

# **ORISSA ELECTRICITY REGULATORY COMMISSION**

**BIDYUT NIYAMAK BHAWAN,  
UNIT – VIII, BHUBANESWAR – 751 012**

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**Present** : Shri D. C. Sahoo, Chairperson  
Shri B. C. Jena, Member  
Shri S. K. Jena, Member

## **CASE NO.43 OF 2005**

**Date of Hearing** : **06.02.2006**

**Date of Order** : **23. 03.2006**

**IN THE MATTER OF** : An application for approval of Annual Revenue Requirement and determination of Transmission Tariff under Section 62, 64 and all other applicable provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004, and OERC (Conduct of Business) Regulations, 2004, and other Tariff related matters, for the year 2006-07.

## **ORDER**

M/s. Orissa Power Transmission Corporation Limited, Bhubaneswar (in short, OPTCL) a deemed licensee under 5<sup>th</sup> proviso of Section 14 of the Electricity Act, 2003(the Act) read with Government of Orissa's Transfer Notification No. 6892 dtd. 09.06.2005, submitted an application in respect of its Annual Revenue Requirement (ARR) and determination of its Transmission Tariff for the FY 2006-07. The said application was duly scrutinised, registered as Case No.43/2005 and admitted for hearing. In the consultative process, the Commission heard the applicant, objectors, representative of the State Government and discussed the matter in the specially convened meeting of the State Advisory Committee and orders as follows:

### **1 PROCEDURAL HISTORY**

1.1 As per OERC (Conduct of Business) Regulations, 2004 and OERC (Terms and Conditions for determination of Tariff) Regulations, 2004, licensees/deemed licensees are required to file the ARR within 30<sup>th</sup> November in the prescribed formats. OPTCL as a deemed licensee submitted its ARR application for 2006-07 before the Commission on 30.11.2005. After due scrutinisation and admitting the matter, the Commission directed OPTCL to publish its ARR application in the

- approved format in the leading and widely circulated daily newspapers and the matter was also posted in the Commission's website in order to invite objections 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.
- 1.2 In compliance with the Commission's aforesaid order the OPTCL published the said public notice in the leading daily English and Oriya newspapers. In response to the aforesaid public notice of the applicant, the Commission received 9 nos. of objections from the following objectors.
  - 1.3 Mr. Jayadev Mishra, N-4/98, Nayapalli, Bhubaneswar (2) Utkal Chamber of Commerce & Industry, N/6, IRC Village, Nayapalli, Bhubaneswar (3) Orissa Consumers' Association & FOCO, Biswanath Lane, Cuttack (4) Confederation of India Industry (CII), 8, Forest Park, Bhubaneswar (5) M/s NESCO, Januganj, Balasore (6) M/s Jindal Stainless Ltd., 50-HIG, Jayadev Vihar, Bhubaneswar (7) State Public Interest Protection Council, Talengabazar, Cuttack (8) Mr. R.P.Mohapatra, 775, Jayadev Vihar, Bhubaneswar (9) National Aluminum Company Ltd., Bhubaneswar.
  - 1.4 The date for hearing was fixed and it was duly notified in the leading newspapers mentioning the list of the objectors. The Commission conducted a public hearing in its premises and heard the applicant, objectors/their authorised representative and the representative of the State Government on 06.02.2006.
  - 1.5 About the maintainability of OPTCL's application, the objector M/s Orissa Consumers' Association & FOCO had raised the following issues.
    - (i) The application so filed by the licensee is not bonafied and tenable under law.
    - (ii) The notice so published inviting the objections does not confirm to the requirement of law and does not disclose what purpose the revenue requirement have been asked for.
  - 1.6 In its rejoinder to the aforesaid preliminary issues the licensee submitted that it has filed its ARR and tariff applications as per provisions of the Electricity Act 2003 and the relevant Regulations promulgated by the Commission. As per direction of the Commission it has published the public notice in the prescribed format in order to invite objections from the general public. After considering the views of the objector and the licensee, Commission is of the considered opinion that OPTCL is a deemed licensee under 5<sup>th</sup> Proviso of Section 14 of the Electricity Act 2003 read with the provisions of Govt. of Orissa Transfer Scheme, 2005. As a deemed transmission licensee OPTCL is competent to file its ARR and application for determination of its transmission tariff before the Commission. The Commission as a statutory body has legal obligations to dispose such ARR tariff application according to the provisions of the Act and relevant Regulations. In the above circumstances, the Commission is of the view that the preliminary

issues raised by the objector about the maintainability of licensee's application has no substance and not based on the facts. Hence, the Commission decided to proceed further and heard the objectors on other relevant issues.

## 2 OPTCL PROPOSAL FOR FY 2006-07

- 2.1 Under Section 14 of the Electricity Act, 2003, OPTCL is a deemed licensee for transacting business of transmitting electricity in the state with effect from 1<sup>st</sup> April, 2005. It is a constituent of Eastern Regional Power committee. It owns EHT network for transmission of power from various generating stations within the periphery of state and for interconnection with the neighbouring regions. It transmits bulk power to DISTCOS and supplies emergency power to CPPs and wheels CPPs' power to their industries located elsewhere. Interstate wheeling of power is also carried through its network. Apart from this, it is also expected to transmit power for both long term and short term customers as per OERC Open Access Regulation 2005.
- 2.2 OPTCL is notified as State Transmission Utility and shall also discharge the state load dispatch functions until further orders of the State Govt.
- 2.3 OPTCL has projected revenue requirement of Rs.404.34 crore in Annual Revenue Requirement and Transmission Tariff for the FY 2006-07, with existing transmission charge of 25 p/u, as tabulated below :-

**Table – 1**  
**Sources of Revenue**

| Sl. No. | Customer                | MU approved in 2005-06 | MU proposed to be Handled | Rate (P/U) | % Loss | MU handled before Transmission Loss | Amount in Rs. Crore |
|---------|-------------------------|------------------------|---------------------------|------------|--------|-------------------------------------|---------------------|
| 1.      | CESCO                   | 3930                   | 4409.92                   | 25.00      | 4.49   | 4617.23                             | 115.43              |
| 2.      | NESCO                   | 3308.14                | 4200.00                   | 25.00      | 4.49   | 4397.45                             | 109.94              |
| 3.      | WESCO                   | 4150                   | 4531.03                   | 25.00      | 4.49   | 4744.04                             | 118.60              |
| 4.      | SOUTHCO                 | 1800                   | 1836.30                   | 25.00      | 4.49   | 1922.63                             | 48.07               |
|         | Total DISTCO            | 13188.14               | 14977.25                  |            | 4.49   | 15681.34                            | 392.03              |
| 5.      | Emergency sale to CPP   | 10                     | 120                       | 25.00      | 4.49   | 125.64                              | 3.14                |
| 6.      | Wheeling of ICCL power  | 430                    | 250.00                    | 25.00      | 4.49   | 261.75                              | 6.54                |
| 7.      | Wheeling of NALCO power |                        | 100.00                    | 25.00      | 4.49   | 104.70                              | 2.62                |
|         | Total                   | 13628.00               | 15447.25                  |            |        | 16173.44                            | 404.34              |

- 2.4 The Transmission Cost which includes Employees' Cost, Administrative and General Expenses, Repair and Maintenance Cost, Depreciation, Interest on Long

Term Liabilities, appropriation to Contingency Reserve etc. in the table as given below:-

**Table – 2**  
**Transmission cost proposed by OPTCL for FY 2006-07**

**(Rs. Crore)**

| Item  | Approved for<br>FY 2005-06 | Estimation for<br>FY 2005-06 | Projection for<br>FY 2006-07 |
|---|----------------------------|------------------------------|------------------------------|
| Employees' Cost   | 113.32                     | 150.18                       | 158.89                       |
| A&G Cost  | 15.73                      | 13.21                        | 15.85                        |
| Repair & Maintenance Cost                               | 14.80                      | 95.22                        | 116.65                       |
| Depreciation  | 49.77                      | 44.40                        | 130.13                       |
| Interest on Long Term Liabilities                       | 151.03                     | 156.73                       | 132.98                       |
| ERLDC Fees  | 1.84                       | -                            | -                            |
| Contingency Reserve                                     | 12.41                      | 10.80                        | 12.59                        |
| Reasonable Return                                       | -                          | -                            | 94.82                        |
| Less expenses capitalised                               | 1.10                       | -                            | -                            |
| Less inter-state wheeling                               | 17.50                      | 5.00                         | 5.00                         |
| Net Transmission Cost for computing transmission tariff | 340.30                     | 465.54                       | 656.91                       |
| Monthly fixed transmission cost for recovery            |                            |                              | 54.74                        |

2.5 OPTCL proposes to recover annual fixed cost of Rs.656.91 crore from the long-term customers during FY 2006-07 with effect from 01.04.2006, considering the transmission loss for wheeling as 4.49% on energy drawal.

