

**ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN,
UNIT – VIII, BHUBANESWAR – 751 012**

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Present : Shri S. P. Nanda, Chairperson
Shri S.P. Swain, Member
Shri A.K. Das, Member

Date of Hearing : 06.02.2016 (at 11AM)
Date of Order : 21 .03.2016

CASE NO. 55 OF 2015

In the Matter of: An application for approval of Aggregate Revenue Requirement and determination of Transmission Tariff for FY 2016-17 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 2016-17.

AND

Case No. 01/2016

In the matter of: An application in compliance with the Regulation 7.1 of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 for truing up of capital expenditure for the FY 2014-15.

ORDER

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

2. The OPTCL had submitted an application with respect to its Aggregate Revenue Requirement (ARR) and determination of its Transmission Tariff for FY 2016-17 on 30.11.2015. The said application, after being scrutinized and registered as Case No.55 of 2015 was admitted for hearing. 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 FY 2014-15 in Case No.01 of 2016 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, 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 2016-17 before the Commission on 30.11.2015. After due scrutiny and admission of the matter, the Commission directed OPTCL to publish its ARR 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 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 13 nos. of objections/suggestions from the following persons/ associations/ institutions/ organisations.
 - (1) Sri M.V. Rao, Resident Manager, M/s Ferro Alloys Corporation Ltd., GD.2/10, Chandrasekharpur, Bhubaneswar-751023,(2) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012, (3) Shri Prashanta Kumar Das, President, State Public Interest Protection Council, 204, Sunamoni Apartments, Telenga Bazar, Cuttack-753009,(4) Shri Devashis Mahanti, President, North Odisha Chamber of Commerce and Industry

(NOCCI), Ganeswarapur Industrial Estate, Januganj, Balasore-756019, (5) Shri Bijay Kumar Pradhan, President, Grama Panchayat Development Committee, Mendhasal, Bhubaneswar,(6) M/s. Facor Power Limited, At/po-Randia, Dist-Bhadrak-756135,(7) M/s. Grasim Industries Limited formerly known as Jayashree Chemicals Ltd., P.O. Jayashree-761025, Dist-Ganjam, (8) M/s. Utkal Chambar of Commerce & Industry Ltd. (UCCI), N-6, IRC Village, Nayapalli, Bhubaneswar-751015,(9) M/s. Visa Steel Limited, Kalinganagar Industrial Complex, At/Po. Jakhapura-755026, Dist-Jajpur,(10) M/s. Swain & Sons Power Tech Pvt. Ltd., Swati Villa, Surya Vihar, Link Road, Cuttack-753012, (11) M/s. Vedanta Limited, 1st Floor, Fortune Tower, Chandrasekharapur, Bhubaneswar-751023,(12) Sri Ananda Kumar Mohapatra, Power Analyst, S/o-Jachindranath Mohapatra, Plot No. L-II/68, SRIT Colony, Budharaja, Ps-Ainthapali, Dist-Sambalpur-768004 and (13)Sri G.N. Agrawal, Convenor-cum-Gen. Secy, Sambalpur District Consumers Federation, Balaji Mandir Bhawan, Khetrjapur, Sambalpur- 768003. All the above named objectors along with the representative of Dept. of Energy, GoO were present during tariff hearing except objector Nos. 3 and 12 but their written submissions filed by the said Organisations were 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 u/S. 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 2016-17. The Consumer Counsel presented his views in the hearing.
8. The date for hearing was fixed as 06.02.2016 at 11 AM and it was duly notified to all concerned. The Commission also issued individual notice to objectors and the Government of Odisha in Department of Energy informing them about the date and time of hearing and requesting to participate in the proceeding.
9. The Commission conducted the public hearing at its premises on 06.02.2016 and heard the Applicant, Objectors, Consumer Counsel and the Representative of the Dept. of Energy, Government of Odisha.
10. The Commission convened the State Advisory Committee (SAC) meeting on 18.02.2016 at 3.30 PM in its premises to discuss about the Aggregate Revenue Requirement applications and tariff proposals of licensees for FY 2016-17. 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 2016-17 (Para 11 to 41)

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 Commission for approval. Further, Regulation 5.2 of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 requires OPTCL to file ARR application by 30th November of every year of the Control Period. In compliance of the above, OPTCL submitted its Aggregate Revenue Requirement & Transmission Tariff application for FY 2016-17 for approval of the Commission.

Categorization of Open Access Customers

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

a. Long Term Open Access Customers (LTOA Customers)

A Long Term Open Access Customer means a person availing or intending to avail access to the Intra-State Transmission System for a period of 25 years or more. Based on such premise, four DISCOMs, NALCO & IMFA happen to be the long term customers of OPTCL.

b. Short Term Open Access Customers (STOA Customers)

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

Computation of Transmission Charges

13. The Commission has framed OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 for determination of Intra-State Transmission Tariff which has been published in Extra Ordinary issue of the Odisha Gazettee on 04.12.2014. The said Regulations are effective from 04.12.2014 and are to be followed by the Transmission Licensee OPTCL while formulating its ARR and Transmission Tariff application for 2016-17. Regulation 5 of the OERC Regulations, 2014 specifies the Procedure for Tariff Determination and Regulation 8 specifies the Principles for

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

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

The various costs involved for carrying out transmission business by OPTCL for FY 2016-17 while formulating the ARR and Transmission Tariff have been categorized under the following heads:

I. Fixed Cost

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

II. Others

- 1) Incentive for System Availability

Details of Fixed charges –

O&M Expenses:

- 14. Taking into account the proposed expenditure towards Employee Cost including Terminal Benefit, Administrative and General (A&G) Expenses, Repair & Spares (R&M Expenses) , GCC & CSR expenses, OPTCL has proposed a sum of Rs.602.03 crore under the head of O&M Expenses for FY 2016-17.

Salaries, wages, pension contribution and other employee costs

- 15. OPTCL has proposed the Employee Cost of Rs.399.56 crore including Terminal Benefit Liability and possible impact of 7th Pay Commission Report 2016-17 considering the Men in Position (MIP) of OPTCL is 3003 (Executive-1139 + Non-Executive 1864) as on 01.11.2015 as against sanctioned strength of 4668 (Executive-1740 + Non-Executive 2998). The major head wise proposed Employees Cost are shown in the table below:

Table - 1
Employees Cost proposed by OPTCL for FY 2016-17

Particulars	Rs. crore
Employee cost including Salaries, Dearness Allowance etc.	204.46
Terminal Benefit Liability of Employees and Existing Pensioners	143.98
7 th Pay Commission Impact (Existing & Pensioners)	63.33
Less: Capitalization	12.21
Total	399.56

Administrative and General (A&G) Expenses

16. OPTCL has proposed Rs.25.58 crore towards A&G Expenses for FY 2016-17. This includes property related expenses, communication, professional charges, conveyance and travelling, SLDC charges, licensee fee and material related expenses etc. While estimating the above A & G Expenses, OPTCL has taken the annual escalation based on the Regulation 8.14 of OERC Regulations, 2014.

Repair and Maintenance (R&M) Expenses

17. Presently (as on 01.11.2015), OPTCL owns 120 nos. grid sub-stations of different voltage classes and EHT transmission lines of 12,549.209 ckt. km. as shown in the table below:

Table - 2
Sub-Station and Line Details

400/220kV S/S	2	
400/220/132/33kV S/S	1	
220/132/33kV S/S	16	
220/33kV S/S	5	
220/132kV S/S	1	
132kV Sw.Stn.	18	
132/33kV S/S	73	
132/33/25kV S/S	1	
132/33/11kV S/S	2	
132/11kV S/S	1	
Total No. of Sub-Stations	120	
Voltage Level	Lines (ckt. km.)	Bays
400kV	921.434	35
220kV	5870.534	266
132kV	5757.241	770
33kV		900
25kV		2
11kV		18
Total	12549.209	1991

18. OPTCL has proposed R&M expenses of Rs.170.66 crore for FY 2016-17 by considering the works are undertaken in different streams namely O&M, Telecom, Civil Works and Information Technology (IT).

Expenses related to auxiliary energy consumption in the sub-stations

19. In its ARR filing OPTCL proposes Rs.3.82 Crore towards auxiliary energy consumption in the sub-stations.

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

20. **Grid Coordination Committee (GCC) Expenses:** OPTCL has proposed towards annual GCC Expenses of Rs.0.84 crore for FY 2016-17 as per the provisions under Chapter-11(2) of the Orissa Grid Code Regulation 2006.

21. **Corporate Social Responsibility (CSR):** OPTCL has given proposal to spend Rs.1.57 crore under CSR head during FY 2016-17 by considering 2% of the last 3 years average profit.

Interest and Financial Charges

Interest on Loan

22. OPTCL in its ARR application has proposed of Rs.124.55 crore towards interest on loan for FY 2016-17.

Interest on Working Capital:

23. OPTCL has estimated Rs.273.98 crore towards working capital requirement for FY 2016-17 based on the norms of Regulations 8.25 of OERC Transmission Tariff Regulations 2014. Accordingly OPTCL has proposed Rs.17.81 crore (50%) towards interest on working capital considering @13% interest rate.

Rebate :

24. OPTCL has proposed @ 2% rebate amounting to Rs.19.50 crore on the projected ARR for FY 2016-17.

Depreciation

25. OPTCL has projected depreciation at Rs.150.50 crore for FY 2016-17 based on the estimated book value of assets for FY 2016-17 as per CERC Regulations 2014.

Return on Equity

26. OPTCL in its tariff application submitted that, at the time of de-merger of GRIDCO, the equity share capital of OPTCL was stated at Rs.60.07 crore as on 01.04.2005. There after Govt. of Odisha has provided Equity support of Rs.100 crore during FY 2008-09 to FY 2010-11. Further Government of Odisha has committed to provide Rs. 300 crore

@Rs.60 crore annually Equity support over a period of five years i.e., FY 2011-16. As against the above Rs.300 crore, OPTCL has received Rs.249.93 crore and balance of Rs.50.07Crore. will be received during FY 2016-17. Therefore due to infusion of additional capital by the State Government, the paid up equity capital of OPTCL shall be increased to Rs. 410.00 crore as on 31.03.2016. Accordingly, as per clause 8.28 of Transmission Tariff Regulations 2014, OPTCL has proposed Return on Equity (RoE) of Rs.68.62 crore (@ 19.61% on net Equity capital of Rs.349.93 crore .

Income Tax:

27. OPTCL has projected Rs.7.79 Cr. for FY 2014-15 towards Income Tax under section 115JB of Income Tax Act, 1961. Therefore, OPTCL has projected the same amount of Rs.7.79 crore for FY 2016-17 in ARR as per the Regulation 8.43 of OERC Transmission Tariff Regulations 2014.

Other Costs & Receipts:

Incentive for system availability:

28. OPTCL submitted that, the Regulation 6.4 of OERC Transmission Tariff 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 TAFY for the year 2014-15 as 99.95. 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. 9.19 crore towards system availability for the year 2014-15 using approved ARR figure of Rs. 624.50 Cr. for the said year. Accordingly OPTCL has proposed Rs. 9.19 crore towards Incentive for System Availability to be allowed in the ARR for FY 2016-17.

Contingency reserve:

29. OPTCL in its tariff application has submitted that, as per the observation of the Commission at para 237 of ARR order for FY 2015-16, OPTCL has not claimed any amount under Contingency Reserve as Commission will allow the actual expenditure in the truing up as and when spent by OPTCL.

Miscellaneous receipt:

30. OPTCL has submitted that, during 1st six months of FY 2015-16, the miscellaneous receipt of OPTCL was Rs.16.01crore. Based on the trend of revenue earning from other

sources during FY 2015-16, OPTCL has estimated miscellaneous receipt of Rs.25.00 crore from different sources during FY 2016-17.

Summary of ARR proposed by OPTCL for FY 2016-17

31. Considering all the proposed expenses and receipts as explained in foregoing paragraphs, OPTCL has filed its Aggregate Revenue Requirement of Rs.975.00 crore for FY 2016-17 for approval of the Commission. The summarised ARR are shown in the table below:

Table - 3
Summary of ARR Proposed by OPTCL for FY 2016-17 (Rs. crore)

Particulars		Amount
A) FIXED COST		
1. O&M Expenses		602.03
(i) Employees Cost including Terminal Benefits	399.56	
(ii) A&G Cost	25.58	
(iii) R&M Cost	170.66	
(iv) Expenses related to auxiliary energy consumption	3.82	
(v) Other miscellaneous expenses, statutory levies and taxes(GCC& CSR)	2.41	
2. Interest & Financial Charges		161.86
(i) Interest on Loan Capital	124.55	
(ii) Interest on Working Capital	17.81	
(iii) Rebate	19.50	
3. Depreciation		150.50
4. Return on Equity		68.62
5. Income Tax		7.79
Sub-Total (A)		990.81
B) Others		
Incentive for system availability		9.19
Total Trans. Cost (A+B)		1000.00
C) Less: Misc. Receipts		25.00
D) ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement		975.00
Proposed Transmission Tariff (P/U)		37.82

Transmission loss:

32. OPTCL submitted that, the actual transmission loss in the system was 3.71% during the period from April'15 to September'15 as against Commission's approval of 3.75% for FY 2015-16. OPTCL expects the loss level to be remained around 3.75% during the

current year. Accordingly, OPTCL has proposed transmission loss @ 3.70% for FY 2016-17.

OPTCL revenue receipt and deficit in the proposed ARR for FY 2016-17:

33. OPTCL has proposed to transmit 25468 MU power to four DISCOMs during FY 2016-17. Out of which 150MU of power to be transacted in DISCOMs at 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 25318 MU (25468-150) from the total demand projection of DISCOMs. The revenue to be earned by OPTCL from 25778 MU (25318 MU from DISCOMs+450 Mu from wheeling +10 MU CGPs drawal) at the existing transmission tariff of 25 P/U will be Rs.644.45 crore. Accordingly, there will be a revenue deficit of Rs.330.55 crore (Rs. 975.00Cr.-Rs. 644.45Cr.) for OPTCL for FY 2016-17 at the existing transmission tariff of 25 P/U.

Proposal for revision of Transmission Tariff/ Wheeling Charges:

34. OPTCL in its tariff application has submitted that the above proposed transmission cost of FY 2016-17 cannot be met through the existing transmission tariff @ 25 P/U. Therefore OPTCL has requested to the Commission for approval of :
- a) Proposed ARR of Rs.975.00 crore,
 - b) Proposed Transmission Charges @ 37.82 P/U and
 - c) Transmission Loss @3.70% for FY 2016-17 with effect from 01-04-2016

Open Access Charges:

35. 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 the Open Access charges for FY 2016-17 as shown in table below:

Table-4
Open Access Charges proposed by OPTCL for FY 2016-17

Particulars	Units	Amount
Net Annual Revenue Requirement	(Rs. Cr.)	975.00
Power Flow (Equivalent of 25778 MU)	MW	2943
Long term Open Access Charges	Rs./MW/Day	9078
Short term Open Access Charges	Rs./MW/Day	2269

36. Intra-state STOA transactions have started to gather momentum in Odisha. As per existing OERC Regulations, STOA customers are liable to pay 25% of the long term transmission charge. OPTCL has proposed to consider equating 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 in downward effect on Retail Supply Tariff.

