** S/S with LILO	0.28	7.00	7.28	13.89
7	132/33kV**Bhogra**i S/S with LILO	6.34	6.00	12.34	-
8	132kV **Baripada PGCIL** (Kuchei)-**Jaleswar** D/C line & 2 nos. 132kV Bay Extn.	2.71	2.34	5.05	-
9	220/132kV **Puri** (Samangara) S/S with line	3.50	4.33	7.83	-
10	220/132kV **Atri (**Karadagadia**)** S/S with line	3.43	5.00	8.43	-
11	220/132kV **Mendhasal**S/S with line	0.75	1.15	1.90	-
12	220/132/33kV **Pratapsasan**S/S with line	18.09	10.00	28.09	26.13
13	3rd ICT at 400/220kV **Mendhasal** S/S	0.56	7.50	8.06	10.55
14	220kV **Bidanasi-Cuttack** D/C line	2.27	2.00	4.27	-
15	220/132kV **Cuttack** (Nuapada) S/S & 220kV Bay Extns. at **Bidanasi**	1.77	4.80	6.57	-
16	132/33kV **Marshaghai** S/S with LILO	0.14	2.5	2.64	-
17	132kV Bay Extns. at **Salipur** & **Kendrapara** with lines	0.01	1.00	1.01	-
18	132kV**Nuapatna-Banki** S/C line	1.17	6.00	7.17	2.97

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2016-17			Projected Expenditure (FY 2017-18)
		Actual For First 6 Months	Projection For Balance 6 Months	Total	
19	132/33kV **R. Udayagiri** S/S with line & 132kV Bay Extn. at Mohana	2.79	10.00	12.79	5.67
20	Conversion of existing 132kV **Balasore-Somathpur** S/C line to D/C line & 132kV Bay Extns.	0.07	0.05	0.12	-
21	220/33kV **Narasinghpur** S/S with LILO	6.09	6.00	12.09	16.33
22	132/33kV **Bangiriposhi** S/S with line	2.45	4.50	6.95	1.01
23	132/33kV **Dhenkikote** S/S with line	4.69	8.50	13.19	16.87
24	132/33kV **Brajabiharipur,** Cuttack (old site CDA) S/S	-	3.50	3.50	20.00
25	220/33kV **Baliguda** S/S with line	3.02	15.00	18.02	45.00
26	132/33kV **Satasankha** (Puri) S/S with line	0.26	7.00	7.26	25.00
27	132/33kV **Tirtol** S/S with line	0.23	5.00	5.23	25.00
28	132/33kV **Chikiti** S/S with line	1.03	6.50	7.53	25.00
29	132/33kV **Betonati** S/S with line	3.49	7.50	10.99	5.02
30	220/132/33kV **Aska** S/S with line	1.77	7.50	9.27	35.00
31	220/132/33kV**Chandaka-B** (Bhubaneswar) GIS S/S	40.9	33.14	74.04	-
32	220kV **Atri-Pandiabil** D/C line	2.03	-	2.03	-
33	220/132/33kV **Goda Chhak** S/S with line	1.43	12.00	13.43	30.00
34	132/33kV **Banki** S/S with line	-	0.50	0.50	-
35	132/33kV **Unit-8** (Bhubaneswar) GIS S/S with line	-	3.00	3.00	25.00
36	132/33kV **Mancheswar** GIS S/S with line	-	3.00	3.00	25.00
37	132kV **Phulbani-Boudh** S/C line	-	5.00	5.00	25.00
38	132/33kV **Athagarh** GIS S/S with line	3.64	5.00	8.64	28.00
39	220/33kV **Keonjhar** GIS S/S with line	2.16	7.00	9.16	35.00
40	132/33kV **Chandbali** GIS S/S with line	-	5.00	5.00	25.00
41	220kV **Pandiabil - Pratapsasan** D/C line	1.88	5.00	6.88	20.00
42	Other works	9.29	2.50	11.79	2.50
43	220/33kV**Kasipur** S/S with line	8.55	10.49	19.04	-
44	220/132kV **Jayapatna** S/S with line	4.04	10.00	14.04	63.45
45	132/33kV **Muniguda** S/S with line	3.45	14.94	18.39	-