**2.6 Depreciation**

OPTCL has projected depreciation to the tune of Rs.130.13 crore for the FY 2006-07, computed with respect to post-94 rate and based on audited accounts of GRIDCO for FY 2004-05 and estimation for FY 2005-06.

**2.7 Contingency reserve**

OPTCL proposes the contingency reserve of Rs.12.59 crore to meet expenses towards unforeseen calamities relating to transmission.

## 2.8 Capital Base & Reasonable Return

OPTCL has computed capital base of Rs.612.94 crore in its revised filing. Applying the standard rate of 14% return on the capital base of Rs.612.94 crore plus 0.5% of outstanding loan of Rs.1802.40 crore, the reasonable return has been estimated as Rs.94.82 crore.

## 2.9 Summary of proposed tariff for 2006-07

### 2.9.1 Transmission Charge

Transmission Charge @ Rs. 54.74 crore per month shall be applicable for transmission of power at 220 kV/ 132/ 66KV kV over OPTCL's EHT transmission system for the purpose of transmission of energy from generators' end to the substations from where energy will be fed to DISTCOs and CPPs to their industrial units as well as for transmission of power from outside the state to an industry located inside the State. The transmission charge shall be applicable on prorata basis on quantum of energy delivered to long term customers for that month. No change on rebate as well as DPs rates for FY 2006-07 have been proposed, the details are given below :-

2.9.2 **Rebate:** On payment of monthly bill (excluding arrear) a rebate of 2% of the amount of monthly bill is allowed if full payment is made within 48 hours of the presentation of the bill.

- A rebate 1.5% of the monthly bill(excluding arrears) is allowed, if a minimum of 85% of the whole amount (excluding arrears) is paid within 48 hours of the presentation of the bill and 1% of the balance amount, if paid in full within 15 days of the presentation of the bill.
- 1% on the amount of monthly bill if full payment is made within 15 days from the date of presentation of the bill.

### 2.9.3 Delayed Payment Surcharge

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% (two percent) 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).

### 2.9.4 Duty and Taxes

The Electricity Duty levied by the Government of Orissa 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.

### 3 **OJECTIONS TO THE TRANSMISSION TARIFF PROPOSAL**

The Commission has considered all the objections raised by various objectors. Some of the objections were found to be of general nature whereas others were specific to the proposed tariff filing for the FY 2006-07. Based on their nature and type, these objections have been categorized subject-wise as discussed below:

#### 3.1 **Publication of Tariff Proposal**

One objector stated that the notice published for inviting objections does not conform to the requirements of law and does not disclose the purpose for which such revenue requirement has been asked for without giving details of its calculation. Further, the licensee has filed this application to confuse the public with malafied intention. This is contrary to law and principle of natural justice.

#### 3.2 **Transmission Loss**

3.2.1 Some objectors stated that transmission loss at 4.49% is higher than the figure approved in the previous year's tariff order. OPTCL needs to explain the cause for such high system loss in spite of huge capital investment made during the previous years. Another objector reiterated that the principle behind the loss to be determined on the basis of "as the system operates" does not motivate the licensee to make sustained and continuous improvement. It is requested that the Commission should fix a lower and achievable transmission loss as compared to international standard. One objector suggested that transmission loss should be substantiated through computer based load flow studies. He again contended that in inter-state power trading, transmission charges is low as compared to intra-state transmission charges. Therefore, the transmission tariff as approved by OERC for open access should be charged to intra-state transmission along with transmission losses. He again stated that there is no to and fro energy transfer on account of trading by GRIDCO. OPTCL should evaluate the quantum of energy loss due to this phenomenon.

3.2.2 One of the objectors requested the Commission to set up a special technical committee to scrutinize the details of the project under OPTCL which are adding to its transmission loss.

3.2.3 Another objector said the projected loss for FY 2006-07 is not acceptable as it occurs due to gross inefficiency in operation, including infrequent testing of the connected meters.

#### 3.3 **Repair & Maintenance Expenses**

Some objectors stated that OPTCL should clarify the huge gap between the actual expenditure incurred during 2004-05 and projected expenditure for 2005-06 and 2006-07 regarding R&M expenses. One objector also approached the Commission to fix it at 1.5% of fixed asset. One objector also stated that R&M expenses should be classified under renovation and modernization and the

expenditure on this account ought to be capitalised. He also requested the Commission to fix the norms for O&M expenses for 220 KV and 132 KV lines and bay as per CERC norms.

### **3.4 Employee's Cost & Administrative & General Expenses**

One objector stated the Commission has approved employees' cost to the extent of Rs.113.32 crore in 2005-06 but OPTCL has spent Rs.150.18 crore during the corresponding period. This is in contravention of Commission's order. He further requested the Commission to allow 6% increase over the previous year. Another objector said A&G expenses may be kept at 2005-06 level as there is retirement of staff enjoying higher salary. Some objectors also pointed out non-availability of actuary valuation report.

### **3.5 Fixed Asset, Interest and Depreciation**

3.5.1 Many objectors requested the Commission that depreciation should be computed on the original book value of the asset at pre-92 rate. Further, interest and depreciation should be fixed taking into account individual loan liability and assets with more than 90% depreciated values. They also wanted to know whether the up-to-date asset register has been completed.

3.5.2 One objector wanted to know why gross book value of asset has gone up from Rs.1590.17 crore in FY 2005-06 to Rs.2517.59 crore during FY 2006-07.

3.5.3 Some objectors wanted OPTCL to justify huge amount of asset addition estimated for the current year as well as for the ensuing year. They also stated that as a result of delay in completion of the projects, the consumers have been unnecessarily encumbered with the burden of interest due to construction, thereby affecting the rise in the transmission tariff.

3.5.4 One objector stated that some lines like Meramundali-Duburi 400KV DC line, IB-Meramundali400KVline, Budhipadar-Bolangir 220KV DC line, Meramundali-Mendhasal 400KV lines etc are under construction for several years. Delay in completion of these lines are posing critical power problems so also contributing towards increase in transmission loss.

### **3.6 Some Special Issues**

3.6.1 One objector stated that OPTCL is forcing the prospective EHT consumers, not only to bear the entire cost of bay extension/transmission line/switching station but also has been demanding interest bearing (6% per annum) deposit of Rs.10 lakh per MW towards augmentation charges. OPTCL has also been collecting identical deposit even from consumers applying power supply at 33 KV.

3.6.2 OPTCL has not spelt out the modus operandi for timely recovery of Rs.54.74 crore per month with the retail tariff, being fixed in nature. The same may be laid down.

- 3.6.3 OPTCL has not mentioned under which provision of the tariff regulation the reasonable return has been worked out. The same needs to be complied with.
- 3.6.4 Transmission tariff should not be applicable to the CPPs operating in the State for wheeling of power from their plants to their load centre, as physically no power is transmitted in the system.
- 3.6.5 Some objectors apprehended that interest burden for non-completion of projects beyond the schedule date will be reflected in the tariff.

#### **4 OPTCL'S RESPONSES TO THE OBJECTIONS**

In reply to various objections raised by objectors against OPTCL's application for approval of the annual revenue requirement for 2006-07, OPTCL had filed rejoinders to these queries. OPTCL's replies to these queries have been broadly classified into the following issues.