Reactive energy charges

37. In accordance with Regulation 1.7 of the OGC Regulations 2006, OPTCL has proposed to consider Reactive Energy Charges at **6.75 Paise/kVArh** for the FY 2016-17 with an escalation of 0.25 Pais /kVArh over the approved provisional rate for FY 2015-16.

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 2% 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.

CAPEX for New Projects

41. In addition to this petition for approval of ARR, OPTCL has proposed to spend Rs.1014.98 crore towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works during FY 2016-17. The detail proposal of OPTCL for CAPEX are shown in **Annexure-I**.

VIEWS OF CONSUMER COUNSEL ON TRANSMISSION TARIFF PROPOSAL OF OPTCL FOR 2016-17 (Para 42 to 46)

42. The Licensee was allowed to give presentation regarding its ARR and tariff application for the FY 2016-17. World Institute of Sustainable Energy (WISE), Pune appointed as Consumer Counsel raised queries and objections regarding ARR and tariff filing of OPTCL. The objectors placed their views before the Commission.

Analysis of the Proposal by Consumer Counsel

43. WISE acting as Consumer Counsel had analyzed the application of OPTCL and important observations are presented below:

Annual Revenue Requirement

44. OPTCL has projected its revenue requirement during FY 2016-17 at about 54.53 per cent more than that approved for FY 2015-16. In last year (FY 2015-16), the total ARR was increased by 1.03% from approved ARR for FY 2014-15.

45. It includes the increase in R&M Cost (58.02%), A&G cost (4.97%), interest on loan capital (204.30%), depreciation (40.03%) and incentive (83.80%). The comparative figures of components of ARR are given in table below:

Table – 5

Comparative Annual Revenue Requirement of OPTCL (Rs. crore)

ITEMS	Approved for FY 2014-15	Approved For FY 2015-16	Proposed For FY 2016-17	FY 2015-16 vs. FY 2014-15	FY 2016-17 Vs FY 2015-16
Employees Cost including Terminal Benefits	318.18	305.23	399.56	-4.07%	30.90%
R&M Cost	93.00	108.00	170.66	16.13%	58.02%
A&G Cost	24.01	24.37	25.58	1.50%	4.97%
Interest on Loan Capital	48.74	40.93	124.55	-16.02%	204.30%
Depreciation	92.71	107.48	150.5	15.93%	40.03%
Return on Equity	45.96	52.10	68.62	13.36%	31.71%
Income tax			7.79		
Interest on Working Capital			17.81		
Expenses for aux consumption			3.82		
GCC Expense including SLDC charges	1.20	1.22	2.41	1.67%	97.54%
Incentive	5.00	5.00	9.19	0.00%	83.80%
Rebate	12.50	12.61	19.5	0.88%	54.64%
Total	641.30	656.94	1000	2.44%	52.22%
Less Misc. Receipts	16.80	26.00	25.00	54.76%	-3.85%
Annual Revenue Requirement	624.50	630.94	975.00	1.03%	54.53%
Transmission Charges (paise/unit)	25	25	37.82	0.00%	51.28%

46. 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 2016-17 (Para 47 to 77)

Transmission Loss

47. OPTCL has failed to arrest the high transmission loss due to non-completion of most of the lines including those entrusted to PGCIL. OPTCL have not yet identified the areas where loss is maximum, so as to formulate action plans for loss reduction.
48. OPTCL should have under taken energy audit of lines and sub-stations to know the quantum of transmission loss in the system. The Standard of performance of OPTCL transmission system should be monitored by third party auditor to assess the actual performance.
49. The Transmission and Distribution losses are exorbitantly high in respect to all of the licensees in spite of the huge investment made by the Govt.
50. One objector submitted that OPTCL collects excess money from consumers by inflating transmission loss by 1.25%.
51. OPTCL has to justify the proposed transmission loss with various measures taken them to arrest Loss.
52. The Commission should not allow transmission losses more than 3% at least from this year onwards.

R&M Expenditure

53. OPTCL has to produce all relevant documents regarding R&M expenses proposed, approved and actual expenditure since 2000-01 till 2015-16.
54. Actual expenditure for a financial year is always less than the amount approved by the commission. OPTCL may submit an item-wise list of the R&M expenses already carried out in FY 2015-16. Commission may allow only 10% increase in the earlier approved R&M expenses.

Employee and A&G Cost

55. Substations and lines are not properly maintained by OPTCL due to want of required number of skilled manpower. OPTCL has to produce how Govt. is interfering to fulfill skilled manpower in OPTCL.
52. Average increase in employee cost for the period FY 2010-11 to FY 2015-16 is around 3.75%, whereas for FY 2016-17 23.22% increase is claimed over previous year. If OPTCL does not submit any adequate justification and action plan for deployment of required manpower, Commission may allow only 3.75% increase in the actual employee cost for FY 2015-16.
53. OPTCL may justify why they have always crossed the approved expenses without obtaining necessary consent from the Commission. Commission may allow 0.1% increase in the earlier approved A&G expenses and may approve A&G expenses at Rs.20.61 crore.
54. A&G cost proposed, approved and actual expenditure since 2000-01 to 2015-16, may be produced.

Depreciation

55. Proposed huge depreciation if allowed in ARR, will increase transmission tariff steeply. The huge increase in depreciation is due to artificial increase in capital base which is based on proposed expenditure to be made during year 2015-16. The Commission should not to allow any capitalization unless the work is completed and commissioning has been declared. Depreciation may be approved at Rs.107.48 crore.

Interest on Loan

56. Out of projected interest on loan capital only State Govt. loan (Rs.0.26 crore) and Govt. of Odisha Bond (Rs.26 crore) may not be considered as interest on loan as per earlier tariff orders. Interest towards secured loan may be considered and allowed. Interest on new loan during FY 2016-17 is anticipated. The interest component on the same which needs to be serviced may be trued up as per audited accounts pertaining to that period after due scrutiny and approval by Hon'ble Commission. Interest on loan capital may be approved at Rs.84.98 crore.
57. Interest on Govt. loan and GoO bond may not be considered in line with earlier orders.
58. Interest on institutional loan may be considered depending upon actual loan availed as per audited accounts.

Interest on Working Capital

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

Incentive

60. In accordance with RST order, transmission system availability should be fixed at a minimum value of 99% for incentive. Further as per OERC Transmission Regulations 2014, incentive amount need not to be considered in ARR because this is not revenue required by OPTCL rather the incentive should be considered in the ARR of DISCOM.

Return on Equity

61. As per OPTCL, total equity deployed is Rs.303.07 crore only. Further ROE @ 15.5% may be considered as per OERC regulations 2014. The amount of Rs.46.97 crore may be approved as RoE.

Miscellaneous Income and Income from Wheeling

62. Commission may consider Rs.26 crore as misc receipt expecting more intra-state wheeling, STOA and power trading through exchange likely to take place.

ARR and Transmission Tariff

63. ARR for FY 2016-17 may be approved at Rs.620.05 crore. The proposed tariff is abnormally high and will adversely affect the RST with huge burden on consumers. Considering energy to be handled as 29293 MU as approved by OERC in case of LTDF for the period FY 2014-15 to FY 2022-23 vide order dated 1.11.2014, the transmission charges would be 21.17 P/U.
64. Commission may critically examine the proposal of OPTCL and Reduce Transmission Charges. One objector has proposed transmission tariff as 23 p/u and another objector has proposed 25 p/u for FY 2016-17.

Open access charges

65. 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.

Other Issues

66. IPPs are not interested to connect with the state network due to inefficiency of OPTCL. OPTCL has to impress them to avail the STU network by which OPTCL will be a profit making unit.

67. OPTCL having old lines requires proper up-gradation.
68. Erection of 132/33 kV sub-stations is the responsibility of OPTCL but are to be properly approached by DISCOMs and GRIDCO which is not being done with sincerity.
69. To implement Rajib Jyoti and Biju Gramyajyoti, proper coordination of GRIDCO / OPTCL and DISCOMs are required. For this purpose OPTCL is to provide proper power.
70. 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 2015-16.
71. OPTCL should produce the status report about the two joint venture companies and expenditure incurred till date.
72. OPTCL should produce the status report of up-gradation lines and sub-station till date as per the direction of the Commission.
73. OPTCL has to produce how much fund they have utilized for construction of new lines and substations under CAPEX programme.
74. The ongoing process for determination of ARR is not at all consumer friendly, but limits it to a few select objectors, in a regular way and thereby friendly to the licensees and the Commission.
75. Govt. may kindly consider extending the tariff concession to the local people where OPTCL has used agriculture land for establishing 440/220 kV grid stations.
76. OPTCL has not paid the energy bill charged by DISCOMs towards auxiliary consumption.
77. Applications submitted by OPTCL are supported by falsified facts/figures/data.

REJOINDER BY OPTCL TO THE QUERY OF OBJECTORS (Para 78 to 140)

78. In response to the views of objectors on the ARR and Tariff Application of OPTCL for 2016-17, OPTCL had filed rejoinders for the same. The response of OPTCL has been broadly classified into the following issues.

Transmission Loss

79. The transmission loss approved by the Commission for the last 8 years vis-à-vis actual transmission loss occurred in OPTCL's EHT network is given in the table below.

Table – 6

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%

80. The detailed calculation of Transmission Loss of 3.73% for 2014-15 and 3.71% for the period April to September'15 (1st 6 months of FY 2015-16) in OERC approved format have been enclosed with the ARR application. 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 3.70% for the ensuing year 2016-17.
81. 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 RGGVY, DDUGJY, BGJY, BSVY etc. in Odisha, there will be increased flow of power in the OPTCL transmission network contributing to increased transmission loss.
82. 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 year over year as evident from the data on transmission loss.
83. Transmission loss in OPTCL system is one of the lowest in the country compared to other transmission utilities. Hence, OPTCL does not agree with the suggestion of the Objector for not allowing transmission loss more than 3%.

84. 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.
85. OPTCL has conducted the transmission planning study for its transmission system in coordination and consultation with GRIDCO and DISCOMs. OPTCL is making all effort to create new sub-stations, lines, renovate/modernize and strengthen its infrastructure to cater the future load as per approval of the Commission. OPTCL endeavors its best for successful implementation of the Central and State sponsored schemes like RGGVY, DDUGJY, BGJY, BSVY etc. in coordination with GRIDCO & DISCOMs.

R&M Expenditure

86. OPTCL intends to attain highest system availability by undertaking preventive and proper maintenance of its lines and grid sub-stations for which Rs.170.66 Cr. is proposed towards R&M expenses for FY 2016-17 which has been realistically assessed.
87. Regulation 8.16 of OERC Transmission Tariff Regulations, 2014 is applicable for OPTCL for R&M. Hence, the projection towards R&M expenses is very much realistic as it is based on facts and evidential documents which need consideration. OPTCL does not agree with the projection of Rs. 86.7815 Cr. made by the Objector.
88. For FY 2015-16, Commission has allowed Rs.108 Cr. against which OPTCL has already incurred expenditure of Rs.96.78 Cr. up to Nov-2015. Hence, OPTCL's proposal needs full consideration by the Commission.
89. On the basis of present load flow profile, years of service and requirement of capacity enhancement in view of future load growth as well as n-1 contingency, OPTCL has planned for Comprehensive renovation of identified lines with uprating of conventional ACSR conductors to HTLS conductors, which involve substantial cost. These projects have been proposed by OPTCL as Capital Works. Similarly, the proposals under 'Conversion of existing S/C lines to D/C lines' scheme are also proposed under Capital Works category.
90. 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.

91. As the cost involvement for the sub-station specific requirement of equipment is not substantial, the same is proposed under the R&M Plan.
92. To ensure quality as well as competitive price for these sophisticated equipment, OPTCL takes the bulk procurement action against the consolidated requirement of the total system and executes installation of the same at different grid sub-stations through separate contracts in order to avoid delay.
93. 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:

For EHT Lines

- 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

For sub-station equipment

- Earth resistance measurement and renewal of earthing system wherever necessary
 - Condition monitoring of equipment such as tan delta measurement, thermovision 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
94. OPTCL has submitted that the Year wise proposal, approval and actual expenditure towards R&M, A&G, and O&M (Employee Cost+ R&M cost + A&G cost) as per audited accounts for the period from 2000-01 to FY 2013-14 and based on actual cash flow statement of FY 2014-15 and FY 2015-16 (up to Nov-15) are given in the table below:

Table - 7
Proposed, Approved and Actual R&M, A&G and O&M Expenses of OPTCL
(2000-01 to 2015-16)

Year	R&M Cost (Rs. Cr.)			A&G Cost (Rs. Cr.)			O&M Cost (Rs. Cr.)		
	Proposal	Apprv	Actual	Proposal	Appr	Actual	Proposal	Apprv.	Actual
2000-01	23.74	14.67	9.90	19.85	12.25	14.33	124.76	103.23	126.38
2001-02	27.16	15.99	8.81	21.74	12.86	14.67	148.55	111.19	165.18
2002-03	28.73	17.43	9.35	27.65	13.51	15.13	171.46	117.11	171.37
2003-04	13.35	13.35	7.03	21.03	14.19	22.88	152.66	127.6	225.47
2004-05	17.59	14.07	4.59	18.91	14.96	49.66	218.96	213.14	238.48
2005-06	20.73	14.8	6.94	18.54	15.73	35.54	226.5	142.75	199.67
2006-07	116.65	36.00	11.31	15.85	14.89	17.3	291.39	166.05	142.32
2007-08	54.00	47.00	16.50	14.79	15.71	12.82	2510.91	201.49	239.99
2008-09	82.12	53.88	16.91	25.93	16.57	18.24	252.32	195.70	527.77
2009-10	122.74	47.00	26.14	36.94	14.35	26.68	644.34	234.46	349.84
2010-11	98.14	60.00	28.32	26.99	15.14	33.82	990.25	354.70	272.14
2011-12	93.89	75.00	45.70	38.34	18.00	20.18	1084.29	431.14	336.96
2012-13	95.46	95.00	60.25	39.11	21.25	30.50	789.93	434.73	362.01
2013-14	108.01	60.00	70.19	23.09	22.39	146.17	473.20	371.69	411.09
2014-15	146.77	93.00	100.31	25.46	24.01	45.48	533.61	435.19	463.91
2015-16*	154.11	108.00	96.78	22.02	24.37	15.36	486.15	437.60	309.10

(* Actual upto Nov-15)

A&G expenses

95. Thus, the actual A&G expenditure as per audited accounts is always higher than the OERC approved figures as indicated in the table above. 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.
96. 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.
97. The projection towards A&G expenses includes communication, professional charges, conveyance, traveling, License Fee, Watch and Ward expenses etc. As per audited accounts for FY 2014-15, the details of A&G expenses are given in the table below:

Table – 8
A&G and Other Expenses

Sl. No.	A&G & Other Expenses	Rs. crore
1	Rebate to Consumers	11.95
2	Loss on theft material	0.17
3	Insurance	0.03
4	Rates & taxes	0.47
5	Legal & Professional Fees	1.54
6	Office Maintenance	0.76
7	Telephone & Internet Charges	0.67
8	Traveling Expenses	2.52
9	Rent	0.76
10	Watch & Word Expenses	1.44
11	License & related fees	1.26
12	Inspection fees	1.78
13	Power & Fuel	1.57
14	Hire charges on vehicles	5.45
15	Audit Fee	0.08
16	Other professional charges	0.23
17	Miscellaneous Expense	7.08
18	Fees and Subscriptions	0.15
19	Advertisement for Tenders etc.	0.94
20	Provision for bad & doubtful debts	3.31
21	Provision for doubtful receivable	3.32
	Total	45.48

It is submitted that OPTCL has estimated the A&G Cost for the FY 2016-17 as Rs.35.96 Cr. However, OPTCL has claimed Rs.25.58 Cr. based on Regulation 8.14 of OERC Transmission Tariff Regulations, 2014.