46	Diversion of 220kV**Indravati-Theruvalli** (Ckt-III & IV) D/C line atLoc. No. 64	-	0.20	0.20	-
47	Tfr. bay at 220/33kV **Laxmipur** S/S	-	1.52	1.52	-
48	220/132/33kV **Gunupur S/S** with LILO	0.05	-	0.05	9.57
49	132/33kV **Pottangi** S/S with line	2.33	2.22	4.55	-
50	132/33kV **Umerkote** S/S with line	0.09	0.02	0.11	-
51	132/33kV **Dabugaon** S/S with line	-	0.40	0.40	-
52	132/33kV **Podagada** S/Swith line	1.02	2.00	3.02	-
53	220kV **Jayanagar-PGCIL** D/C line with 2 nos. 220kV feeder bays	0.53	8.00	8.53	-
54	Conversion of existing **Jaynagar-Sunabeda** S/C line to D/C line	0.47	2.00	2.47	-
55	220/33kV **Malkanagiri** S/S with line	15.03	9.00	24.03	-
56	132/33kV **Boriguma**S/S with LILO	4.36	3.00	7.36	-
57	220/33kV **Kalimela** S/S with line	2.47	5.00	7.47	7.00
58	132kV **Jayanagar-Tentulikhunti** S/C line	0.30	5.00	5.30	6.00
59	132kV **Podagada-Pottangi**S/C line	-	0.10	0.10	1.00
60	220/132kV **Kesinga** S/S with line	0.91	20.00	20.91	-

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2016-17			Projected Expenditure (FY 2017-18)
		Actual For First 6 Months	Projection For Balance 6 Months	Total	
61	220/132/33kV **Baragarh** (New) S/S	2.98	10.00	12.98	-
62	132/33kV **Kantabanji** S/S with line	1.36	17.00	18.36	-
63	132/33kV **Ghens** S/S with line	4.22	23.00	27.22	3.00
64	132/33kV **Tusura** S/S with line	5.95	18.00	23.95	2.00
65	132/33kV **Biramaharajapur** S/S with line	4.96	10.00	14.96	-
66	132kV **Junagarh-Kesinga** D/C line	3.10	12.00	15.10	10.00
67	132kV **Kesinga-Khariar** line	-	-	-	5.00
68	132kV **Nuapada-Padampur** line	6.46	5.00	11.46	-
69	400/220kV **Lapanga** S/S with LILO	11.27	38.73	50.00	35.00
70	220/132/33kV **Lapanga** S/S with LILO	2.26	0.74	3.00	-
71	220/132/33kV**Kuanrmunda** S/S with LILO.	0.26	1.00	1.26	15.00
72	Conversion of 132/11kV S/S to 2x40MVA, 132/33kV S/S **Sarasmall** (Jharsuguda)	1.35	1.00	2.35	-
73	400kV **IB-Meramundali** D/C Line	0.02	-	0.02	-
74	132kV **Lapanga-Remja** D/C line	-	2.00	2.00	3.00
75	132/33kV **Kuchinda** S/S with line	0.12	-	0.12	-
76	220/33kV**Bonai** S/S with line	3.75	2.25	6.00	-
77	132/33kV **Kalunga** S/S with line	-	1.00	1.00	-
78	220kV LILO to **Bonai**	-	1.00	1.00	-
79	Restoration of 400kV **IB-Meramundali** DC line from Loc. No. 124/2 to Loc. No. 149/0.	12.78	8.22	21.00	-
	TOTAL - A	**236.67**	**487.39**	**724.06**	**677.59**
B	**NEW PROJECTS**				
1	400/220kV **Meramundali- B** GIS S/S with line	-	-	-	30.00
2	132/33kV **Rajnagar** S/S with line	-	-	-	7.00
3	220/33kV **Dasapalla** S/S with line	-	-	-	7.00
4	132kV **Kuchei-Baripada** D/C line	-	-	-	3.00
5	220/132/33kV **Dhamra** S/S with line **(Revival)**	-	-	-	7.00
6	132kV **Dhamra-Chandbali** D/C line	-	-	-	3.00
7	220/33kV **Telkoi** S/S with line	-	-	-	4.00
8	132kV **Aska-Digapahandi** D/C line	-	-	-	3.00
9	220kV **Paradeep-Pratapsasan** D/C line	-	-	-	7.00