##### **4.1 Publication of Tariff Proposal**

- 4.1.1 Regarding legality of the notice for ARR and tariff revision application, it is stated that public notice published on 11.12.2005 by OPTCL is absolutely in line with provisions contained Electricity Act, 2003 and conforms to the requirement under the aforesaid Act. Hence, sufficient information have been given for inviting objections and this cannot be treated as frustrated exercise and contrary to the law and/or principle of natural justice.
- 4.1.2 OPTCL stated that the present ARR and tariff application has been prepared and submitted to OERC basing on the segregated audited accounts of undivided GRIDCO for the year 2004-05 and on proven facts and materials. Hence, this application cannot be rejected by simply stating that it is based on incorrect and manipulated statements of facts/materials/accounts.

##### **4.2 Transmission Loss**

- 4.2.1 OPTCL has attributed the following factors to enhancement in transmission loss.
- i) Extension of 132 kV networks, new addition of substation and augmentation of their capacity.
  - ii) Overloaded lines drawing power in excess of the design capacity.
  - iii) Lines close to the sea-coast resulting in large capacitance effect.
  - iv) At the time of low hydro generation, the flow of power of TTPS to Jaipur during March, 2005 to September, 2005.



- 4.2.2 At the time of submission of tariff proposal, the average transmission loss for FY 2006-07 was arrived at 5.05% computed with reference to 1<sup>st</sup> six months of 2005-06. However, after considering the average for the 1<sup>st</sup> eight months of 2005-06, the transmission loss has come down to 4.49%.
- 4.3 **Metering**
- OPTCL has fixed 0.2 accuracy meters at power receiving and sale points which are periodically checked for accuracy.
- 4.4 **Repair & Maintenance Expenses**
- OPTCL stated that unbundled GRIDCO could not undertake repair/maintenance of transmission lines and grid substations for availability of lines and substations to the desired extent because of paucity of funds. Inadequate expenditure towards repair and maintenance is not a healthy sign and does not serve long-term interest of OPTCL, DISTCOs and the consumers of the State in general. The projection of Rs.116.65 crore towards R&M expenses during the FY 2006-07 is in line with the approval of the Commission in the retail supply tariff order in which the DISTCOs have been allowed R&M expenses i.e. 5.4% of opening balance of gross fixed asset.
- 4.5 **Employee's Cost & Administrative & General Expenses**
- 4.5.1 OPTCL's projection of employees cost for 2006-07 is based on segregated audited accounts of 2004-05, facts and evidential documents. The projection is very much realistic. The actuarial valuation for FY 2005-06 can only be done after completion of the corresponding financial year.
- 4.5.2 Regarding A&G expenses, the same has been projected to increase by 20% over and above Commission's approval of Rs.15.73 crore in FY 2005-06 which works out to Rs.18.88 crore. This combined A&G expenses have been segregated between GRIDCO and OPTCL in the ratio of 15% and 85% respectively.
- 4.6 **Fixed Asset, Interest and Depreciation**
- 4.6.1 Undivided GRIDCO's gross block as at the end of financial year 2004-05 was Rs.1763.29 crore. OPTCL expects an addition of Rs.381.39 crore and Rs.357.40 crore during the financial year 2005-06 and 2006-07 respectively. The huge addition during these two years is mainly because of the completion and charging of the World Bank funded projects. OPTCL is trying its level best to adhere to the schedule of completion of the projects and very much hopeful to stick to its scheduled programme. However, looking into the multifarious problems faced by the company in the past like rampant theft of conductors, severe ROW problems, statutory clearance from different statutory bodies, etc. which are beyond the control of OPTCL have affected the works badly.

- 4.6.2 OPTCL's projection of interest cost for 2006-07 is based on facts and evidential documents. If the suggestions of objectors are considered, OPTCL will be put into financial hardship. It will have no objection if the Hon'ble Commission takes a suitable decision in the matter.
- 4.6.3 OPTCL has followed the basis of calculation of depreciation which was given in the State Govt. notification No.1068 dated 29.01.2003 which has considered the recommendations of Kanungo Committee Report and the correctives suggested by OERC. As per this notification pre-94 rate of depreciation notified by the Govt. of India were taken for the years from FY 2001-02 to FY 2005-06 on the upvalued assets. Thereafter post-92 rate as notified by the GOI on the up valued asset was taken for calculation of tariff purpose.
- 4.6.4 Regarding completion of different projects, OPTCL submitted that load projection envisaged during early 1990's did not materialize due to industrial recession in the state. A lot of industrial projects like MESCO planned to come up at NESCO command area did not come up. Therefore, there was no need to spend huge amount to complete such projects like Meramundali-Duburi 400 kV line. Similarly, Ib 3<sup>rd</sup> & 4<sup>th</sup> generating units of OPGC did not materialize necessitating power evacuation. Some projects like Ib-Meramundali 400 kV line and Meramundali-Mendhasal 400 kV line were delayed due to non-receipt of forest clearance from Govt. of India, Right of way (ROW) problems and rampant theft of conductors and tower materials. However, OPTCL is committed to complete these projects in near future.

#### 4.7 **Some Special Issues**

- 4.7.1 Regarding the demand of OPTCL towards the cost of bay extension, transmission line and switching station from the consumer, the same is not related to present ARR and transmission tariff.
- 4.7.2 OPTCL has submitted the application to OERC for fixation of transmission tariff based on annual/monthly transmission tariff model approved by CERC.
- 4.7.3 As per Para 5 (Part C rate base) of the OERC (Terms & Conditions for Determination of Tariff) Regulation, 2004, OPTCL has calculated the reasonable return.
- 4.7.4 The wheeling charges have been fixed on the basis of postage stamp method. As CPPs are working in the integrated system, they are required to pay the wheeling charges which are to be determined on the principles set forth by CERC/OERC.
- 4.7.5 The impact of interest burden is not reflected in the current tariff due to the reason that the same is not capitalized or charged to revenue. However, on completion of such projects, the interest will be capitalized and will be

loaded in future year tariff. GRIDCO/OPTCL is taking care of the interest burden by way of swapping the high cost loans with lower cost loans.

#### 4.8 **Issues raised during public hearing and reply of OPTCL**

- 4.8.1 In response to the issues raised by the Commission's staff regarding huge employees' cost, OPTCL replied that they had estimated it based on the actual employees' cost in the previous year with due consideration for escalation with respect to annual increment and DA, etc. for ensuing year.
- 4.8.2 The Commission wanted to be appraised of how OPTCL will spend Rs.95 crore during the remaining part of 2005-06 and Rs.116.65 crore during the ensuing Financial Year 2006-07 when they have merely incurred an expenditure to the tune of Rs.5.00 crore till September 2005, towards R&M expenses. Replying to the query MD said that lines and substations of OPTCL are quite old and in distressed condition. In the past proper maintenance was not possible due to insufficient funds. Now they have devised a complete plan for proper maintenance for higher availability of the systems. However, one objector contended that R&M expenses are material costs while labour charges are assigned to employees' cost and the components like transformer oil, insulator and consumables should form a part of R&M expenses.
- 4.8.3 Regarding query on power supply position to different new industries, OPTCL answered that all the industries having executed MoU with Govt. of Orissa have been committed power supply by OPTCL. For this OPTCL is enhancing sub-stations and line capacities.
- 4.8.4 MD, OPTCL stated that asset register up to 2004-05 has already been submitted to the Commission. However, one objector suggested that as per CERC tariff norms (Reg. 56 IV), the value base for depreciation should be the historical cost.
- 4.8.5 Regarding metering, OPTCL reiterated that meter readings are taken by EBC representative (GRIDCO) in presence of OPTCL representative(s). Hence, no dispute does crop up between GRIDCO and OPTCL. The Commission declared that as and when Grid Code becomes operational, there will be hardly any reason for dispute in, future.
- 4.8.6 The Commission wanted to know why OPTCL is demanding Rs.10lakh/MW from industries as returnable security deposit in addition to the cost of construction of line/bay for power supply, to be borne by the consumers, OPTCL stated that the corporation had earlier invested a lot of money for power supply in anticipation of establishment of industries like TISCO, etc. But these industries did not materialise as a result of which OPTCL's financial position became precarious. Now OPTCL has resorted to abundant caution and that's why it is asking for security of Rs.10 lakh/MW to ensure establishment of industries. When the Commission asked whether this deposit will be returned with a interest of 6%, OPTCL

replied this has formed a part of agreement between OPTCL & concerned industry.