Employee Cost

98. OPTCL has projected Rs.399.56 Cr. towards Employee Cost in the ARR application which is based on actual cost incurred in FY 2014-15 & FY 2015-16. The component wise details of Employee Cost have been submitted in the ARR application. The projections have been made based on the Regulation 8.6 to 8.11 of the OERC Transmission Tariff Regulations, 2014.
99. Summarizing the above Regulations, broadly there will be two heads:
- a) Employees Cost: This includes Basic Pay, Grade Pay, Dearness Allowance, House Rent Allowance, Other Allowance, Bonus, Stipend for New Recruitment, Contractual/Out Sources Engagement, Medical Expenses etc.

- b) Terminal Benefit Liabilities: This is assessed as per Accounting Standard 15 approved by Ministry of Company Affairs.
100. The projected amount of Rs.399.56 Cr. as indicated in of ARR application towards Employee Cost is given in the table below:

Table - 9
Employee cost including Terminal Expenses (Rs. Crore)

Employee cost including Salaries, Dearness Allowance etc. and	204.46
Terminal Benefit Liability of Employees and Existing Pensioners	143.98
7th Pay Commission Impact (Existing & Pensioners)	63.33
Less: Capitalization	12.21
Total	399.56

101. The net employee cost after capitalization is estimated of Rs. 192.25cr (204.25 -12.21) for FY 2016-17 as against the projected expenditure of Rs.185.61 Cr. for the FY 2015-16. The increment is 3.58%.
102. Under terminal liabilities (i.e. Pension, Gratuity and Leave Encashment), the actual claim as on 31.3.2016 works out to Rs.530.07 Cr. Keeping in view the impact on tariff, OPTCL has proposed Rs.140.00 Cr. Besides, Rs.3.98 Cr. is proposed towards Employer's matching contribution for employees who have joined under NPS and employees under Non-Pensioner Category.
103. Further, OPTCL has proposed Rs.63.33 Cr. towards impact of 7th Pay Commission. As per the 7th Pay Commission report the hike will be 2.57%.
104. In the ARR application at page 6, OPTCL has submitted its proposal of manpower recruitment during 2015-16 and 2016-17 and accordingly worked out the stipend requirement for FY 2016-17.
105. As per direction of the Commission, OPTCL had prepared the Business Plan for the 3rd 5-year control period FY 2013-14 to FY 2017-18 and filed before Commission on 26.5.2014 for approval. As per direction of Commission, OPTCL has recently filed the revised Business Plan before the Commission for approval.
106. The Recruitment Plan of OPTCL upto 2018 has been approved by Govt. However, keeping in view the actual physical progress and revised commissioning schedule of the projects, OPTCL has accordingly phased the recruitment and planned to fill the vacancies. The year wise recruitment plan is given in the table below:

Table – 10
Recruitment Plan

Particulars	FY 2015- 16	FY 2016-17	FY 2017-18
Skilled A (Others/Administrative Staff)	9	200	41
Semi-Skilled A (Technical Staff)	200	177	356
Junior Manager	55	26	17
Assistant Manager	2	311	173
TOTAL	266	714	587

107. However, the recruitment will be done as per the actual requirement and in a phased manner. The Post of Directors in OPTCL will be filled up by Public Enterprise Selection Board.
108. Since 2013, OPTCL has already recruited 280 ITI (Electrical) Technicians and 70 ITI (Telecom) Technicians in a phased manner. For filling up of 150 ITI (Electrical) Technicians post, the recruitment is in process. They are expected to join in March-2016. The State Government has already given permission to OPTCL for filling up the vacant posts upto 2018 and OPTCL is filling the vacancy in a planned & phased manner by direct recruitment.
- OPTCL has optimised Repair & Maintenance Works to ensure healthiness of sub-stations & lines utilising the available resource of manpower.
 - Maintenance Manual prepared in line with the CBIP Manual as well as the best R&M practices in transmission sector as adopted by the Central and State Sector Transmission Utilities has been widely circulated among the field units for strict adherence.
 - OPTCL Safety Manual-2015 has been released and Mock safety drills are being regularly conducted in grid sub-stations.
 - Regular awareness training and mock drills for erection of ERS structures are conducted at different geographical locations. During this exercise, ODRAF team's help will also be taken on various use of equipment used by them during natural disasters. Recently one such exercise has been conducted at Mancheswar and Bidanasi grid sub-stations.
 - Diagnostic Testing Kits are in use to monitor the condition of sub-station & line equipment for taking repair / replacement action in advance as per requirement.
 - Sophisticated T&P including safety gadgets have been supplied to field units for smooth maintenance works.

- Field executives and workmen are being given regular exposure to workshops / training programmes for skill enhancement.
- Awards for best maintained sub-stations & transmission lines have been introduced to create motivation & competitiveness among the field people.
- In addition to above, emergency gangs have been deployed at Circle / Division levels through outsourcing for attending exigencies.

Depreciation

109. Commission has allowed depreciation of Rs. 107.48 Cr. for FY 2015-16 computing at Pre-92 rate as per GoI notification dated 31.01.1992. For the FY 2016-17, OPTCL has projected depreciation of Rs. 150.50 Cr. based on the audited accounts for FY 2014-15 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.
110. Further, it is submitted that OPTCL has not proposed any Special Appropriation for the FY 206-17. Similarly, no depreciation has been claimed on any capital assets unless it is completed and put in use. Hence, the Objector's submission to approve the depreciation of Rs.107.48 Cr. does not merit for consideration.

Interest on Loan

111. The State Govt. vide Notification No. R&R-I-15/2009/81, EN dated 06.01.2010 stated that Bonds issued by GRIDCO & OHPC to the State Govt. consequent upon the revaluation of the assets shall not carry any interest for a further period of 5 years from FY 2006-07 to 2010-11. Thereafter, no such notification towards relaxation of interest on Bond has been issued by the State Govt. Therefore, OPTCL has made provision towards interest on Rs. 200.00 Cr. Bond @ 13% per annum.
112. Govt. of Odisha had sanctioned Rs. 2 Cr. Central Assistance loan to GRIDCO towards construction of 400kV Rengali-Kolaghat Transmission Line (Odisha Portion). As per the terms & Conditions, the period of loan is 20 years and normal rate of interest is 13% per annum. Therefore, interest claimed on State Govt. Loan and Bonds amounting to Rs. 26.26 Cr. is justified and need to be allowed.
113. The projection towards interest on loan capital is very much realistic as it is based on facts and evidential documents that need full consideration.

114. The loans proposed to be availed from REC/PFC/Commercial Banks are in respect of various projects which have been approved by the Commission. Accordingly, an amount of Rs. 963.63 Cr. has been provided as CAPEX for the FY 2016-17. For financing the above CAPEX, OPTCL proposes Rs. 124.55 Cr. towards interest on loan capital for FY 2016-17 based on Regulation 8.24 of OERC Transmission Tariff Regulations, 2014. OPTCL does not agree with the projection of Rs. 84.98 Cr. made by the Objector.

Interest on Working Capital

115. 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.

CAPEX Programme

116. OPTCL is planning and implementing a good 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. Construction of new sub-stations & lines taking into consideration the loading constraint of the existing system as well as demand projections by the DISCOMs.
- b. ‘‘Conversion of S/C Lines to D/C Lines’’ and ‘Conversion of Radial System to Ring System’ for redundancy in the supply system as well as for meeting the future load growth.
- c. 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 contingency condition. In FY 2014-15, 579.5 MVA transformation capacities have been added at 13 sub-stations. Similarly, in FY 2015-16 (till Jan-16), 460MVA has been added at 18 sub-stations.
- d. Uprating of conductors in the stressed EHT lines from conventional ACSR to state-of-the-art HTLS (High Temperature Low Sag).
- e. Installation of 33kV Capacitor Banks for improvement of voltage profile at identified sub-stations. In FY 2015-16 (till Jan-16), 235MVAr has been added at 16 sub-stations. Balance 40MVAr is under installation at 4 sub-stations and scheduled to be commissioned within FY 2015-16.
- f. The Transmission System Availability figures attained by OPTCL over the last three years are – 99.89% (2012-13), 99.96% (2013-14), 99.95% (2014-15). The Commission has acknowledged this achievement of OPTCL. The Central

Electricity Authority has declared OPTCL as the Best Performer (GOLD Medal) in the country under 'Transmission System Availability' category consecutively for FY 2012-13 and 2013-14.

Incentive

117. OPTCL has proposed an amount of Rs.9.19 Cr. towards incentive for system availability following Regulation 6.5 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.

Return on Equity

118. As on date, OPTCL has received Rs.350.00 Cr. (Rs.349.93 Cr. received earlier + Rs.0.07 Cr. received in January-16) from Govt. of Odisha towards Equity Share Capital. The projection of Rs.68.62 Cr (@15.50% post-tax) towards RoE is based on Regulation 8.29 of OERC Transmission Tariff Regulations, 2014. OPTCL does not agree with the contention of the Objector projecting Rs.46.97 Cr. as this is contrary to the provisions of said Regulations. Hence, the projection towards RoE is very much realistic which needs full consideration.

Miscellaneous Income and Income from Wheeling

119. In the ARR application, OPTCL has clearly explained regarding current status of revenue earnings from inter-state wheeling. For FY 2016-17, the revenue under this head cannot be correctly assessed as the same is to be determined by Hon'ble CERC.
120. 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.25.00 Cr. during FY 2016-17. The Objector's contention to consider Rs.32.00 Cr. under this head is not justified.

ARR and Transmission Tariff

121. 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.620.05 Cr. against OPTCL's proposal of Rs.975.00 Cr. in view of component wise rejoinder made in foregoing paragraphs against objections made by the Objector.
122. For similar reasons as above, working out the Transmission Charge of 21.17 p/u by the objectors does not merit for consideration.

Open access charges

123. 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.

124. Regarding OPTCL's proposal to equate LTOA and STOA rates, elaborate and justified grounds have been furnished in the ARR application.

Other Issues

125. 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.

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

127. Land to the extent of Ac.60.34 dec. has been acquired through lease and land acquisition process for construction of 400/220/132kV grid sub-station at Mendhasal by GRIDCO/OPTCL. Advance possession of Ac.50.00dec and Ac.0.90dec. Govt. land was taken after sanction by the Revenue & Disaster Management Deptt., Govt. of Odisha and Collector Khurdha in village Mendhasal. Subsequently de-reservation of the Gochar land has also been done by the Collector, Khurdha. Land premium, Ground Rent & Cess as assessed by the Revenue authorities has been paid by OPTCL. Finalisation of lease is under process. In addition to the aforesaid Govt. land, Ac.9.44dec private land was also acquired through land acquisition process after payment of due compensation to the land owners as required for the aforesaid grid sub-station. In view of the above, the aforesaid grid sub-station has been constructed and functioning on the land acquired following due procedure under law.
128. The High Tension Lines are established as per the Standard guidelines (IE Rules, Regulatory Provisions etc.) available for design, erection and commissioning of the same. Ground clearance is maintained accordingly which is well above the safe limits. The lines are energised only after getting the clearance from the Electrical Inspectorate of Govt. of Odisha. Contrary to the statement of the Objector, no fatal accidents/mortality has been reported in the vicinity due to problems in EHT lines of OPTCL.
129. There is no such provision under the Companies Act, 2013 for spending portion of CSR fund for the purpose of tariff concession as suggested by the Objector.
130. Up to FY 2015-16, OPTCL has not been allowed any amount towards auxiliary energy consumption in the sub-stations for the purpose of air-conditioning, lighting, technical consumption. The same is borne by GRIDCO as OPTCL has been billing to DISCOMs at grid sub-station ends (LT side of Power Transformers). As per Regulation 8.2 (d) of OERC Regulations, 2014, OPTCL is entitled to claim the expenses related to auxiliary energy consumption and reimburse the same to GRIDCO.
131. OPTCL has filed the ARR application following all the provisions under OERC Transmission Tariff Regulations, 2014 and replied all the queries raised by the Commission. Hence, Objector's allegations are liable to be rejected.

132. Land inventory has been prepared for the OPTCL occupied land in the State. Some of the land acquired during OSEB/GRIDCO period have not been recorded in the name of the then OSEB/GRIDCO. Steps have been taken for preparation of RoR in favour of OPTCL on submission of Govt. Notification regarding transfer of assets to OPTCL, before the concerned Revenue authority.
133. OPTCL prepared an evacuation plan taking into account 20 nos. IPPs and filed the same before OERC with original scheme and subsequently filed a revised scheme on 05.10.2012 taking into consideration 29 IPPs. The directive from the Commission on the above evacuation plan is awaited.
134. Two Joint Venture Companies have been floated by OPTCL namely M/s. Kalinga Bidyut Prasaran Nigam Pvt. Ltd. (KBPNL) with POWERGRID & M/s. Neelachal Power Transmission Company Pvt. Ltd. (NPTCL) with MCL on 50-50 equity participation basis. Both these Joint Venture Companies have not yet started any commercial operation as they have not obtained the Intra-State transmission License from OERC. In the meanwhile, POWERGRID, the Joint Venture partner of KBPNL has requested OPTCL to accord approval for winding-up of Joint Venture Company. Accordingly, a proposal has been sent to State Government for necessary approval in this regard.
135. OPTCL has managed to extend alternative power supply during interruptions, even though some of them are attributed to the faults occurring in the HT/EHT systems owned by other utilities connected with OPTCL system.
136. Substantial steps have been taken to minimize 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.
137. 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.
138. 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.
 - 400 kV Meramundali-New Duburi DC line has been energised.
 - 220 kV Atri-Pandiabil and Pandiabil-Samagara lines have been energised.
 - By installation of 220/132 Auto-Transformer at Mendhasal, loading constraints of Khurda has 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.
139. OPTCL has published Public Notices in English language in one issue each of a daily English & Odia newspaper and also in Odia language in one issue of daily Odia newspaper on 12.12.2015 for wide circulation regarding its filing of ARR &

Transmission Tariff application before Hon'ble OERC. Hence, the contention of the Objector is not correct.