10	220kV **Narendrapur-Aska** D/C line	-	-	-	4.00
11	220kV LILO to **Kashipur**	-	3.84	3.84	3.16
12	132/33kV **Thuapalli S/S** with line	-	5.00	5.00	15.00
13	132/33kV **Bhatli** S/S with line	-	0.20	0.20	5.00
14	132/33kV **Binka** S/S with line	-	0.20	0.20	5.00
15	132/33kV S/S at **M.Rampur** with line	-	0.20	0.20	5.00
16	132/33kV **Sindeikala** S/S with line	-	0.20	0.20	5.00
17	132/33kV**Lakhanpur** (Belpahar) S/S with line	0.97	1.00	1.97	5.00
18	220/33kV **Lephripada** (Sundergarh) S/S with line	0.34	1.00	1.34	5.00
19	220/33kV **Deogarh** S/S with line	-	1.00	1.00	5.00
20	132/33kV **Maneswar** S/S with line	-	1.00	1.00	5.00
21	220/33kV **Govindpalli** S/S with line	0.14	0.50	0.64	7.00
22	220/33kV **Thuamularampur** S/S with line.	0.05	0.10	0.15	3.85
	TOTAL - B	**1.50**	**14.24**	**15.74**	**144.00**
	TOTAL = A+B	**238.17**	**501.63**	**739.80**	**821.59**
C	**DEPOSIT WORK**				
1	EHT line diversion for **Haridaspur- Paradeep** Rly. line	0.92	0.05	0.97	-

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2016-17			Projected Expenditure (FY 2017-18)
		Actual For First 6 Months	Projection For Balance 6 Months	Total	
2	132/33kV **Shamuka** Beach(Puri) S/S with LILO	0.23	-	0.23	-
3	132/33kV **Arugul** S/S with line	2.30	0.05	2.35	-
4	220/33kV **Infocity-II** GIS S/S with line	5.33	5.00	10.33	-
5	132/33kV **Mania** (Tangi) S/S	1.72	3.00	4.72	-
6	RTSS at **Boinda**	2.18	2.00	4.18	-
7	RTSS at **Talcher Road**	0.74	1.26	2.00	-
8	RTSS at **Malatipatapur**	-	0.80	0.80	3.60
9	RTSS at **Kendrapara**	-	0.50	0.50	1.50
10	RTSS at **Kamakhyanagar**	-	0.50	0.50	1.50
11	RTSS at **Rairakhol**	1.56	2.50	4.06	-
12	RTSS at **Bisam Cuttack**	1.26	2.00	3.26	0.12
13	RTSS at **Rayagada**	0.78	0.30	1.08	-
14	RTSS at **Tikiri**	0.08	0.92	1.00	1.69
15	RTSS at **Bhalumaska**	0.07	2.43	2.50	18.86
16	RTSS at **Lanjigarh**	5.96	8.04	14.00	0.60
17	RTSS at **Kesinga**	1.68	3.00	4.68	-
18	RTSS at **Kantabanji**	0.82	3.00	3.82	-
19	RTSS at **Nuapada**	1.28	3.00	4.28	-
20	RTSS at **Dunguripali**	-	2.00	2.00	3.00
21	RTSS at **Deogaon**	-	2.00	2.00	3.00
22	RTSS at **Godbhaga**	-	2.00	2.00	3.00
23	RTSS at **Bimalagarh**	0.17	3.30	3.47	-
24	RTSS at **Belpahar**	0.20	1.50	1.70	-
25	220kV **Budhipadar-Basundhara** SC line & 220kV S/S at Basundhara	0.44	-	0.44	-
26	Diversion of 132kV **Jharsuguda-Ultratech** Cement line	0.02	-	0.02	-
27	Diversion of 132kV **Sambalpur-Rajgangpur** S/C line	0.01	-	0.01	-
28	RTSS at **Belpahar**	0.10	1.00	1.10	-
29	Diversion of 132kV **Rajgangpur-Rourkela** S/C Line for NH crossing	0.06	-	0.06	-
30	RTSS at **Kechhobahal**	1.63	3.00	4.63	3.00
31	RTSS at **Rengali**	0.86	2.50	3.36	3.00
32	RTSS at **Maneswar**	-	1.00	1.00	2.00
	TOTAL - C	**30.40**	**56.66**	**87.05**	**44.87**
	TOTAL - D = A+B+C	**268.57**	**558.29**	**826.85**	**866.46**