#### **4.9 Views of State Advisory Committee**

The Commission also called a special State Advisory Committee (SAC) meeting on 08.02.2006 for consultation of major issues relating to applicant's ARR and tariff proposals. The Commission examined and considered the valuable suggestion by the Members of SAC. Members of SAC expressed their concern about high transmission loss of OPTCL in spite of huge investment made for system improvement. One member questioned the decision for early procurement of materials for distant future use. He also stated that CERC Regulation does not envisage depreciation on the upvalued cost. He requested the Commission to vouchsafe the interest charges claimed by OPTCL. Members did not appreciate the proposed rise in R & M expenses despite its failure to spend the approved amount in the previous years.

### **5 COMMISSION'S OBSERVATION**

#### **5.1 Computation of Transmission Loss**

5.1.1 The transmission system of OPTCL operates as an integral part 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 Regional Load Dispatch Centre in accordance with the GRIDCODE. Transmission loss, therefore, has been determined on the basis of 'As the system operates'. During the months from April'05 to January'06 of the current FY, the total transmission loss was of the order of 602.96 MU, of which 41.19 MU can be attributed to the loss on account of wheeling to outside the State.

5.1.2 Some of the objectors had pointed out that addition of transmission assets during the last few years should have resulted in reduced level of transmission loss. The Commission takes into consideration the submission of OPTCL with regard to the existing level of transmission loss as indicated in para 4.2 of this order. In fact, OPTCL had reported that the transmission loss during the first half of the current year was 5.05% and by end of November'05, it was 4.49% and by January'06 it was 4.61%. This kind of loss variation is on account of the nature and quantum of power flow in the system.

5.1.3 The National Tariff Policy envisages that the loss compensation should be reasonable and should be linked to an applicable technical loss benchmark. It also envisages that the transactions should be charged on the basis of average losses arrived at after appropriately considering the distance and direction sensitivity, as applicable to relevant voltage level, on the transmission system. System strengthening as contemplated in the

transmission plan of OPTCL system could have been a factor in reducing the transmission loss. Therefore, for the next financial year, the Commission fixes a benchmark of 4% with a direction to the OPTCL to optimize the system operation so as to achieve this level of loss.

5.1.4 The allocation of loss to all the users of OPTCL's transmission system based on the consumption figures of first ten months of 2005-06 is furnished in the table below:

**Table - 3**  
**Actual Transmission Loss from April 2005 to January 2006**

| Sl. No     | Source                              | Gross Input (MU) | Gross Output (MU) | Proportionate Loss sharing (MU) | Proportionate Loss sharing (%) |
|------------|-------------------------------------|------------------|-------------------|---------------------------------|--------------------------------|
| <b>1</b>   | <b>STATE DEDICATED STATIONS</b>     |                  |                   |                                 |                                |
| i          | HIRAKUD                             | 789.03           |                   |                                 |                                |
| ii         | BALIMELA                            | 779.35           |                   |                                 |                                |
| iii        | RENGALI                             | 616.88           |                   |                                 |                                |
| iv         | UPPER KOLAB                         | 502.46           |                   |                                 |                                |
| v          | INDRAVATI                           | 1,110.58         |                   |                                 |                                |
| <b>A</b>   | <b>OHPC</b>                         | 3,798.30         |                   |                                 |                                |
| <b>B</b>   | <b>MACHHKUND</b>                    | 254.67           |                   |                                 |                                |
| <b>C</b>   | <b>OPGC</b>                         | 846.51           |                   |                                 |                                |
| <b>D</b>   | <b>TTPS</b>                         | 2,658.47         |                   |                                 |                                |
|            | <b>Total State Generation Input</b> | <b>7,557.94</b>  |                   |                                 |                                |
| <b>2</b>   | <b>CPPS</b>                         |                  |                   |                                 |                                |
| i          | ICCL                                | 368.96           | 326.23            | 15.77                           | 0.12%                          |
| ii         | NALCO                               | 320.44           | 157.24            | 7.60                            | 0.06%                          |
| iii        | INDAL                               | 19.09            | -                 | -                               | 0.00%                          |
| iv         | RSP                                 | 50.53            | -                 | -                               | 0.00%                          |
| v          | NINL                                | 56.80            | -                 | -                               | 0.00%                          |
| vi         | NBFA                                | 44.46            | -                 | -                               | 0.00%                          |
| vii        | BHUSAN, THELKOLAI                   | 46.33            |                   |                                 |                                |
|            | <b>TOTAL CPP</b>                    | <b>906.61</b>    | <b>483.47</b>     | <b>23.38</b>                    | <b>0.18%</b>                   |
| <b>3</b>   | <b>EREB</b>                         |                  |                   | -                               | <b>0.00%</b>                   |
| i          | Meramundali-TSTPS / Duburi-Kaniha   | 1,603.79         | -                 | -                               | 0.00%                          |
| ii         | Rengali-TSTPS                       | 9.43             | 337.39            | 16.31                           | 0.12%                          |
| iii        | TTPS-TSTPS                          | 413.34           | -                 | -                               | 0.00%                          |
| iv         | Rourkela-Tarkera                    | 284.43           | 50.87             | 2.46                            | 0.02%                          |
| v          | Rengali(SY)-Regali (PG)             | 1,057.79         | -                 | -                               | 0.00%                          |
| vi         | Jeypore-Jayanagar                   | 287.84           | 424.30            | 20.51                           | 0.16%                          |
| <b>vii</b> | <b>Rengali-Kolaghat</b>             | -                | -                 | -                               | <b>0.00%</b>                   |

|      |                                    |                  |                  |               |              |
|------|------------------------------------|------------------|------------------|---------------|--------------|
| viii | <b>Rengali-Rengali (PG)</b>        | -                | -                | -             | <b>0.00%</b> |
| ix   | <b>Indravati PH-Indravati (PG)</b> | -                | -                | -             | <b>0.00%</b> |
| x    | Joda-Jamshedpur                    | 373.33           | 18.90            | 0.91          | 0.01%        |
| xi   | Joda-Ramchandrapur                 | 251.31           | 16.97            | 0.82          | 0.01%        |
| xii  | Joda-Kenduposi-Joda                | 0.01             | 3.46             | 0.17          | 0.00%        |
| xiii | Rourkela-Goelkera                  | -                | -                | -             | 0.00%        |
| xiv  | <b>Budhipadar-Korba</b>            | -                | -                | -             | <b>0.00%</b> |
| xv   | 132 kV Kalabadia- Rairangpur       | 55.92            |                  | -             | 0.00%        |
| xvi  | 132 kV Kalabadia- Baripada         | 159.15           |                  | -             | 0.00%        |
| xvii | Meramundali ICT Loading            | 113.25           | -                |               |              |
|      | <b>Total EREB</b>                  | <b>4,609.59</b>  | <b>851.89</b>    | <b>41.19</b>  | <b>0.32%</b> |
|      | Balimela-U. Silleru                | -                | -                | -             |              |
| 4    | Export to APTRANSCO                |                  | -                | -             | 0.00%        |
| 5    | <b>DISTCOs</b>                     |                  | <b>11,135.82</b> | <b>538.40</b> | <b>4.12%</b> |
|      | <b>GRAND TOTAL</b>                 | <b>13,074.14</b> | <b>12,471.18</b> | <b>602.96</b> | <b>4.61%</b> |
|      | <b>LOSS (MU )</b>                  | <b>602.96</b>    |                  |               |              |
|      | <b>LOSS (%) OF GROSS INPUT</b>     |                  | <b>4.61%</b>     |               |              |

## 5.2 Operation and Maintenance (O&M) Expenses

The O&M expenses for OPTCL may be considered under the following heads:-

- Employees Cost
- Administration & General Expenses
- Repair and Maintenance Expenses
- Less expenses capitalized

### 5.2.1 Employees' Cost

5.2.1.1 OPTCL has projected employee expenses of Rs.158.89 crore for the FY 2006-07. Major components of the expenses are as follows:

**Table - 4**

**(Rs. Crore)**

|                                       |        |
|---------------------------------------|--------|
| Basic Pay                             | 36.17  |
| DA                                    | 27.49  |
| HRA                                   | 4.34   |
| Others                                | 6.47   |
| Terminal benefit (Pension & Gratuity) | 87.75  |
| Total                                 | 162.22 |
| Less : capitalisation                 | 3.33   |
| Net                                   | 158.89 |

5.2.1.2 The desegregated audited figures in respect of Employees' Cost of GRIDCO and that approved by the Commission for the year 2005-06 are given below:

**Table - 5**

(Rs. Crore)

|                     | As per Audited figures<br>FY 2004-05 | As approved by<br>Commission FY 2005-06 |
|---------------------|--------------------------------------|---|
| Basic Pay           | 34.97                                | 38.76                                   |
| DA                  | 21.69                                | 27.13                                   |
| HRA                 | 3.65                                 | 4.11                                    |
| Other               | 2.58                                 | 2.70                                    |
| Terminal Benefits   | 121.33                               | 40.62                                   |
| Total               | 184.22                               | 113.32                                  |
| Less capitalisation | 3.78                                 | 1.10                                    |
| Net                 | 180.44                               | 112.22                                  |

5.2.1.3 On the basis of audited accounts for FY 2004-05, the Commission allows escalation @ 3% on the basic pay towards normal annual increment on year to year basis. This is in line with Commission's order of the previous years.