140. As per provision under Section 31(2) of the Electricity Act, 2003, the State Transmission Utility (STU) shall operate the State Load Dispatch Centre (SLDC) until a government company or any authority or corporation is notified by the State Government. Government of Odisha vide Department of Energy Notification No.6892 dated 09.06.2005 issued the Orissa Electricity Reform (Transfer of Transmission and Related Activities) Scheme, 2005 and notified OPTCL as the STU and vested the SLDC functions with OPTCL till further orders of the State Government from the date of transfer. Accordingly, SLDC is operating autonomously as an independent system operator under the direct administrative control of the Chairman-cum-Managing Director of OPTCL. At present, Sr. General Manager (Power System) is functioning as Chief Load Despatcher.

OBSERVATION OF THE STATE ADVISORY COMMITTEE (SAC)

141. The Commission convened the State Advisory Committee (SAC) meeting on 18.02.2016 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. However, no specific view was offered relating to Annual Revenue Requirement and Tariff filing of OPTCL.

COMMISSION'S VIEWS AND ORDER (Para 142 to Para 260)

142. The Commission, for approval of ARR and determination of transmission tariff for OPTCL for the FY 2016-17, 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.
143. 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 fulfill the Commission's and consumers' expectations on quality of supply, performance standards and availability of transmission network. As a result 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. Regarding compliance of ARR and Tariff order for the FY 2015-16, OPTCL has confirmed that in addition to construction of new lines and grid sub-stations, up-rating/ replacement of conductors including HTLS, provision of GIS sub-station at certain locations are in progress. OPTCL is also in the process of adoption of multi circuit towers to meet the needs. As the up-rating of ACSR to HTLS in some 132 kV lines in Bhubaneswar has increased the power transfer capability and reliability of the transmission system. The Commission, therefore, directs OPTCL to identify the critically loaded lines and initiate action for up-rating of lines wherever necessary to have a better reliable transmission system in place.

144. 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.
145. Further, the Tariff Policy, 2016 framed under the Electricity Act 2003, has embedded 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 kilometer 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.
146. 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.

Computation of Transmission Loss for FY 2016-17

147. 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'.
148. Like all other components of ARR determination, transmission losses are also projected as part of the ARR approval process, and would need to be reassessed (truing up) after the availability of the audited accounts of the Licensee for the past years. Accordingly, variations from the approved figures for the past years have to be trued up on the basis of data available from actual audited annual accounts of the Licensee and after taking into account the target of performance parameters fixed by the Commission.
149. OPTCL in its submission stated that the actual transmission loss in the OPTCL transmission system from April 2015 to September 2015 works out to be 3.71% and OPTCL proposes transmission loss of 3.70 % for the year FY 2016-17 based on the present trend. The approved and actual transmission loss for the year 2009-10 to 2015-16 is furnished in the table below:

Table – 11

FY	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16 (April to Sept 15)
Approved (%)	4.00	4.00	3.90	3.80	3.80	3.75	3.71
Actual audited (%)	4.11	3.93	3.88	3.84	3.79	3.73	

150. M/s OPTCL, in its filing has submitted that transmission loss is purely a technical loss and is dependent on generation sources, system configuration and power flow requirements at different load centers. In view of the increasing demand for power at an accelerated pace due to on-going industrialization and implementation of central & state sponsored schemes like RGGVY, DDUGJY, BGJY, BSVY etc. in Odisha, there will be increased flow of power in the OPTCL transmission network contributing to increased transmission loss.
151. Over the years, OPTCL has been continuously undertaking construction of new lines and sub-stations for strengthening the transmission infrastructure to improve quality of power supply, meet the future load growth and to reduce transmission loss effectively. Further, OPTCL has taken various measures like addition of capacitor bank, load

bifurcation, modification in system configuration, procurement of more efficient equipment, conductor augmentation and replacement etc. As a result, the transmission loss is gradually reducing year over year. Accordingly, OPTCL proposes 3.70% transmission loss during FY 2016-17. The Commission doesn't agree with the views of objectors, since the system operates at voltage of 400 kV, 220 kV and 132 kV and OPTCL network is largely dependent on a conglomerate of 220 kV and 132 kV system at most of the points.

152. Based on the submission of OPTCL, the Commission approves 3.70% for FY 2016-17 as transmission loss for wheeling and directs that OPTCL shall continuously monitor the operation of the transmission system, prevent overloading wherever possible by load diversion and take up innovative measures for improving system loading of the existing network. Effective utilization of new lines and their impact on transmission loss need to be intimated to the Commission periodically and kept in the website of OPTCL for information of all stakeholders. Efforts to reduce the above loss to the best practiced case at national level shall continue.

Execution of Projects

153. Many objectors pointed out that the strategy of OPTCL in execution of Projects is not matching to the downstream network planning of the State. Commission is not able to appreciate the reason cited by the OPTCL as regard to inordinate delay in completion of its ongoing projects. Responsibility and accountability should be fixed on Project Managers for effecting completion of the Projects as per the schedule with adequate delegation of authorities by the management. The Project Managers should identify the critical paths ahead of schedule. The Commission further direct OPTCL that DISCOMs are to be intimated beforehand so that they should be prepared for receiving power from new/augmented grid s/s and accordingly build their own downstream distribution lines for evacuation of power. OPTCL should discuss with the DISCOMs before submission of transmission project for approval of OERC, so that the s/s for which the investment is being made should not be left idle due to non-completion of inter linking transmission/ distribution lines/networks. Further, the Commission directs OPTCL should identify the low voltage pockets in the State particularly in the border areas and should take steps for strengthening the transmission system and intimate DISCOMs for construction of downstream distribution system associated with it.
154. 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 for involvement of local elected representatives and District Administration etc. to resolve the local RoW issues.
155. OPTCL needs to adopt social interface approach to convince local people about the benefit (such as improvement in quality and reliability of supply and consequential financial benefits) of the project and take timely action to avoid cost and time over-run.
 156. The Commission directs that OPTCL should regularly monitor the progress of all its on-going projects to avoid any delay. Projects should be completed within the time schedule to avoid cost and time over-run and overloading of existing system due to growth in demand.
 157. OPTCL has planned a large number of projects to be undertaken by it under the long term business plan, ODSSP, Smart Grid and disaster resilient power system etc. in next five years. Responding to the objectors view, regarding evacuation of power from IPPs, OPTCL submitted that M/s. Arati Steel, M/s Meenakshi Power, Odisha Power Consortium Ltd. with STU connectivity and Sterlite Energy Ltd., GMR Kamalanga Energy Ltd. and OPGC with CTU connectivity are considered in the revised transmission plan for the period 2015-16 to 2018-19. OPTCL will submit the same as a supporting document in the Business Plan. Also additional projects such as TTPS Stage- III expansion, Odisha UMPP Project, OTPCL, Kamakhyanagar, KVK Nilachal and JITPL will be considered in the system study for the period from 2019-20 to 2021-22(13th Plan period). Therefore, Commission directs OPTCL to submit the details and comprehensive report on connectivity and evacuation arrangement of IPPs (Existing as well as proposed) with Odisha Grid for smooth evacuation power in the system.
 158. Further, as far as safety and proper maintenance of electrical installations are concerned, OPTCL should impart proper training to its staff on the safety provisions and procedures thereto and ensure that all the employees should follow it scrupulously. Required safety equipments/gadgets shall be procured and necessary hands-on training should be given to the employees by the selected manufacturers/vendors. Safety officer of OPTCL along with the training department should prepare the training module in line with provisions as mentioned in CEA (Measures relating to Safety and Electric Supply) Regulations, 2010. Further, OPTCL may design some of its training modules to suit the requirement of DISCOM employees so that the resources of OPTCL can be best utilised for the benefit of power sector of the state in a comprehensive manner.

Disaster Management:

159. The Commission had observed in its earlier orders that there was a substantial loss to the OPTCL transmission system due to severe natural calamities like 'PHAILIN' during October, 2013 and "HUDHUD" during October, 2014. The Commission is of the opinion that OPTCL may constitute an internal investigation team to determine the reasons of tower failure and damage to the power system and take necessary action at planning and design stage to avoid such type of failures in future. 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 feels that there should be an institutional mechanism to develop disaster mitigation strategy, preparedness and early response including adequate training to employees.

Efficient Operation of Transmission System:

160. OPTCL submitted that SCADA is not fully operational in all the 220 KV grid substations because of delayed supply of off-shore materials like OPGW, approach cable and hardware accessories etc. Since the projects are running under the consultancy of PGCIL, OPTCL has brought it to the notice of ERPC and POSOCO. However, 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 220 kV and above S/S for proper monitoring and efficient functioning of the power system. Energy Accounting and Settlement Service Centre (EASSC) should be fully functional under the control of SLDC. The Commission may be appropriately informed on completion.

System Interruptions due to Major Incident:

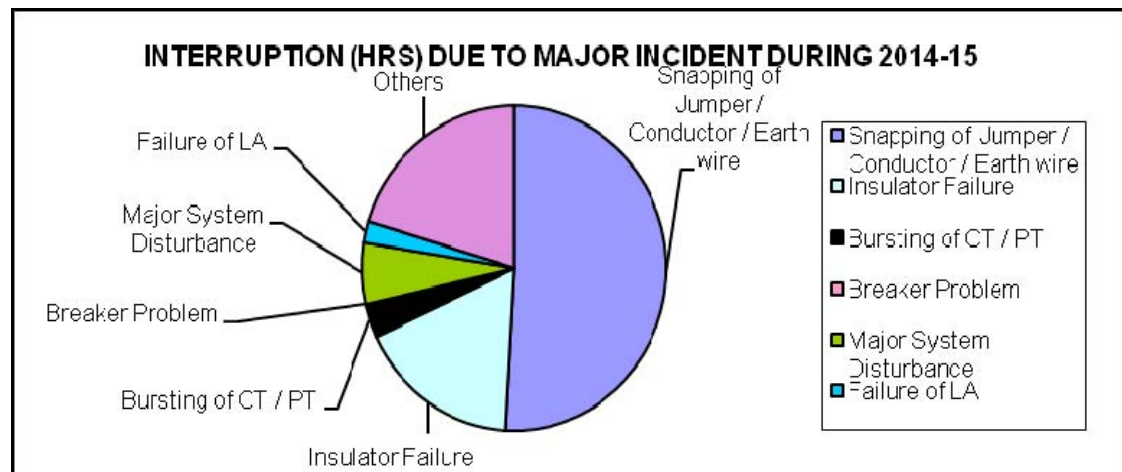
161. OPTCL's system has faced aggregated Annual interruptions varying from 5 hour to 116 hours at different locations on account of conductor/jumper snapping, insulator failure, bursting of Current Transformer/Potential Transformer, breaker problem, system disturbance, Lightning Arrester failures etc. OPTCL 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. The same effort has been made by OPTCL in maintaining uninterrupted power supply even in the event of generation failures. It has been reported about 123 hours and 42 hours of load restriction in the first and second quarter of the FY 2014-15 due to non-availability of

generation and failure of generating stations. OPTCL claimed that there was no blackout experienced in the State during the FY 2014-15. Duration of interruption during the year is given in table below:

Table - 12
Interruption due to Major Incident

Incident	Duration of Interruption	No. of Interruption
Snapping of Jumper / Conductor / Earth wire	116:11:00	64
Insulator Failure	39:10:00	27
Bursting of CT / PT	7:43:00	5
Breaker Problem	0:00:00	4
Major System Disturbance	13:57:00	9
Failure of LA	4:54:00	35
Others	46:24:00	107

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 2014-15.



162. It is observed that during FY 2014-15 the daily peak demand touched at 3981 MW maximum on dt.25.03.2015 and a minimum of 2659 MW on dt.12.10.2014. The peak demand of 3981MW in 2014-15 is about 276 MW above the peak demand experienced during the previous year 2013-14 (of 3705 MW). But the total energy drawl is 24436 MU in FY 2014-15 against 23323MU in 2013-14, which indicates a growth in electricity consumption of around 1113 MU in the State. Further, 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 190 kV minimum and 255 kV maximum in its 220 KV system and 84 KV minimum and 149 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 - 13

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	255	215
2	Duburi	241	200
3	Joda	242	215
4	Tarkera	236	215
5	Budhipadar	244	193
6	Balasore	245	200
7	Narendrapur	252	192
8	Chandaka	238	196
9	Bhanjanagar	248	203
10	Theruvai	251	206
11	Meramundali	235	205
12	Bidanasi	255	193
13	Katapalli	250	213
14	Bhadrak	245	198
15	Paradeep	242	190
16	Bolangir	244	204
17	Mendhasal	239	207

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	140	100
2	Puri	137	84
3	Khurda	144	90
4	Berhampur	149	108

163. It is observed that voltage profile of other substations have not been submitted to the Commission. 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 DISCOM draw excessive reactive load at low voltage condition in grid S/S, it shall take up with them for corrective action. 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.

164. Initiatives for Operation and Maintenance and safety

(i) During the review of performance of OPTCL, the Commission emphasized on regular preventive maintenance of the transmission system to avoid interruption in the system. Therefore, the Commission directs that preventive maintenance of the transmission system should be a routine feature and the zonal heads

should monitor it regularly at least once in each quarter. OPTCL should take steps for increase in power transfer capability of the 132 kV lines specifically in urban areas by introduction of new technology like the up-rating of 132 kV Chandaka-Mancheswar and Chandaka-Ranasinghpur line from ACSR conductor to HTLS conductor.