5.2.1.4 As regards DA, OPTCL has proposed 76% of the basic pay for 2006-07. The DA rates as revised from time to time by Govt. of Orissa are given below:

**Table - 6**

| Date       | DA (%) |
|------------|--------|
| 01.01.2004 | 61     |
| 01.07.2004 | 64     |
| 01.01.2005 | 67     |
| 01.07.2005 | 71     |

5.2.1.5 In the past, there has been a periodic rise in DA on every 1<sup>st</sup> day of January and July of each year. With anticipated half-yearly rise in DA @ 3%, the annual average DA rate is evaluated around 77%. The Commission approves the D.A. rate of 77% for the FY 2006-07 over and above the Basic pay for the FY 2005-06.

5.2.1.6 In respect of expenditures such as medical reimbursement, house rent allowance and encashment of earned leave, the principle adopted in last year, has been followed mutatis mutandis. Medical reimbursement has been allowed @ 3% on the basic pay. House rent has been allowed proportionately based on audited figure for

2004-05 and encashment of earned leave has been allowed @ 15% of the basic pay plus DA.

5.2.1.7 **Terminal Benefits:** OPTCL has claimed a sum of Rs.87.75 crore towards terminal benefits for the year 2006-07. The Commission, after a careful scrutiny, decides that provisioning for terminal liabilities like pension and gratuity should be based on periodic actuarial valuation in line with prevailing Accounting Standard issued by the ICAI. The same should be done by an independent actuary to be appointed by the Commission from time to time.

5.2.1.8 From the note to the audited accounts in item 21 of 2004-05, it is revealed that an amount of Rs.37.19 crore has been paid to employees on behalf of pension trust fund. Considering expected annual cash outflow on account of pension, gratuity, etc., the Commission adopt the same principle as was done in the last year and escalates it @ 10% over approved figure of 2005-06 which works out to Rs.44.68 crore.

5.2.1.9 The summary of employee's cost proposed by OPTCL and approved by the Commission is shown in the table below:

**Table - 7**  
**Employee's Cost**

| Sl. No. | Particulars                            | (Rs. Crore)        |                  |                  |                  |
|---------|--|--------------------|------------------|------------------|------------------|
|         |  | FY-04-05 (Audited) | FY-05-06 (Appr.) | FY-06-07 (Prop.) | FY-06-07 (Appr.) |
| 1       | Salaries                               | 34.97              | 38.76            | 36.17            | 37.10            |
| 2       | Over-time                              | 0.02               | -                | -                | -                |
| 3       | Dearness Allowance                     | 21.69              | 27.13            | 27.49            | 28.57            |
| 4       | Other Allowance                        | 0.37               | 0.35             | 0.37             | 0.37             |
| 5       | Bonus                                  | -                  | -                | -                | -                |
| 6       | Sub Total (1 to 5)                     | 57.05              | 66.25            | 64.03            | 66.03            |
|         | <b>OTHER STAFF COST</b>                |                    |                  |                  |                  |
| 7       | Reimbursement of Medical Expenses      | 1.42               | 1.49             | 1.45             | 1.11             |
| 8       | Lease Travel Concession                | -                  | -                | -                | -                |
| 9       | Reimbursement of House Rent            | 3.65               | 4.11             | 4.34             | 3.87             |
| 10      | Interim Relief to Staff                | -                  | -                | -                | -                |
| 11      | Encashment of Earned Leave             | 0.01               | -                | 2.62             | 2.74             |
| 12      | Honorarium                             | -                  | 0.01             | 0.01             | 0.01             |
| 13      | Payment under Workmen compensation Act | -                  | 0.04             | -                | -                |
| 14      | Ex-gratia                              | 0.00               | -                | 1.11             | -                |



|    |                        |        |        |        |        |
|----|------------------------|--------|--------|--------|--------|
| 15 | Miscellaneous          | 0.23   | 0.21   | 0.27   | 0.27   |
| 16 | Sub Total (7 to 15)    | 5.31   | 5.68   | 9.79   | 8.00   |
| 17 | Staff Welfare Expenses | 0.53   | 0.60   | 0.86   | 0.59   |
| 18 | Terminal Benefits      | 121.33 | 40.62  | 87.75  | 44.68  |
| 19 | Total (6+16+17+18)     | 184.22 | 113.22 | 162.22 | 119.30 |
|    | Less :Capitalisation   | 3.78   | 1.10   | 3.33   | 2.39   |
|    | Net Total              | 180.44 | 112.22 | 158.89 | 116.91 |

5.2.1.10 Of the total approved figure of Rs.116.91 crore, Rs.1.75 crore is allocated to GRIDCO which works out to 1.5% of the total employees' cost of desegregated GRIDCO as assumed by the licensee in their filing for the year 2006-07. The balance amount of Rs.115.16 crore is allowed for OPTCL.

## 5.2.2 Repair & Maintenance Expenses

5.2.2.1 OPTCL has proposed an expenditure of Rs.116.65 crore for 2006-07 towards repair and maintenance expenses. As per the audited accounts for the year 2004-05 of desegregated GRIDCO, the total R&M expenses were Rs.4.59 crore. For the financial year 2005-06, the expenditure incurred upto December, 2005, as reported by OPTCL, was Rs.5.00 crore.

5.2.2.2 Replying to the query regarding optimistic projection of Rs.116.65 crore for the year 2006-07 on the above account, the licensee stated that in order to undertake preventive and proper maintenance of its lines and sub-stations, R&M expenses have been projected @ 5.4% on opening balance of gross fixed asset which is in line with the norms adopted by the Commission for DISTCOs. The details of the expenditure proposed by the licensee is given in the table below:

**Table - 8**

**(Rs. Crore)**

| Particulars  | Cost |
|--|------|
| Replacement of DF Relays and other Relays and spares | 6.00 |
| Replacement of transformer oil                       | 2.60 |
| Patrolling of the lines through security agencies    | 3.80 |
| Replacement of batteries                             | 2.25 |
| Remetalling of switchyard                            | 2.10 |
| Cleaning of switchyard                               | 1.50 |
| Overhauling of OLTC                                  | 0.50 |
| Overhauling of breakers                              | 1.00 |

|  |               |
|--|---------------|
| Replacement of old and obsolete breakers   | 20.00         |
| Painting of S/S equipments   | 1.70          |
| Painting and Maintenance of towers   | 2.00          |
| Replacement of CT/PT/LA/Hardware   | 10.00         |
| Replacement of theft of tower members  | 1.00          |
| Maintenance of control room & colony   | 10.00         |
| Inspection of fees of the lines/S/Ss   | 5.00          |
| Land Cess  | 2.00          |
| Maintenance of Telecom. Equipments   | 5.00          |
| Vehicle/consumables/renovation of earthing/ other Misc. expenses/Refilling and replacement of fire extinguishers | 10.00         |
| Repair of damaged transformers including 2 nos. of Auto transformers   | 1.80          |
| Calibration/repair of testing equipments   | 0.50          |
| AMC for metering system  | 0.55          |
| Up-gradation of conductor  |               |
| a) Theruvali-Kesinga 132 KV SC line  | 21.70         |
| b) Duburi-Jajpur 132 KV DC line  | 2.50          |
| c) Renovation of Chatrapu-Ganjam 132 KV SC line  | 0.95          |
| Spares for ERS   | 2.00          |
| <b>Total</b>   | <b>116.65</b> |

5.2.2.3 Further, the licensee in support of the justification for claiming higher amount towards R&M had referred to para-XV of Chapter-4 of CERC (Terms & Conditions of Tariff) Regulation, 2004 relating to inter-state transmission O&M expenses which states that the O&M expenses mean the expenditure incurred in operation and maintenance of the transmission system or part thereof which includes the expenses on manpower, repairs, spares, consumables, insurance and overheads.