- (ii) OPTCL should have a proper procurement, monitoring and execution mechanism in place and regularly monitor the progress of all its on-going projects to avoid in-ordinate delay. Projects should be completed within the time schedule to avoid cost and time over-run. The equity infusion is required to be balanced and the assets so created should be utilized in a productive manner.
- (iii) During the review of performance, it has come to the notice of the Commission that OPTCL has appointed 32 nos. of Chartered /Cost Accountant firms to carry out yearly audit of inventory transactions such as material at site accounts and store materials. The Commission directs OPTCL to furnish the Auditors report by 30.06.2016 along with the physical verification report of the store verification party of OPTCL. Ideally there should be least inventory barring some materials required to attend breakdowns.
- (iv) OPTCL is required to develop appropriate ring system so that power supply to the affected areas can be easily made available from the neighbouring areas fed from other generating stations of the state and Orissa share from Inter State Generating Station of Eastern Region. In order to have a better reliable and efficient transmission system, the Commission directs OPTCL to renovate the old grid s/s with provision of advanced metering/protection/communication system and new/expanded control rooms. Further, as a part of O&M activity, OPTCL should upgrade the overloaded grid S/Ss in consultation with DISCOMs.
- (v) OPTCL should avoid addition of large number of 132 kV s/s when 220 kV ring transmission system is available. 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 etc. 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. CEA may be consulted in this regard for

introduction of latest technology for improvement in available transmission infrastructure.

Finance OPTCL

Truing up of OPTCL for the FY 2014-15

165. OPTCL has filed truing up proposal for the FY 2014-15 as per Regulation 7.1 of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2014 on 12.01.2016 along with the audited accounts for the FY 2014-15. This was registered in Case No.1 of 2016. This case was heard analogously with OPTCL tariff hearing in Case No.55 of 2015 on 06.02.2016. The analysis of expenditure and income done by OPTCL and its submission for considering in truing up is discussed below:

Employees Cost & Terminal benefits:

166. OPTCL claimed an amount of Rs.318.12 crore towards employees cost including terminal benefit for FY 2014-15. The approved amount vis-à-vis actual expenditure are mentioned in the table below:

**Table – 14
Employees Cost & Terminal benefits**

Particulars	Approved	Actual
Employee cost	184.35	137.59
Terminal benefits including differential pension and pensionary benefits	136.06	198.07
Less capitalization	2.23	17.54
Total	318.18	318.12

167. As per the audited accounts, the employees cost is Rs.137.59 crore. OPTCL requests Commission to consider the same in truing up. Regarding terminal benefits, OPTCL requests to consider Rs.195.63 crore which is determined on the basis of actuarial valuation. Further, an amount of Rs.2.44 crore is claimed towards NPS. The total terminal liability for FY 2014-15 as claimed by OPTCL works out to Rs.198.07 crore (Rs.195.63 + Rs.2.44). It is observed that the terminal benefit component and capitalization component has increased substantially.

168. The audited accounts for the FY 2014-15 was examined and it was found that an amount of Rs.137.59 crore is booked towards employees cost and Rs.198.07 crore towards terminal benefit. The Commission allows the employees cost Rs.137.59 crore as true up for the FY 2014-15 as per Regulation 7.2 & 7.3 of OERC. Regarding terminal liability, the Regulation 8.9 of OERC Tariff Regulations, 2014 state 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 during 2014-15 has allowed the terminal benefits based on the cash flow statement of OPTCL and not on the basis of actuarial valuation. Now the figure submitted by OPTCL is based on the actuarial valuation. The Commission allows the amount of Rs.198.07 crore claimed by OPTCL as true up. Based on the above, the Commission approves the following amounts of Rs.318.12 crores as true up under the head employees cost and terminal liability which is given in the table below:

Table – 15

Particulars	(Rs. crore)	
	Submitted by OPTCL	Approved by Commission
Employee cost	137.59	137.59
Terminal benefits including differential pension and pensionary benefits	198.07	198.07
Less: capitalization	2.23	17.54
Total	333.43	318.12

Repair & Maintenance Expenses:

169. OPTCL submitted to consider the audited figure of Rs.100.31 crore as against the approved amount of Rs.93 crore during 2014-15. The Commission approves the audited figures of Rs.100.31 crore for the purpose of truing up. A concern is being raised by objectors that some of the R & M expenses actually need to be taken as capital deployed. This issue needs appropriate attention of management and there should not be any scope of misgivings of objectors by way of rectification.

A&G Expenses:

170. OPTCL claimed an amount of Rs.33.53 crore booked under the above head in the audited accounts of 2014-15 as against the approval of Rs.24.01 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.
171. Accordingly, the Commission approves an amount of Rs.24.01 crore towards A&G expenses for the FY 2014-15 as true up. The Commission directs OPTCL to expenses within this limit.

Rebate

172. OPTCL claimed an amount of Rs.11.95 crore during 2014-15 towards rebate as against the approval amount of Rs.12.50 crore. The Commission approves the audited figure of Rs.11.95 crore under the head rebate.

Depreciation

173. Under this head OPTCL claimed an amount of Rs.150.62 crore as true up. OPTCL has submitted the audited account for FY 2014-15 as per which the depreciation is show at Rs.118.82 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.”

174. Based on the above principle OPTCL calculated the depreciation on book value of asset as on 01.04.2014 at pre-92 rate and the rate prescribed by CERC. The amount determined by OPTCL at pre-92 rate and at CERC rate works out to Rs.92.71 crore and Rs.150.62 crore respectively. The Commission in view of the direction and order of the High Court of Odisha, is 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 accepts the same principle and approves the amount of Rs.92.71 crore as true up for FY 2014-15.

Interest on loan liability

175. OPTCL has claimed an amount of Rs.62.41 crore (including interest capitalized amount of Rs.10.19 crore) towards interest for the purpose of truing up, based on the audited accounts for FY 2014-15.
176. Regarding interest to be capitalized for an amount of Rs.10.19 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 2014-15 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.
177. The Commission do not agree with the contention of the OPTCL with the following reasons:

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.

178. In view of the above, the Commission allows an amount of Rs.52.22 crore (62.41 – 10.19) as true up for FY 2014-15.

Grid Co-ordination Committee Expenses and SLDC charges

179. OPTCL has claimed an amount of Rs.1.20 crore (Rs.052 crore GCC expenses + Rs.0.68 crore SLDC charges) for FY 2014-15 towards above expenses. As mentioned in the petition Commission approves the same for the purpose of truing up.

Incentive for System Availability

180. 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 2014-15. The Commission approves the same for the purpose of truing up.

Income Tax

181. During 2014-15 OPTCL has made a provision of Rs.7.79 crore towards income tax liability under the MAT. The same amount is shown as truing up for FY 2014-15. The Commission scrutinized the audited accounts for FY 2014-15 and found that an amount of Rs.7.79 crore is booked under tax expenses. In the ARR order of 2016-17, the Commission has already considered the tax expenses of Rs.7.79 crore as a pass through. Hence the Commission is not inclined to consider the tax expenses of Rs.7.79 crore again as true up for the FY 2014-15.

Return on Equity

182. OPTCL submitted that the Commission in the ARR of 2014-15 has approved an amount of Rs.45.96 crore towards return on equity which includes the actual tax expenses of Rs.8.29 crore booked in the audited accounts of OPTCL for FY 2012-13. The Commission approves the same as per the Regulations, 2014 para 8.29 and 8.31 for the purpose of truing up.

Other Miscellaneous Income

183. Under this head OPTCL requests the Commission to consider Rs.11.75 crore towards miscellaneous receipt as against the approved amount of Rs.16.81 crore. The Commission allows an amount of Rs.11.75 crore towards inter-state wheeling and

miscellaneous revenue for the purpose of truing up, after detailed scrutiny of audited accounts for FY 2014-15.

184. With the above observation the figure proposed by OPTCL and approved by the Commission for the purpose of truing up for the FY 2014-15 is given in the table below:

Table - 16

(Rs. crore)

Particulars	OERC approval in ARR OF 2014-15	Actual as per audited accounts	True up proposed by OPTCL	True up approved by the Commission
A. Employee Cost (Net)	318.18	318.12	333.43	318.12
Employee Cost	184.35	137.59	137.59	137.59
Terminal Liabilities	136.06	198.07	198.07	198.07
Less: Capitalization	(2.23)	(17.54)	(2.23)	(17.54)
B. R&M cost	93.00	100.31	100.31	100.31
C. A&G cost	24.01	33.53	33.53	24.01
Sub-total (A+B+C)	435.19	451.96	467.27	442.44
D. Depreciation and Special Appropriation	92.71	118.82	150.62	92.71
E. Interest on long-term liability	48.74	62.41	62.41	52.22
F. Rebate	12.50	11.95	11.95	11.95
G. GCC Expense and SLDC Charges	1.20	0.00	1.20	1.20
H. Incentive for system availability	5.00	0.00	5.00	5.00
Sub-total (A to H)	595.34	645.14	698.45	605.52
I. Special appropriation/ Income Tax		7.79	7.79	0.00
J. Return on Equity	45.96	0.00	45.96	45.96
Grand Total (A to J)	641.30	652.93	752.20	651.48
Less: Inter-state Wheeling & Misc. Revenue	16.80	11.75	11.75	11.75
Net Transmission Cost	624.50	641.18	740.45	639.73
Revenue from Transmission charges	624.50	624.94	624.94	634.34

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

Table - 17
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

186. It is seen from the above table that OPTCL posted a cumulative surplus of Rs.469.47 crore at the end of 2014-15. Hence, OPTCL do not require any regulatory asset to be amortized.

ARR of 2016-17

187. The Commission has analysed the application of OPTCL for Aggregate Revenue Requirement (ARR) for FY 2016-17 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

188. 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.399.56 crore as detailed in the table below:-

Table – 18
Component of Employees Cost

(Rs. crore)

Sl. No.	Particulars	FY 2015-16 (Approved)	FY 2016-17 (Proposed)
1.	Basic pay+GP	63.86	68.37
2.	Dearness allowance	77.27	89.58
3.	House Rent Allowance	9.58	13.67
4.	New recruitment (Stipend)	8.77	13.10
5.	Terminal benefits including NPS	138.65	143.98
6.	Other expenditure	12.38	19.75
	Total	310.51	411.77
7.	Less Employees Cost capitalized	5.28	12.21
8.	Net employees cost to be passed in ARR	305.23	399.56

189. 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 2015-16, which is extrapolated for a period of 12 months.
- ii) 3% towards annual increase over the Basic Pays and GP determined for the FY 2015-16 has been considered.
- iii) Average Nos. of employees has been factored in.
- iv) Rate of DA has been considered at 13%, medical allowance at 5% of the Basic pay+GP and HRA at 20% of the Basic Pay + GP
- v) Terminal benefits have been projected as per the report of the actuary.

Commission's Analysis

190. The Commission considered the Basic Pay+GP for a period of 8 months of the Financial year 2015-16 based on the cash flow submitted by the petitioner, which is given in table below:-

Table – 19
Basic Pay & GP

(Rs. Crore)

Months	Basic Pay	Grade Pay	Total
Apr-15	4.00	1.01	5.10
May-15	4.00	1.01	5.01
Jun-15	4.01	1.01	5.02
Jul-15	3.99	1.01	5.00
Aug-15	4.00	1.01	5.01
Sep-15	3.95	1.00	4.95
Oct-15	4.02	1.02	5.04
Nov-15	4.20	1.08	5.28
Total	32.17	8.15	40.32

191. As revealed from the above table the basis pay + GP for a period of 8 months is Rs.40.32 crore. Extrapolating the same for a period of 12 months the annual impact of pay +GP worked out to Rs.60.48 cr
192. Regarding number of employees, OPTCL in its submission furnished the following information as given in table below:-

Table - 20
Information on number of Employees

Sl. No.	Particulars	Nos.
1	No of employees as on 01.04.2014	3067
2	Induction of new employees during FY 2014-15	199
3	Retired during 2014-15	143
4	No of employees as on 31.03.2015	3123
5	Induction of new employees during 2015-16 (6 recruited + 266 to be recruited)	272
6	Retired/ to be retired during 2015-16	142
7	No of employees as on 31.03.2016	3253
8	Induction of new employees during 2016-17	714
9	To be retired during 2016-17	177
10	No. of employees as on 31.03.2017	3790

193. The Commission examined the proposal of OPTCL. It is found that for the proposed induction of number of employees during 2015-16 and 2016-17 (266 Nos. & 714 Nos.) OPTCL claimed an amount of Rs.13.10 crore under the head stipend for new recruitment. Hence, Commission do not consider the above number employees for determining the average Nos. of employees for FY 2016-17. The average number of employees approved by the Commission for the purpose of determining Pay + GP is given in the table below:

Table - 21

Sl. No.	Particulars	Nos.
1	No of employees as on 31.3.2015	3123
2	Addition during the year	6
3	Retired during 2015-16	142
4	Position as on 31.3.2016	2987
5	Addition during the year	0
6	Retired during the year	177
7	No of employees as on 31.03.2017	2810

194. The average number of employees during FY 2015-16 and FY 2016-17 works out to 3055 Nos. $(3123+2987/2)$ and 2899 nos. $(2987+2810)/2$ respectively.

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

Average annual impact	-	Rs.60.48 crore
Add 3% annual increment	-	Rs. 1.81 crore
Pay + GP after increment	-	Rs.62.29 crore
Factoring in average no. of employees the pay + GP		Rs.59.10 crore.

The Commission approved Rs.59.10 crore towards Pay + GP during FY 2016-17.

Dearness allowance

195. The prevailing rate of D.A. as on 01.7.2015 is 119%. The incremental D.A. allowed by Government of Odisha last time was 6%. Assuming the level of rise at same percentage on January 2016, June 2016 and January, 2017, the Commission allows the weighted average rate of DA at 131% during FY 2016-17. Accordingly an amount of Rs.77.43 crore is allowed towards DA as a pass through for FY 2016-17.

House Rent Allowance

196. For the FY 2016-17 OPTCL proposed the rate of HRA at 20% of basic pay + GP. The Commission in line with the orders of the previous years approves the rate at 15% of the basic Pay+GP amounting Rs.8.87 crore.

Stipend for new recruitment

197. Under this head OPTCL claimed an amount of Rs.13.10 crore for the FY 2016-17 as detailed in table below:

Table - 22
Stipend for new recruitment

YEAR	Post	Proposed No. of candidates to be Recruited	Stipend per person per month (Rs.)	Total stipend per month (Rs. Lakh)
2015-16	ITI Technician	200	7000	14.00
	Jr. Manager	55	12000	06.60
	Asst. Manager	02	18000	00.36
	Other	09	8000	00.72
2016-17	ITI Technician	177	7000	12.39
	Administrative	200	8000	16.00
	Jr. Manager	26	12000	03.12
	Asst. Manager	311	18000	55.98
	Total	980		109.17
Total stipend for FY 2016-17= Rs.13.10 crore				

198. The Commission examined the proposal. Last year OPTCL proposed addition of 450 nos. of employees during 2015-16. The financial impact of stipend to new recruitee of 450 nos. was allowed by the Commission as pass through in the ARR of 2015-16. But OPTCL during 2015-16 recruited only 6 nos. of executive by December 2015 and propose to recruit balance 266 nos. by March, 2016 (OPTCL filing for 2016-17). Again during 2016-17 OPTCL purpose to recruit 714 nos. of new employee. Therefore, the Commission allows the impact of stipend on 266 (272-6) nos. newly recruited employees only during 2016-17. The impact of stipend of new employee to be recruited during 2016-17 of 714 nos. has not been considered in the ARR of 2016-17.
199. 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.
200. The revised figure of the amount of stipend to be new recruit as proposed and as approved is given in the table below:

Table - 23

(Rs. in lakh)

Year	No. of candidates to be recruited	Monthly impact of stipend as proposed by OPTCL	Annual impact as proposed by OPTCL	Amount approved by the Commission
2015-16	266	21.68	260.16	260.16
2016-17	714	87.49	1049.88	0.00
Total	980	109.17	1310.04	260.16

201. Thus the Commission approves Rs.2.60 crore towards stipend for new recruitment during FY 2016-17.

Terminal Benefit including NPS

202. Under this head OPTCL proposed an amount of Rs.140.00 crore and Rs.3.98 crore towards terminal liability and NPS respectively. OPTCL submitted the cash flow statement upto November, 2015 in its reply to query as per which an amount of Rs.104.11 crore has been disbursed towards terminal benefits within 8 months of the FY 2015-16. Hence, the Commission feels it appropriate to allow an amount of Rs.140 crore towards terminal benefit as proposed by OPTCL. Besides above an amount of Rs.3.98 crore as proposed by OPTCL is also allowed as a pass through towards NPS during 2016-17.

7th Pay Commission Impact

203. OPTCL has claimed an amount of Rs.63.33 crore towards 7th Pay Commission impact (Rs.26.09 crore for salary and Rs.37.24 crore for terminal benefit) as a pass through in the ARR of FY 2016-17. The Commission does not agree with the proposal of OPTCL as it has not been implemented anywhere yet.

Other Employees Cost and allowances

204. OPTCL had claimed Rs.19.75 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.2.96 crore. Regarding other allowances claimed by OPTCL to the tune of Rs.6.55 crore, the Commission allows Rs.1.00 crore only because of non availability of detail breakup. The rest of the expenditures claimed by OPTCL under the heads such as contractual/outsources engagement, leave travel concession (LTC), honorarium, ex-gratia, bonus, staff welfare expenses and other miscellaneous expenses is allowed as such by the Commission. Based on the above observations, the Commission has approved Rs.12.79 crore towards Other Employees Cost and allowances for FY 2016-17.
205. 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- 24
(Employees Cost - FY 2016-17)

(Rs. crore)

Sl. No.	Particulars	Approved (FY 2015-16)	Proposed 2016-17	Approved 2016-17
A	Salary & Allowances			
1	Basic Pay + Grade Pay	63.86	68.37	59.10
2	Dearness Allowance	77.27	89.57	77.43
3	House Rent Allowance	9.58	13.67	8.87
4	Other Allowance	0.84	6.55	1.00
5	Bonus	0.01	0.01	0.01
6	Stipend for New Recruitment	8.77	13.10	2.60
7	7th Pay Commission	-	26.09	0
	Sub-Total (A)	160.33	217.36	149.00
B	Additional Employee Cost			
1	Contractual/Out Sources Engagement	1.44	1.99	1.99
	Sub-Total (B)	1.37	1.99	1.99
C	Other Employee Cost			
1	Medical Expenses (allowance +Reimbursement)	3.19	4.37	2.96
2	Leave Travel Concession	0.67	0.75	0.75
3	Honorarium	0.05	0.15	0.15
4	Ex-gratia	1.00	1.00	1.00
5	Staff Welfare Expenses	2.85	4.01	4.01
6	Miscellaneous	2.32	0.92	0.92
	Sub-Total (C)	10.08	11.20	9.79
D	Terminal Benefits			
1	Pension	135.37	140.00	140.00
2	Gratuity			
3	Leave Salary			
4	Other (including contribution to NPS)	3.28	3.98	3.98
5	7th Pay Commission	-	37.24	0.00
	Sub-Total (D)	138.65	181.22	143.98
E	Total Employee Cost (A+B+C+D)	310.51	411.77	304.76
F	Less: Employee Cost Capitalized	5.28	12.21	12.21
G	Net Employee Cost (E- F)	305.23	399.56	292.55

Repair & Maintenance Expenses

206. For the FY 2016-17 OPTCL has proposed an amount of Rs.170.66 crore under the head repair and maintenance expenses. Item wise details is given in the table below:

Table- 25

Particulars	(Rs.crore)		
	OERC Approval (FY 2014-15)	OERC Approval (FY 2015-16)	Projection (FY 2016-17)
(i) O&M	93.00	108.00	143.62
(ii) Telecom			10.39
(iii) Civil Works			8.85
(iv) Information Technology			7.80
Total R&M Expenses			170.66

207. The objectors during hearing question 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 2014-15 and found an amount of Rs.100.31 crore booked under repair and maintenance. The Commission views that once more and more new substations are commissioned the expenditure on repair and maintenance shall be rationalised. In the audited accounts for FY 2014-15 it is found that the OPTCL piled up a huge amount of capital works under progress of Rs.1289.10 crore at the end of 31st March, 2015. Also the actual asset addition reflected in audited accounts is much below than what has been projected in the tariff order during previous years. A table showing the asset addition as proposed by the licensee , approved by the Commission and actual as per audited accounts is given in the table below:

Table - 26

	Proposed by licensee	Approved by Commission	Actual per audited accounts
2011-12	227.34	227.34	135.58
2012-13	416.57	416.57	219.48
2013-14	256.72	256.72	196.74
2014-15	495.18	495.18	153.06

208. From the above table it transpires that the actual addition to the fixed asset is very poor for which the pressure on repair and maintenance on lines and substations is rising upwards. This somewhere reinforces the views projected by the objectors and needs a relook. On the other hand huge amount is blocked in Work in progress without any tangible benefit.

209. Therefore, the Commission is not inclined to allow the amount proposed by the licensee. The Commission considers a growth of 5% annually over the audited accounts figure of Rs.100.31 crore and approves an amount of Rs.110.59 crore during the FY

2016-17 under the head repair and maintenance. The Commission observes that views of objectors shall be addressed by OPTCL in future tariff applications.

Administration & General Expenses

210. For the FY 2016-17, the petitioner has proposed an amount of Rs.25.58 crore under the head Administration & General Expenses. Item-wise break up of expenses is given in table below:

Table- 27

PARTICULARS	(Rs. crore)
Commission approved - 2015-16	20.59
Escalation as per WPI Oct-15(0.1%)	0.02
A&G for 2016-17	20.61
Add: Licence Fees	1.50
Add: Inspection Fees	2.76
Add: SLDC Charges	0.70
Total A&G Expenses for 2016-17	25.58

211. 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. OPTCL submitted the Commission to revisit the approved amount of A&G for 2015-16, with reference to the base year 2005-06. As mentioned by petitioner, there is an increase of 176% in WPI for the calendar year 2014 over the base year 2005.
212. The Govt. of India in its recent review by the office of Economic Advisor of India reported that Indian wholesale price fell by 0.90% year-on-year in January, 2016. The inflation has been in a negative territory since November, 2014.
213. In view of above the Commission allows escalation of (-) 0.90% (rate of inflation measured by WPI of January 2016) over the approved amount of previous year. The calculation for determining the A&G expenses is given in table below:

Table - 28

(Rs. crore)

Normal A&G approved during 2015-16	20.59
Escalation as per WPI (January 2016)	(-) 0.9%
Normal A&G for 2016-17	20.40
Add licensee fees to Commission	1.50
Add: Inspection fees	2.76
Total	24.66

214. The Commission approved an amount of Rs.24.66 crore towards A&G expenses for the FY 2016-17.

Interest on Loan

215. The petitioner has proposed an amount of Rs.124.55 crore towards interest on long-term loan for the FY 2016-17. Loan-wise interest payment as proposed by OPTCL is depicted in table below:

Table- 29

(Rs.crore)

Sl No	Source :	Current Year 2015-16				Ensuing Year 2016-17			
		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	-
	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	45.39	50.00	-	95.39	194.61	-	290.00	18.88
	PFC	69.17	21.81	6.58	84.40	-	7.08	77.32	7.67
	REC	204.88	158.18	21.43	341.62	-	32.83	308.79	43.78
	JICA					213.26	-	213.26	0.85
	New Loan		147.28		147.28	501.18	-	648.46	27.11
	Sub Total	319.43	377.27	28.01	668.69	909.05	39.91	1,537.84	98.29
3	Others								
	Infrastructure Loan	52.45		24.00	28.45		28.45	(0.00)	-
	Total Loan (1+2+3)	788.88	377.27	52.01	1,114.14	909.05	68.36	1,954.83	124.55

216. It is observed from the table submitted in form F-3, the quantum of loan to be availed during 2015-16 and 2016-17 is Rs.377.27 crore and Rs.909.05 crore respectively. Source-wise receipt of loan is given table below:

Table – 30
Source-Wise Receipt of Loan (Rs. crore)

Particulars	2015-16	2016-17
Bank of India	50.00	194.61
PFC	21.81	0.00
REC	158.18	0.00
JICA	0.00	213.26
New loan	147.28	501.18
Total	377.27	909.05

217. OPTCL has submitted the cash flow statement for the year 2015-16 (upto January 2016) as per which the loan drawl during 1st 10 months of the financial year is shown

NIL. However, going by the past records of OPTCL it is found that majority of the loans are drawn towards end of financial year. A table showing loan details as on 31.03.2015 and the sanctioned loan expected to be drawn by March, 2016 is given in table below:

**Table – 31
Cash Flow Statement**

Source (Institution-wise/ Bank-wise)	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
150689-1	Karanja	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	Karanja	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	2.10	17.03.2009	12.50%	10 Year	3 Year
150689-3	Karanja	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	Karanja	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	Karanja	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	2.30	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	1.40	05.03.2012	12.50%	10 Year	0
2350002-5	Bhadrak	REC	5.76	5.76	06.03.2012	12.50%	10 Year	0
2353194-1	Bhudipadar-Bolangir	REC	22.26	22.26	07.03.2012	12.50%	15 Year	3 Year
150688-	Basta	REC	2.79	2.79	07.03.2012	12.50%	10 Year	0
2350001-3	400 Kv DC Line Meramindali Duburi	REC	19.09	19.09	07.03.2012	12.50%	10 Year	0
150689-	Karanja	REC	2.18	2.18	14.03.2012	12.50%	10 Year	0

Source (Institution-wise/ Bank-wise)	Purpose	Sanctioned by	Amount Sanctioned	Amount of Drawal	Date of Drawal	Interest Rate (%)	Tenure of Loan	Moratorium period
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	Bhawaniapatana	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 Jagatsunghpur	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	1.40	29.03.2012	12.50%	15 Year	3 Year
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 Jagatsunghpur	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	Bhawaniapatana	REC	6.08	6.08	3/27/2014	12.00%	15 Year	0
2350011-3	Boudh	REC	7.70	7.70	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 Bidanshsi	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

Source (Institution-wise/ Bank-wise)	Purpose	Sanctioned by	Amount Sanctioned	Amount of Drawal	Date of Drawal	Interest Rate (%)	Tenure of Loan	Moratorium period
48703017-4	132/33 KV S/S Kalunga	PFC	5.40	5.40	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				
	Grand Total		390.45	390.45				
F Y 2015-16	To be availed during FY 15-16(During Mar-16)							
2350001-4	400 Kv DC Line Meramindali Duburi	REC		13.97	Mar-16	11.60%	7 Year	0
2353194-2	Bhudipadar-	REC		3.73	Mar-16	11.60%	10 Year	1 Year
2350004-3	Purusottampur	REC		4.20	Mar-16	11.60%	10 Year	1 Year
2350015-3	Karadagadia	REC		47.25	Mar-16	11.60%	10 Year	1 Year
101080-1	Transformers for (O&M)	REC		89.02	Mar-16			
		Sub Total		158.17				
48703008-5	132/33 KV S/S Banki	PFC		1.04	Mar-16	12.25%	10 Year	0
48703017-5	132/33 KV S/S Kalunga	PFC		0.39	Mar-16	12.25%	10 Year	0
48703019-4	132/33 KV S/S Banai	PFC		20.40	Mar-16	12.25%	11 Year	0
		Sub Total		21.83				
	Bank of India Projects	Bank of India		50.00	Mar-16	9.75%	12 years	2 years
		Sub Total		50.00				
	New loan to be availed from the Banks			147.28	Mar-16	9.95	12 years	3 years
		Sub Total		147.28				
	Total			377.28				

218. As seen from the above, OPTCL availed loan from Bank of India, REC, PFC for capital works amounting Rs.390.45 crore by 31.03.2015. During 2015-16 the sanctioned loan which is expected to be availed during March 2016 amounts to Rs.229.99 crore. Details are given in table below:

Table - 32

Particulars	Rs. crore
Bank of India	50.00
PFC	21.81
REC	158.18
Total	299.99

219. Regarding new loan of Rs.147.28 crore expected to be received during 2015-16, sanction has not been obtained. Hence the Commission is not inclined to allow interest impact on new loan proposed to be received during FY 2015-16.
220. For the purpose of allowing interest impact on ARR the Commission considers only the gross loan amount of Rs.620.45 crore (Rs.390.45 crore upto 31.03.2015 + Rs.229.99 crore during 2015-16). Interest impact on loan proposed to be received during 2016-17 has not been considered as a pass through in the ARR.
221. The closing balance of loans as on 31.03.2016 after repayment works out to Rs.521.41 crore. During FY 2016-17, OPTCL propose to redeem an amount of Rs.39.91 crore on the above loan. Thus loan balance as at 31.03.2017 would be Rs.481.50 crore. Source wise break up on loan as on 31.03.2016, 31.03.2017 rate of interest on the above loan and the amount of interest determined is given in table below:

Table – 33 **(Rs. crore)**

Source	Average rate of interest (%)	Loan as on 31.03.2016	Loan as on 31.03.2017	Average	Interest impact
Bank of India	9.75	95.39	95.39	95.39	9.30
REC	12.25	341.62	308.79	325.21	39.84
PFC	12.25	84.40	77.32	80.86	9.90
Total		521.41	481.50		59.04

222. Besides 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 above, the interest liability for FY 2016-17 works out to Rs.59.04 crore as shown in the table above. The Commission approves the same as a pass through in the ARR for FY 2016-17.