5.2.2.4 Sec.-IV of Para-56 of CERC Regulation relating to Operation & Maintenance expenses speaks of the norms for O&M expenses per ckt-Kms of transmission lines and per bay of sub-stations as follows:

**Table - 9**  
**Norms for O&M expenses per Ckt-Kms and per bay**

|                                      | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
|--------------------------------------|---------|---------|---------|---------|---------|
| O&M EXPENSES (Rs.in lakh per ckt.km) | 0.227   | 0.236   | 0.246   | 0.255   | 0.266   |
| O&M EXPENSES (Rs.in lakh per bay)    | 28.12   | 29.25   | 30.42   | 31.63   | 32.90   |

5.2.2.5 CERC has approved O&M expenses for FY 2006-07 for POWERGRID, the CTU operating at EHT (400 KV) and its lines and sub-stations are only of 15/20 years old.

5.2.2.6 OPTCL contends that it operates at 400 KV, 220 KV and 132 KV voltage level. The average age of lines and sub-stations is 30 years or more. OPTCL, therefore, claims for additional 25% rise in O&M expenses approved by CERC for CTU. Considering 25% escalation, the O&M expense for transmission lines is evaluated at Rs.0.3075 lakh per Ckt-Kms and that for sub-stations works out to Rs.38.025 lakh per bay.

5.2.2.7 Accordingly, OPTCL estimates the O&M expenses for 2006-07 as given in Table-10 below:

**Table - 10**

| Voltage level (KV) | Length of line in Ckt- Km | No. of bays | O&M Expenses (Rs. in lakh per ckt.km) | O&M Expenses (Rs. in lakh per bay) | Total O&M Expenses (Rs. in lakh) |
|--------------------|---------------------------|-------------|---------------------------------------|------------------------------------|----------------------------------|
| 400                | 460.5                     | 0           | 0.3075                                | 38.025                             | 141.60                           |
| 220                | 3859.1                    | 147         | 0.3075                                | 38.025                             | 6776.35                          |
| 132                | 4673.91                   | 506         | 0.3075                                | 38.025                             | 20677.88                         |
| 33                 | 0                         | 624         | 0.3075                                | 38.025                             | 23727.60                         |
| <b>Total</b>       |                           |             |                                       |                                    | <b>51323.43</b>                  |

5.2.2.8 OPTCL in its submission had considered the following as O & M expenses of Rs. 303.98 Crore against the entitlement of Rs. 513.23 crore based on CERC norms.

**Table - 11**

| Item of O&M Cost                          | (Rs. Crore)   |
|---|---------------|
| Employees Cost including Terminal Benefit | 158.89        |
| A & G Cost                                | 15.85         |
| R & M Cost                                | 116.65        |
| Contingency Reserve                       | 12.59         |
| <b>Total</b>                              | <b>303.98</b> |

5.2.2.9 The Commission observed that desegregated GRIDCO has not taken effective steps to take-up urgent R&M works of transmission lines and sub-stations by spending money approved by the Commission in past years. An analysis of the figures approved by the Commission for past 5 years and actuals as per audited account is summarised in the table below:

**Table – 12****(Rs. in Crore)**

| Year    | Approved | Actual               |
|---------|----------|----------------------|
| 1999-00 | 19.84    | 9.51                 |
| 2000-01 | 14.67    | 9.90                 |
| 2001-02 | 15.99    | 8.81                 |
| 2002-03 | 17.43    | 9.35                 |
| 2003-04 | 13.35    | 7.03                 |
| 2004-05 | 14.07    | 4.59                 |
| 2005-06 | 14.80    | 95.22<br>(Estimated) |
| 2006-07 | -        | 116.65<br>(Proposed) |

5.2.2.10 From the table, it is revealed that the actual expenditure for each year is always less than the approved figure. With the existing infrastructure of OPTCL, the Commission holds the view that OPTCL is not in a position to spend Rs.116.65 crore in one year. As such, the Commission allows a sum of Rs.36.00 crore for the year 2006-07 towards R&M expenses as indicated in the table below:

**Table - 13****(Rs. Crore)**

| 2005-06           |                       | 2006-07          |                       |
|-------------------|-----------------------|------------------|-----------------------|
| GRIDCO's Proposal | Commission's Approval | OPTCL's Proposal | Commission's Approval |
| 20.73             | 14.80                 | 116.65           | 36.00                 |

5.2.2.11 The Commission also desires that the operation and maintenance standards of OPTCL should be suitably brought at par with the lines and sub-stations being maintained by entities like the Power Grid Corporation of India.

5.2.2.12 The Commission had expressed grave concern about the interruptions occurring in the EHT transmission system due to snapping of conductors, burning of jumpers, damage to transmission towers, failure of equipment at various sub-stations causing dislocation of power supply which can hardly be stomached in view of growing importance for maintaining continuity and quality of power supply in the developing industrial economy of the State. Theft of tower members and

conductors have almost reached a menacing proportion that requires serious attention of not only OPTCL but of the law and order authorities of the Govt. of Orissa. The Commission directs that OPTCL should have in place appropriate security mechanism for continuous monitoring of various transmission lines to prevent failure of such lines. The OPTCL was also directed in course of the tariff hearing to prepare a master plan for renovation and modernization of their existing transmission network and submit the same to the Commission for completion of such maintenance in a definite time frame. OPTCL has agreed to submit such a plan by 30<sup>th</sup> June, 2006.

### **5.2.3 Administration and General Expenses**

5.2.3.1 Administration and General Expenses include property related expenses like license fee, rent, taxes, insurance, communication charges, professional charges, consultancy charges, conveyance charges, travel expenses and other sundry expenditure. OPTCL had proposed Rs.15.85 crore under this head for 2006-07 excluding capitalization expenses of Rs.0.20 crore. The Commission had approved an amount of Rs.15.73 crore towards A&G expenses excluding capitalization for 2005-06 in respect of composite GRIDCO chargeable to revenue on the basis of annual escalation of 5.2% over the approved figure of 2004-05 to factor in changes in WPI and CPI. The audited figure of desegregated GRIDCO for the year 2004-05 reveals the expenditure of Rs.49.67 crore towards administration and general expenses. The detailed break-up of other expenses amounting to Rs.46.66 crore has not been furnished.

5.2.3.2 As such, the Commission, in accordance with their earlier orders, allows escalation of 5.2% over the approved figure of 2005-06 and approves an amount of Rs.16.54 crore to be passed on to tariff for composite GRIDCO. Out of the above amount Rs.1.65 crore is approved to be allocated to GRIDCO leaving a balance of Rs.14.89 crore to OPTCL.