Interest on Working Capital

223. OPTCL has proposed an amount of Rs.17.81 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- 34

Calculation of Interest on Working Capital	
Parameters	Rs. Crore
(i) Receivables equivalent to two months of fixed cost.	133.50
(ii) Maintenance Spares @ 15% of O&M expenses	90.30
(iii) Operation & Maintenance expenses for one month	50.18
Total Working Capital	273.98
Interest on Working Capital	35.62

224. The interest on working capital claimed by OPTCL for Rs.17.81 crore is half of Rs.35.62 crore as shown in table above.
225. 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 as per which revenue receipt upto January is shown at Rs.520.61 crore whereas the revenue expenditure including repayment of principal is Rs.442.22 crore. Thus, OPTCL posted a surplus of Rs.78.39 crore during the FY 2015-16 (upto January 2016). 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

226. OPTCL has claimed an amount of Rs.150.50 crore towards depreciation for the FY 2016-17 the computation is based on OERC Regulation, 2014 for the State Transmission Utility. A statement of Fixed Asset and block wise computation depreciation is shown in table below:

Table- 35

(Rs.crore)

Transmission Assets	OERC Depreciation Rate as per Regulations, 2014	Estimated Gross Block as on 01.04.2016	Estimated Depreciation for FY 2016-17
Free Hold Land		41.30	-
Lease Hold Land		24.50	0.66
Buildings	3.34%	102.22	3.41
Plant and Machinery (Other Civil Work)	3.34%	10.28	0.34
Plant and Machinery	5.28%	2,009.58	76.38
Plant and Machinery (By Beneficiary)	0.00%	434.24	-
Plant and Machinery: (Lines, Cables & Network)	5.28%	1,778.66	67.51
Vehicles	9.50%	1.95	0.19
Furniture, Fixture	6.33%	3.92	0.25
Office Equipment & Others	6.33%	28.24	1.76
Grand Total		4434.89	150.50

227. In format F-17(statement of fixed asset) it is found that OPTCL has added an amount of Rs.963.63 crore towards fixed asset during 2015-16. Opening balance of fixed asset i.e. 01.04.2015 as found out from the audited account was Rs.3471.26 crore. After addition of the completed asset during 2015-16 the gross fixed asset as on 31.03.2016 works out to Rs.4434.89 crore which was taken into consideration for calculation of depreciation for the FY 2016-17. On verification from the audited accounts it is found that during the FY 2014-15 OPTCL has added an amount of Rs.153.06 crore to the asset base. This amount was very less in comparison to the figure approved in the last year's tariff order. A table showing the amount of fixed asset addition approved by the Commission and actual as per audited accounts is given table below:

Table – 36

	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

228. It is observed the above that, OPTCL always added lesser amount towards fixed assets as against the proposal and approval. Hence, considering the trend the Commission is not inclined to approve an amount of Rs.963.63 crore towards addition on fixed asset during 2015-16. In reply to OERC query No.17, OPTCL stated that projects having estimated value of Rs.506.79 crore have been completed by the end of December, 2015. The Commission therefore considers the asset addition of Rs.506.79 crore during 2015-16 for the purpose of determination of depreciation. As revealed from the audited accounts of 2014-15, the works in progress as on 31.03.2015 is shown at Rs.1289.10 crore which is more than the asset addition during the FY 2015-16. Therefore, OPTCL should endeavour to convert the huge work in progress to fixed asset in use and fulfill the target approved by the Commission.

229. During 2015-16 tariff order the Commission has allowed depreciation on an inflated value of asset amounting to Rs.342.12 crore shown in table above. The incremental depreciation on the above amount at the pre-92 rate works out to Rs.10.98 crore. The Commission viewed that the amount of Rs.10.97 crore should be deducted from the total amount of depreciation approved during FY2016-17.

230. The issue of up-valuation of the fixed asset has been addressed in the previous years 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 of upvaluation, moratorium of Debt Service

Govt. of Odisha extended the benefit 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 impact vide No.862 dt.12.06.2014. Reply from State Govt. on this issue is still awaited.

231. 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.2091 dated 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.

232. 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 01.4.96 and year-wise asset addition thereafter till FY 2015-16 is depicted in table below.

Table – 37

(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 (Approved)	506.79
Total	3513.80

233. In view of the directions and order of the High Court of Odisha, the Commission is 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 assets (i.e. after rolling back the effect of revaluation of 1996 from the value of the assets).
234. The classification of assets has been done proportionately based on the audited account for 2014-15 submitted by OPTCL. The calculation of depreciation for the FY 2016-17 is shown in table below:

Table –38

(Rs. crore)

Particulars	Pre-92 rate of depreciation as per GOI notification dated 31.01.92	Book Value of asset as on 01.04.1996	Book Value of asset as on 01.04.2016	Depreciation for the year 2016-17
Land and Rights		8.07	55.57	0.00
Building	1.80%	13.09	86.35	1.55
Plant & Machinery (other civil works)	1.80%	-	8.69	0.16
Plant & Machinery	3.80%	-	1832.31	69.63
Plant & Machinery (line, cables and network)	2.57%	492.71	1502.47	38.61
Vehicles	12.86%	0.02	1.65	0.21
Furniture, Fixture	4.55%	0.19	3.31	0.15
Office equipment	9.00%	0.25	23.45	2.11
Grand Total		514.32	3513.80	112.42

235. Accordingly, Commission approves an amount of Rs.112.42 crore towards depreciation for the FY 2016-17. As mentioned in the above para the approved amount of Rs 112.42 crore is reduced by an amount of Rs.10.97 crore (excess depreciation allowed during 2015-16) to arrive at an amount of Rs.101.45 Crores allowed as pass through in the ARR of 2016-17.

Return on Equity

236. OPTCL has claimed an amount of Rs.68.62 crore during FY 2016-17 @19.61% as per clause 8.28 of Regulation, 2014 on equity share capital of Rs.349.93 crore.

237. 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 2015-16 amounts to Rs.349.93 crore. The sanction order and date of Govt. fund is given in table below:

Table – 39

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

Sl. No.	Sanction Order No. and Date	Amount (Rs. in cr.)
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
	Total	349.93

238. The Commission allows return at the rate of 15.5% on the equity value of Rs.349.93 crore amounting to Rs.54.24 crore. The Commission approves the same as a pass through in the ARR of 2016-17.
239. Over and above this amount, the Commission allows the actual tax expenses Rs.7.79 crore booked in the audited accounts for FY 2014-15 which is also claimed by OPTCL in the ARR.

Expenses relating to auxiliary energy consumption in the s/s

240. OPTCL claimed an amount of Rs.3.82 crore under this head for FY 2016-17. 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

241. (a) **Grid Co-ordination Committee Expenses:** OPTCL claimed an amount of Rs.0.84 under this head for the FY 2016-17. In a reply to query OPTCL furnish the details of expenditure towards GCC during 2014-15. As per which an amount of Rs.0.32 crore have been spent during 2014-15. OPTCL has incurred an amount of Rs. 0.0874 crore towards GCC expenses (upto September 2015) which is much less in comparison to the figure approved by the Commission i.e. Rs.0.52 crore during 2015-16. The

Commission therefore allows an amount of Rs.0.32 crore (actuals as per audited accounts of 2014-15) towards GCC expenses for the year 2016-17.

(b) **Corporation Social responsibility:** Under this head OPTCL claimed an amount of Rs.1.57 crore during the FY 2016-17. The Commission viewed that such expenditure is a part of Administrative and General Expenses which the Commission already approved in the said head. Hence, the claim of Rs.1.57 crore is not allowed as pass through in the ARR.

Payment of SLDC Charges

242. 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 2016-17 wherein it has been computed that OPTCL has to Pay 10% of SOC to SLDC. Accordingly, OPTCL will pay an amount of Rs.0.66 crore per annum to SLDC towards System Operation Charges for FY 2016-17. The details of SOC are available in the ARR of SLDC approved in Case No.56/2015. The said amount of Rs.0.66 crore is allowed in the ARR of OPTCL to be recovered through its Transmission Tariff.

Incentive for system availability

243. OPTCL in its submission has claimed for an incentive of Rs.9.19 crore to be passed on the ARR of FY 2016-17 as the system availability of OPTCL Transmission Network for FY 2014-15 was 99.95%, which is more than Normative Annual Transmission System Availability Factor (NATAF) of 98.5%. The OPTCL Incentive Claim of Rs.9.19 crore has been certified by SLDC.
244. 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 99.95% during FY 2014-15 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 2016-17 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 and continuously suffer 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

245. As per Regulation 8.49 of OERC Regulation, 2014 a rebate of 2% to be allowed the transmission licensee in case the payment is made within 2 working days. Similarly, as per the Regulations, 8.50 a rebate of 1% to be allowed in the transmission licensee in case the payment is made after 2 working days and within a period of 30 days. Accordingly OPTCL has projected an amount of 19.50 crore towards rebate for FY 2016-17. The Commission approves an amount of Rs.12.50 crore towards rebate as a pass through in the ARR.

Miscellaneous Receipts

246. OPTCL has proposed an amount of Rs.25 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 2015-16, Miscellaneous Receipt of OPTCL from different sources is about Rs.16.01 crore. As required by the Commission the OPTCL submitted its cash flow statement upto January, 2016 as per which the miscellaneous receipt for the 1st 10 months of the current financial year worked out to Rs.37.96 crore. The details are given in table below:

Table- 40

Miscellaneous Receipt during 1st six months of FY 2015-16	
Source	Rs.crore
Inter-State Wheeling	0.33
Short-Term Open Access	20.76
STU charges received from Energy Exchange	5.51
Supervision Charge	1.67
Sale of tender papers and other miscellaneous receipt	9.69
Total	37.96

247. Extrapolating the above amount of Rs.37.96 crore for a period of 12 month the miscellaneous receipt for the entire year works out to Rs.45.55 crore for the FY 2016-17. The Commission considers an amount of Rs.45.55 crore towards Miscellaneous Receipt.

Transmission Cost

248. OPTCL in its ARR application has considered demand projection of all four DISCOMs totaling 25468 MU for FY 2016-17. OPTCL envisages 150MU 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 25318 MU. The Commission scrutinized the proposal of OPTCL and the total energy to be transmitted in the OPTCL system is estimated at 24900 MU for FY 2016-17, the details of which are mentioned in the table below:

Table – 41

Details of Energy for Transmission	Proposed by OPTCL (MU)	Approved by OERC (MU)
Total Demand of DISCOM	25468	25540
Less energy transmited in 33KV & 11 KV network	150	150
Energy Transmitted for DISCOM	25318	24390
Wheeling to industries from CGPs	450	500
Sale to CGPs by GRIDCO	10	10
Total	25778	24900

249. 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 – 42
ARR Proposed and Approved for OPTCL for 2016-17

ITEMS	Approved for 2015-16	Proposed for 2016-17	Approved for 2016-17
Employees Cost including Terminal Benefits	305.23	399.56	292.55
R&M Cost	108.00	170.66	110.59
A&G Cost	24.37	25.58	24.66
Interest on Loan Capital	40.93	124.55	59.04
Depreciation	107.48	150.50	101.45
Return on Equity including Income Tax	52.10	76.41	62.03
Interest on Working Capital	-	17.81	-
Sub-Total	638.11	965.08	650.32
Special Appropriation			
Pass Through Expenses			
Contingency Reserve	-		
Other miscellaneous expenses	-	3.82	0.00
GCC Expense including SLDC charges and CSR	1.22	2.41	0.98
Incentive for system availability	5.00	9.19	5.00

ITEMS	Approved for 2015-16	Proposed for 2016-17	Approved for 2016-17
Rebate	12.61	19.50	12.50
Total	656.94	1000.00	668.80
Less Misc. Receipts	26.00	25.00	45.55
Annual Revenue Requirement to be recovered from LTOA Consumers (i.e. DISCOMs & CGPs)	630.94	975.00	623.25
Transmission Charges (Paise/Unit) (Rounded)	25.00	37.82	25.00

TARIFF DESIGN

Transmission Charges

250. OPTCL in its ARR Application for FY 2016-17 has proposed Transmission Charges @ 37.82 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.
251. 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 24900 MU with an average demand of 2843 MW. The net transmission cost as indicated in the table above is Rs.623.25 crore. Accordingly, the LTOA charges work out to a near sum of Rs.6000.00/MW/day rounded to 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

252. OPTCL had proposed that out of the energy supplied to transmission licensee, 3.70% 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 3.70% for wheeling for FY 2016-17. However, the Commission expects that OPTCL shall strive to reduce the loss further by 0.20% by adopting best practices by end of 2016-17.

Reactive Energy Charges:

253. OPTCL in its ARR application for FY 2016-17 has submitted that the Reactive Energy Charges shall be separately determined by the Commission as per Regulation 4 (5) of OERC (Determination of Open Access Charges) Regulations, 2006 and the Open Access Customers shall pay the same.
254. The Commission in order dated.23.03.2015 had approved Reactive energy charges provisionally @ 6.50 Paise /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 & IMFA) by SLDC since long. The stake holders 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.

Transmission Charge Payment Mechanism

255. 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 2016-17.

Rebate

256. 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% 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

257. 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.
258. The transmission tariff approved as above in respect of OPTCL will become effective from 1st April, 2016 and shall continue until further order.
259. The Tariff Order shall be made effective from 01.04.2016.
260. The applications of OPTCL in Case No.55 of 2015 & Case No. 1 Of 2016 are disposed of accordingly.

(A.K. DAS)
MEMBER

(S.P. SWAIN)
MEMBER

(S.P. NANDA)
CHAIRPERSON

[Annexure – I](#)

CAPEX Proposed by OPTCL for new projects - FY 2016-17 (Rs. crore)

Table – 1

Particulars	Amount
Telecom	101.25
O&M	119.40
Information Technology (IT)	30.64
Civil Works	17.67
Construction	746.02
Total Capital Expenditure	1014.98

CAPEX for telecom related projects:

1. OPTCL has proposed Rs.101.25 crore towards CAPEX pertaining to Telecommunication Wing for FY 2016-17. The details of which are shown in the table below:

Table – 2

CAPEX Proposed for Telecom Project for FY 2016-17(Rs. crore)

Particulars	Amount
SCADA interface points at vital 132kV s/s by laying OPGW cable (1745 km.)	30.00
Laying OPGW to balance 132/220/400kV s/s (Approx. 6589km.)	45.31
Infrastructure provision of SCADA for upcoming industries	2.40
Provision of Digital Tele-protection coupler in all 220kV lines	5.91
Provision of phase-wise replacement of old RTU	2.75
Phase-wise replacement of 8 core OPGW by 24 core OPGW	10.83
Installation of PMUs in all 220kV & above voltage level s/s	4.05
Total	101.25

CAPEX for O&M related projects:

2. To meet the future load growth, OPTCL has proposed Rs. 119.40 crore For O &M related CAPEX projects for FY 2016-17. The details of item wise CAPEX for O&M related projects are shown in the table below.