### **5.2.4 Interest on Loan**

5.2.4.1 OPTCL has proposed gross interest expenses of Rs.137.98 crore for the FY 2006-07. The loan wise interest payment schedule is given in the table below:

Table – 14

(Rs. in crore)

|  | Rate of Int. | OB as on 01-04-05 | 2005-06 Principal |               |                  | 2006-07 Principal |              |                  | Interest due for the year |
|--|--------------|-------------------|-------------------|---------------|------------------|-------------------|--------------|------------------|---------------------------|
|  |              | Principal         | Addition          | Re-payment    | CB as on 31-3-06 | Addition          | Repayment    | CB as on 31-3-07 |                           |
| <b>Govt. Loans</b>                       |              |                   |                   |               |                  |                   |              |                  |                           |
| State Govt.(Cash Loan)                   | 13.00%       | 2.00              |                   |               | 2.00             |                   |              | 2.00             | 0.26                      |
| State Govt. (CRF)                        | 0.00%        | 15.00             |                   |               | 15.00            |                   |              | 15.00            | -                         |
| Central Govt. Loan                       | 9.25%        | 11.26             |                   |               | 11.26            |                   |              | 11.26            | 1.04                      |
| GoO Bonds                                | 6.50%        | 400.00            |                   |               | 400.00           |                   |              | 400.00           | 26.00                     |
| IBRD Loan                                | 13.00%       | 129.24            |                   | 129.24        | -                |                   |              | -                | -                         |
| <b>Sub Total</b>                         |              | <b>557.50</b>     | <b>-</b>          | <b>129.24</b> | <b>28.26</b>     | <b>-</b>          | <b>-</b>     | <b>428.26</b>    | <b>27.30</b>              |
| <b>Institutional Loans</b>               |              |                   |                   |               |                  |                   |              |                  |                           |
| REC Loan                                 | 12.15%       | 45.95             |                   | 12.13         | 33.82            |                   | 13.48        | 20.34            | 3.70                      |
| PFC Loan                                 | 16.05%       | 70.46             |                   | 14.95         | 55.51            |                   | 14.95        | 40.56            | 8.28                      |
| SPA Loan                                 | 14.00%       | 0.28              |                   |               | 0.28             |                   |              | 0.28             | 0.04                      |
| <b>Sub Total</b>                         |              | <b>116.69</b>     | <b>-</b>          | <b>27.08</b>  | <b>89.61</b>     | <b>-</b>          | <b>28.43</b> | <b>61.18</b>     | <b>12.02</b>              |
| <b>Secured Loan</b>                      |              |                   |                   |               |                  |                   |              |                  |                           |
| Union Bank of India                      | 8.25%        | 98.80             |                   | 14.29         | 84.51            |                   | 14.29        | 70.22            | 6.68                      |
| HUDCO                                    | 7.75%        | 252.63            |                   | 28.87         | 223.76           |                   | 28.87        | 194.89           | 16.78                     |
| U Co Bank                                | 8.25%        | 200.00            |                   | 16.68         | 183.32           |                   | 33.36        | 149.96           | 14.44                     |
| Oriental Bank of Commerce                | 8.25%        |                   | 200.00            |               | 200.00           |                   |              | 200.00           | 16.50                     |
| Other Short term Loans                   | 8.50%        |                   | 15.00             |               | 15.00            | 335.00            |              | 350.00           | 15.51                     |
| <b>Sub Total</b>                         |              | <b>551.43</b>     | <b>215.00</b>     | <b>59.84</b>  | <b>706.59</b>    | <b>335.00</b>     | <b>76.52</b> | <b>965.07</b>    | <b>69.91</b>              |
| <b>GRIDCO Bonds</b>                      |              |                   |                   |               |                  |                   |              |                  |                           |
| Open Market Loan                         | 11.50%       | 24.03             |                   |               | 24.03            |                   |              | 24.03            | 2.76                      |
| Pension Trust Bond                       | 9.00%        | 138.00            |                   | 18.00         | 120.00           |                   | 18.00        | 102.00           | 10.40                     |
| <b>Sub Total</b>                         |              | <b>162.03</b>     | <b>-</b>          | <b>18.00</b>  | <b>144.03</b>    | <b>-</b>          | <b>18.00</b> | <b>126.03</b>    | <b>13.16</b>              |
| <b>Deposit from EHT Consumers</b>        |              |                   |                   |               |                  |                   |              |                  |                           |
| Neepaz                                   | 6.00%        | 1.35              |                   |               | 1.35             |                   |              | 1.35             | 0.08                      |
| Zindal Steel                             | 6.00%        | 6.50              |                   |               | 6.50             |                   |              | 6.50             | 0.39                      |
| Rohir Ferotech                           | 6.00%        |                   | 2.00              |               | 2.00             |                   |              | 2.00             | 0.12                      |
| <b>Sub Total</b>                         |              | <b>7.85</b>       | <b>2.00</b>       | <b>-</b>      | <b>9.85</b>      | <b>-</b>          | <b>-</b>     | <b>9.85</b>      | <b>0.59</b>               |
| <b>Other Loans &amp; Finance Charges</b> |              |                   |                   |               |                  |                   |              |                  |                           |
| Employee Housing Loans                   |              | 1.64              |                   |               | 1.64             |                   |              | 1.64             | -                         |
| Finance Charge                           |              |                   |                   |               | -                |                   |              | -                | 15.00                     |

|                              |  |          |        |        |          |        |        |          |        |
|------------------------------|--|----------|--------|--------|----------|--------|--------|----------|--------|
| Sub Total                    |  | 1.64     | -      | -      | 1.64     | -      | -      | 1.64     | 15.00  |
| Grand Total                  |  | 1,397.14 | 217.00 | 234.16 | 1,379.98 | 335.00 | 122.95 | 1,592.02 | 137.98 |
| Less:Interest Capitalisation |  |          |        |        |          |        |        |          | 5.00   |
| Interest Chargeable          |  |          |        |        |          |        |        |          | 132.98 |

5.2.4.2 In compliance with the Electricity Act 2003, the GOO notified the Orissa Electricity Reform (Transfer of transmission and other related activities) Scheme, 2005 on 09.06.2005 by virtue of which GRIDCO was unbundled. The transmission and related activities of GRIDCO were transferred and vested in OPTCL, a newly formed company. As per this Scheme, the assets and liabilities of the transmission utility were transferred from GRIDCO to OPTCL at the book value as on the date of transfer which shall be adjusted to reflect the actual value on finalisation of audit of accounts of GRIDCO.

5.2.4.3 Subsequently, the Annual Accounts of GRIDCO were finalised and adopted by the Board of Directors in their 96<sup>th</sup> meeting held on 28 October 2005 and the statutory auditor gave their report on 29 October 2005. Based on the audited accounts of GRIDCO and views of the consultants appointed by GRIDCO, GRIDCO has segregated the different figures as in compound in the audited accounts between GRIDCO & OPTCL, which was approved by the Board in their 98<sup>th</sup> meeting held on 06.01.2006.

5.2.4.4 After the final acceptance and notification of GOO, the segregated accounts as reported by GRIDCO, will be submitted to the Commission. In the meanwhile, GRIDCO has submitted a copy thereof to the Commission.

5.2.4.5 The total loan balance of Rs.1628.17 crore assigned to OPTCL, comprises two parts viz. principal and interest amounting to Rs.1397.14 crore and Rs.231.03 crore, respectively. The Commission is to be satisfied that loans taken from various sources shall match the net fixed asset and capital works in progress which again has to match with the figure assigned to OPTCL in the Transfer Scheme. From the segregated account, it is revealed that the net fixed asset and the work in progress assigned to OPTCL as on 31.03.2005 amounts to Rs.1029.94 crore and Rs.955.23 crore respectively. The total fixed asset along with capital work-in-progress amounts to Rs.1985.17 crore. The source from which the fixed asset has been created is given as under :-

|                                       |                   |
|---------------------------------------|-------------------|
| Loan Transfer to OPTCL                | Rs. 1397.14 crore |
| Equity Infusion at the time of Reform | Rs. 326.20 crore  |
| Consumer Contribution                 | Rs. 69.29 crore   |
| Subsidy towards Capital Asset         | Rs. 25.91 crore   |
| Grant towards cost of Capital Asset   | Rs. 150.17 crore  |
| Total                                 | Rs. 1968.71 crore |

The Commission provisionally accepts the figure of Rs. 1397.14 crore as opening balance of loan for the OPTCL.

5.2.4.6 **State Govt. Loan:** OPTCL has reported that loan from State Govt. (Cash loan + CRF) stands at Rs.17.00 crore as on 31.03.2005. It has not assumed any repayment upto 2006-07. Since debt servicing of State Govt. loan has been kept in abeyance vide notification dtd. 29.01.2003 of GOO, the Commission does not consider the interest impact on the above loan to be passed on to tariff.

5.2.4.7 **Central Govt. Loan:** The remaining loan amount of Rs.11.26 crore of Central Govt. as on 31.03.2005 availed by the erstwhile OSEB for construction of transmission lines at an average rate of interest of 9.25%, OPTCL has not proposed any repayment for 2005-06 and 2006-07. The Commission, therefore, allows interest on a loan balance of Rs.11.26 crore to be passed on to tariff for the year 2006-07.