Table – 3
CAPEX Proposed for O&M projects for FY 2016-17(Rs. crore)

Sl.	Description	Rate	Quantity (Nos.)	Amount
1	PROCUREMENT OF TRANSFORMERS WITH COST OF ERECTION			
(i)	Procurement of 160 MVA, 220/132kV	7.15	2	14.30
(ii)	Procurement of 63 MVA, 132/33kV	3.63	2	7.26
(iii)	Procurement of 40 MVA, 132/33kV	3.00	11	33.03
(iv)	Procurement of 40 MVA, 220/33kV	3.35	1	3.35
(v)	Procurement of 20 MVA, 132/33kV	1.65	5	8.25
(vi)	Cost of construction of Bays	LS		7.00
2	PROCUREMENT OF TRANSFORMERS TO MEET EMERGRNCY SITUATION			
(i)	Procurement of 160 MVA- 2 nos., 40 MVA - 5 nos, 20MVA-2 nos Transformers	LS		37.43
3	CONVERSION OF S/C (DC TOWERS) TO D/C WITH BOTH END BAYS			
(i)	132kV Kendrapara - Pattamundai (19.5 RKM)	LS		2.89
4	UPRATING OF CONDUCTOR WITH HTLS			
(i)	132kV Ranasinghpur - Kesura SC (26.36 RKM)	LS		4.81
5	CONSTRUCTION OF BAYS AT GRID SUBSTATIONS			
(i)	LILO of 132kV Burla - Chipilima Tie Line (Ckt - I) to Katapali Grid with connecting Bays	LS		1.08
	TOTAL			119.40

CAPEX for Information Technology (IT) related projects:

3. OPTCL has proposed Rs.30.64 crore towards CAPEX for Information Technology (IT) related works for infrastructure development and automation related fields etc. to be made during FY 2016-17. The details of item wise CAPEX for Information Technology (IT) related projects are shown in the table below:

Table – 4
CAPEX Proposed for IT projects for FY 2016-17(Rs. crore)

Sl. No.	Item Description	Amount
1	Geographical Information System (GIS)	5.70
2	Analytics (Business Intelligence)	3.50
3	Primary Data Center	4.50

4	Disaster Recovery Data Center	7.00
5	End-User IT Systems	3.00
6	Network (OGS-WAN)	0.82
7	IT Security	0.50
8	Smart Grid Initiatives (AMI)	1.00
9	Other IT Initiatives:	
a)	CCTV & VC	4.57
b)	DMS	0.05
Total		30.64

CAPEX for civil works:

4. For the FY 2016-17, OPTCL has proposed Rs. 17.67 crore towards CAPEX for Civil works for new upcoming projects and the activity wise details are shown in table below:

Table – 5
CAPEX Proposed for IT projects for FY 2016-17(Rs. crore)

Sl. No.	Description of works	Amount
1	Construction of re-alignment of approach roads & related work	0.45
2	Construction of Boundary and Compound Wall related work	0.98
3	Water supply system, sewerage system and drainage related work	0.31
4	Renovation & Construction of offices, staff qrs., stores	2.56
5	Construction of PEB,GRIDCO,BBSR	3.37
6	Construction of Tech Tower, BBSR	10.00
Total		17.67

CAPEX for Construction Wing:

5. To strengthen the transmission system network of the State and to increase the overall system capacity, OPTCL has proposed to spend an amount of Rs. 744.62 crore during FY 2016-17 and the activity wise details are shown in table below:

Table –6
CAPEX Proposed for Construction Wing for FY 2016-17

(Rs. crore)

Sl.	Description of the Project/Scheme	Expenditure during FY 2015-16			projected Expenditure FY 2016-17
		Actual for First Six Months	Projection for Balance Six Months	Total	
1	2	3	4	5=3+4	6
A	ONGOING SCHEME				
1	400kV Meramundali- DuburiD/C line	-	4.00	4.00	

2	132/33kV Khajuriakata (Hindol Road) S/S with line	3.20	7.50	10.70	
3	400kV IB- Meramundali D/C line	-	1.20	1.20	
4	Diversion of 132kV Dhenkanal- Nuapatna line with 132KV Bay Extension at Nuapatna	0.06	3.50	3.56	
5	Conversion of 132/33kV Somanathpur Sw-Stn to S/S	1.14	2.00	3.14	
6	2x12.5MVA ,132/33kV Udala S/S with LILO	-	1.00	1.00	8.00
7	132kV Bhadrak - Anandpur S/C line	1.98	6.00	7.98	15.27
8	132/33kV Olaver S/S & 132kV Pattamundai-Olavar line with Bay Extension at Pattamundai	1.89	3.00	4.89	2.00
9	132/33kV Agarpada S/S with LILO	1.48	7.00	8.48	15.00
10	2x20MVA, 132/33kV Bhograi S/S with LILO	3.88	5.00	8.88	14.00
11	132kV Kuchei PG-Jaleswar D/C line & 2 nos. 132kV Bay Extension	6.04	3.50	9.54	5.50
12	220/132/33kV Puri (Samangara) S/S with line	35.51	5.00	40.51	1.00
13	220/132/33kV Atri (Karadagadia)S/Swith LILO	10.88	5.00	15.88	5.00
14	2x160MVA, 220/132kV Mendhasal S/S with line	1.24	1.00	2.24	
15	220/132/33kV Pratapsasan S/S with line	1.30	8.00	9.30	15.00
16	3rd ICT at 400/220kV Mendhasal S/S	3.93	5.00	8.93	10.15
17	220kV Bidanasi-Cuttack D/C line	2.04	3.00	5.04	
18	220/132kV Cuttack (Nuapada) S/S & 220KV Bay Extensions at Bidanasi	0.24	5.50	5.74	2.00
19	132/33kV Marshaghai S/S with LILO	4.52	2.50	7.02	
20	132kV Bay Extensions at Salipur&Kendrapara with lines	0.07	4.50	4.57	
21	132kV Nuapatna-Banki S/C line	1.32	4.00	5.32	10.63
22	2X20MVA, 132/33kV R.Udayagiri S/Swith line	8.81	7.00	15.81	23.67
23	Conversion of existing 132kV Balasore- Somathpur S/C line to D/C line & 132kV Bay Extensions	-	2.00	2.00	-
24	220/33kV Narasinghpur S/S with LILO	0.13	6.00	6.13	16.87
25	132/33 kV Bangiriposhi S/S with line	1.27	3.00	4.27	9.00
26	132/33kV Dhenkikote S/S with line	-	6.00	6.00	27.93
27	2x20MVA,132/33kV Brajabiharipur , Cuttack (old site CDA) S/S	-	3.50	3.50	20.00
28	220/33kV Baliguda S/S with line	8.75	5.00	13.75	35.00
29	2x20MVA, 132/33kV Satasankha (puri) S/S with line	-	2.00	2.00	25.00
30	132/33kV Tirtol S/S with LILO	-	2.00	2.00	15.00
31	132/33kV Chikiti S/S withline	-	5.00	5.00	22.00
32	132/33kV Betonati S/S with line	0.29	4.00	4.29	5.00
33	220/132/33kV Aska S/S with line	6.86	10.00	16.86	30.00

34	220/132/33kV Chandaka-B (Bhubaneswar) GIS S/S	5.63	35.00	40.63	35.00
35	220kV Atri-Pandiabil D/C line	6.82	-	6.82	
36	220/132/33kV GodaChhak S/S with line	-	4.00	4.00	15.00
37	400/220KV Duburi(New) S/S & Bay Extension Work at Meramundali	-	1.00	1.00	
38	132/33kV Boudh S/S with Line	-	0.05	0.05	
39	132/33kV Padampur S/S with line	0.09	7.00	7.09	3.00
40	220/132kV Kesinga S/S with line	0.79	10.00	10.79	10.00
41	132/33kV Kantabanji S/S with line	1.16	10.00	11.16	4.00
42	220/132/33kV Baragarh(New) S/S	0.75	10.00	10.75	15.00
43	132kV Pottangi S/S with line	2.91	11.00	13.91	0.10
44	132kV Umerkote S/S with line	4.87	0.10	4.97	
45	2nd 220kV Indravati-Therubali D/Cline		1.50	1.50	1.00
46	132/33kV Podagada S/S with line	2.99	14.00	16.99	1.00
47	220kV Jayanagar(OPTCL)-Jaynagar (PGCIL) line & 2 nos. 220kV feeder bays	0.37	5.00	5.37	5.00
48	Conversion of existing Jaynagar- Sunabeda S/C line to D/C line	3.50	5.00	8.50	1.00
49	220/33kV Malkanagiri S/S with line	0.84	15.00	15.84	10.00
50	2x20MVA ,132/33kV Muniguda S/S with LILO	0.42	5.00	5.42	10.00
51	2x20MVA,132/33kV Kalunga S/S with LILO	0.04	4.00	4.04	
52	2x40MVA,220/33kV Bonai S/S with LILO	0.10	2.00	2.10	8.00
53	220/132kV Lapanga S/S with lines	0.93	7.00	7.93	
54	Conversion of 132/11kV S/S to 2x40MVA, 132/33kV S/S at Sarasmal (Jharsuguda)	1.24	2.00	3.24	4.00
55	Transformer bay at 220/33kV Laxmipur S/S	0.22	2.00	2.22	3.00
56	2x12.5MVA, 220/33kV Kasipur S/S with LILO	0.06	5.00	5.06	10.00
57	132kV Junagarh-Kesinga S/C line	2.47	2.00	4.47	10.00
58	2X20MVA, 132/33kV Boriguma S/S with LILO	-	5.00	5.00	8.00
59	2x20MVA, 220/33kV Jaypatna S/S with line	6.95	5.00	11.95	7.00
60	220/33kV Kalimela S/S with line	-	5.00	5.00	7.00
61	132kV Jayanagar -Tentulikhunti S/C line	-	6.00	6.00	8.00
62	132/33kV Birmaharajpur S/S with line	0.01	4.00	4.01	7.00
63	132/33kV Tusura S/S with line	2.76	4.00	6.76	10.00
64	132kV Nuapada-Padampur S/C line	-	3.00	3.00	5.00
65	400/220kV Lapanga S/S with line	7.48	2.00	9.48	15.00
66	132/33kV Ghens S/S with line	3.08	4.00	7.08	15.00
67	132 kV Podagada-Pottangi S/C line	-	0.05	0.05	5.00
68	220 kV Pandiabil-Pratapsasan Line	2.74	2.00	4.74	12.00
69	132/33kV Banki S/S with line	0.84	0.50	1.34	

70	Other Works	4.46	2.50	6.96	
	TOTAL - A	171.35	343.40	514.75	577.12
B	NEW PROJECTS				
1	400/220 kV Meramundali- B GIS S/S with line				10.00
2	132/33kV Unit-8 (Bhubaneswar)GIS S/S with line		-	-	10.00
3	132/33kV Rasulgarh (Bhubaneswar) GIS S/S with line		-	-	5.00
4	132kV Phulbani-Boudh S/C line				7.00
5	132/33kV Athagarh GIS S/S& associated LILO		5.00	5.00	15.00
6	220/33kV Keonjhar GIS S/S &associated line		5.00	5.00	15.00
7	132/33kV Chandbali GIS S/S & associated line		0.10	0.10	2.00
8	220/132kV Dhenkanal (New) S/S & associatedline			-	2.00
9	132/33kV Rajnagar S/S & associated line		0.03	0.03	5.00
10	132/33kV Bahugram S/S& associated Line		0.03	0.03	5.00
11	132/33kV Chandipur S/S& associated line		0.03	0.03	2.00
12	132/33kV G.Udayagiri S/S & associated line	0.01	0.03	0.04	5.00
13	132/33kV Gondia S/S & associated line		0.03	0.03	5.00
14	220/33kV Dasapalla S/S with line		0.50	0.50	1.00
15	220/132/33kV Kuakhia GIS S/S with line		0.50	0.50	2.00
16	220/132/33kV Kiakata S/S with line		0.70	0.70	2.00
17	440/220kV Bhadrak (Ramakrushnapur) GIS S/Swith line		0.75	0.75	2.00
18	400/220kV Berhampur (Narendrapur) S/S with line		0.20	0.20	2.00
19	132kV Kuchei (PGCIL)- Baripada DC line		0.03	0.03	3.00
20	2x20 MVA, 132/33kV Maneswar S/S with LILO			-	1.00
21	220/33kV Deogarh S/S with line			-	1.00
22	220/33kV Lephipada S/Swith line			-	1.00
23	132/33kV Thuapalli S/S with line	-	0.20	0.20	1.00
24	132/33kV Thuamularampur S/S with associated line		0.10	0.10	0.50
25	220/132 kV Gunupur S/S with associated line	0.02	0.50	0.52	5.00
26	220/33kV Govindpalli S/S with associated line	-	0.10	0.10	0.50
27	132/33kV Lakhanpur S/S with line			-	1.00
28	220/33KV S/S at Turumunga with associated line				1.00

	TOTAL - B	0.03	13.83	13.86	112.00
	TOTAL - A+B	171.38	357.23	528.61	689.12
C	DEPOSIT WORK				
1	EHT line diversion for Haridaspur- Paradeep Rly. line	-	1.00	1.00	
2	132/33kV S/S at Samuka Beach(Puri)with LILO	0.73	4.60	5.33	
3	132/33kV Konark S/S with line	2.65	5.00	7.65	
4	3x40 MVA, 132/33kV Arugul S/S with line	0.25	2.00	2.25	
5	220/33kV Infocity-II GIS(IDCO) S/S with line	7.21	12.00	19.21	2.00
6	132/33kV Mania (Tangi) S/S	1.93	9.50	11.43	
7	RTSS at Boinda	-	1.00	1.00	2.00
8	RTSS at Talcher Road	-	0.50	0.50	1.50
9	RTSS at Malatipatapur	-	0.50	0.50	1.50
10	RTSS at Kendrapara	-	0.50	0.50	1.50
11	RTSS at Kamakhyanagar	-	0.50	0.50	1.50
12	RTSS at Rairakhol	-	0.50	0.50	1.50
13	RTSS at Belpahar	0.81	1.00	1.81	2.00
14	220/33kV Basundhara S/S with line	0.05	2.25	2.30	
15	RTSS at Rengali		0.10	0.10	4.00
16	RTSS at Bimalagarh	2.32	2.00	4.32	4.00
17	RTSS at Bissam Cuttack	-	5.00	5.00	10.00
18	RTSS at Rayagada	-	2.00	2.00	10.00
19	RTSS at Lanjigada	-	10.00	10.00	10.00
20	RTSS at Kechobahal		0.10	0.10	4.00
	TOTAL - C	15.95	60.05	76.00	55.50
	TOTAL - D = A+B+C	187.33	417.28	604.61	744.62