5.2.4.8 **GOO Bonds:** The amount of Rs.400.00 crore in the form of zero coupon bond has been issued to State Govt. by GRIDCO, which is now transferred to OPTCL. The Commission, in their earlier tariff orders, has decided not to take into account the effect of up-valuation of asset for the purpose of determination of tariff as it was not a real out go by the Govt. of Orissa. As such, no interest shall be allowed on the bond for FY 2006-07.

5.2.4.9 **IBRD Loan:** GRIDCO in its annual account for 2004-05, has shown a balance of Rs.242.45 crore on account of this loan as on 31.03.2005, out of which an amount of Rs.129.24 crore was assigned to OPTCL leaving a balance of Rs.113.21 crore with GRIDCO. The position of IBRD loan is indicated in the table below:



**Table – 15**

**(Rs. Crore)**

|   |        |
|---|--------|
| Loan availed of upto 31.03.04 (Net of 30% Grant)  | 441.12 |
| Received during 2004-05   | 2.03   |
| Total Loan  | 443.15 |
| Repayment during 2004-05 (Through swapping by taking Rs.200 crore loan from UCO Bank @ 8.25%) | 200.71 |
| Balance of loan as on 31.03.2005 as per desegregated accounts of 2004-05                      | 242.44 |
| Assigned to OPTCL in the provisional transfer notification                                    | 129.24 |
| Retained with GRIDCO to be transferred to DISTCOs   | 113.20 |

5.2.4.10 OPTCL, in its filing, assumed repayment of entire loan of Rs.129.24 crore along with outstanding interest of Rs.71.13 crore during 2005-06 by availing of a fresh loan of Rs.200.00 crore from Oriental Bank of Commerce at a lower rate of 8.25% per annum.

5.2.4.11 As regards the loan of Rs.113.20 crore assigned to GRIDCO, the impact of interest has not been considered in the revenue requirement by GRIDCO, since the same will be transferred to DISTCOs. Therefore, neither OPTCL nor GRIDCO has assumed interest impact on IBRD loan during 2006-07. The Commission approves the same.

5.2.4.12 The Commission further approves the swapping of IBRD loan on the ground that the loan brought for swapping carries a lower rate of interest as compared to the interest rate on IBRD loan which carries the rate of 13%.

5.2.4.13 **REC Loan:** The loan from REC are project related which GRIDCO availed at different rate of interest from time to time. This was availed for transmission as well as distribution networks. The average rate of interest of the above loan is shown at 12.15%. The total loan balance as 31.3.2005 amounts to Rs.256.24 crore out of which Rs.45.95 crore has been allotted to OPTCL leaving a balance of distribution related loan of Rs.210.29 crore with GRIDCO.

5.2.4.14 During FY 2005-06 and 2006-07, OPTCL assumed repayment of Rs.12.13 crore and Rs.13.48 crore respectively leaving a balance

of Rs.20.34 crore at the end of 31.03.2007 towards REC loan. The Commission approves the same and allows the interest to be calculated @8.5% (Tax free) as per Govt. notification dated 29.01.2003.

5.2.4.15 **PFC Loan:** GRIDCO in its annual accounts for 2004-05, has shown a balance of Rs.220.46 crore of PFC loan as on 31.03.2005. Out of the above, Rs.70.46 crore is project related loan which has been assigned to OPTCL. The balance of Rs.150 crore is the short-term loan from PFC which has been allocated to GRIDCO.

5.2.4.16 During 2005-06 and 2006-07, OPTCL assumed repayment of Rs.14.95 crore each year, leaving a balance of Rs.40.56 crore of PFC loan at the end of 31.03.2007. The Commission approves the same and allows the interest rate to be calculated @8.5% (Tax free) as per Govt. notification dated 29.01.2003.

5.2.4.17 **Loan from Union Bank of India:** GRIDCO during 2004-05 availed of a loan of Rs.100 crore to swap a portion of Bond IC/99 of NALCO, Bond 1/2002 of NALCO at an average rate of 8.25%. GRIDCO after making a repayment of Rs.1.20 crore during 2004-05, transferred the loan balance of Rs.98.80 crore to OPTCL. During 2005-06 and 2006-07, OPTCL assumed repayment of Rs.28.58 crore leaving a balance of Rs.70.22 crore as on 31.03.2007.

5.2.4.18 The Commission in its order for FY 2005-06, allowed the interest to be passed on to the tariff to undivided GRIDCO. Based on the same principle, the Commission now considers to allow the interest impact to be passed on to the tariff. The Commission, however, directs the licensee to amend the provisional notification and assign the loan amount to GRIDCO instead of showing it to OPTCL since the loan from Union Bank of India was not taken for creation of asset.

5.2.4.19 **Loan from HUDCO:** GRIDCO during 2003-04 availed of a loan of Rs.300.00 crore from HUDCO @7.75% to discharge the old loan from LIC, ICICI (project related loan) and a portion of power bonds. The loan balance after repayment, worked out to Rs.252.63 core which was transferred to OPTCL in the transfer notification. During 2005-06 and 2006-07, OPTCL has assumed the repayment of Rs.57.74 crore leaving a balance of Rs.194.89 crore as on 31.03.2007. The Commission allows the interest impact to be passed on to the tariff.

- 5.2.4.20 **Loan from UCO Bank:** As discussed earlier, GRIDCO during 2004-05, has availed of an amount of Rs.200 crore from UCO Bank at an average rate of 8.25% to swap IBRD loan. During 2005-06 and 2006-07, OPTCL assumed repayment of Rs.16.68 and Rs.33.36 crore respectively leaving a balance of Rs.149.96 crore as at the end of 31.03.2007. The Commission approves the same and allows the interest to be passed on to tariff.
- 5.2.4.21 **Loan from Oriental Bank of Commerce:** During 2005-06, GRIDCO has availed of an amount of Rs.200.00 crore as loan from Oriental Bank of Commerce to swap principal of IBRD loan along with outstanding interest which has been assigned to OPTCL. The total amount of the IBRD loan swapped along with interest works out to Rs.200.37 crore. As discussed earlier, the Commission approves the same and allows the interest to be passed on to the tariff.
- 5.2.4.22 **Other Short-term Loan:** OPTCL has shown a loan balance of Rs.350.00 crore at an average rate of 8.5% as on 31.03.2007. The interest impact on the above loan was projected at Rs.15.51 crore by the licensee. The purpose of availing of such loans during 2005-06 and 2006-07 is not available in the filing. This has also not been explained during the public hearing. Therefore, the Commission disallows the interest to be passed on to tariff.
- 5.2.4.23 **Open Market Loan:** GRIDCO had inherited the loans from OSEB period at an average rate of 11.5% interest as on 01.04.2005 which works out to Rs.24.03 crore and has been allocated to OPTCL. The Commission allows the interest to be passed on to tariff for the year 2006-07, based on the principle adopted in the last year's tariff.
- 5.2.4.24 **Pension Trust Bond:** The Commission, in line with previous order, approves the pension trust bond of Rs.150.00 crore and its interest impact thereon at an average rate of 9% as proposed by the licensee.
- 5.2.4.25 **Deposit from EHT consumers:** Besides above, the licensee has considered interest on deposit of EHT consumer viz. NEPAZ, Jindal Steel, Rohit Ferro Tech. at an average rate of 6% amounting to Rs.0.59 crore. The utilization of this fund has not been explained for which the Commission disallows the interest.
- 5.2.4.26 OPTCL has claimed an amount of Rs.15.00 crore towards finance charges, the detailed calculation of which has not been

filed with the Commission. Hence, the Commission disallows the same to be passed on to tariff.

## 5.2.5 Capitalization of Interest

5.2.5.1 GRIDCO in its application has projected a sum of Rs.5.00 crore towards advance to suppliers and contractors as interest during construction (IDC). The Commission directs the same to be deducted from the gross interest.

5.2.5.2 Therefore, considering the above factors, the interest liability of OPTCL has been calculated and it works out to Rs.68.03 crore after capitalisation of interest of Rs.5.00 crore.

**Table - 16**

**(Rs. Crore)**

|   |                           | Rate of Interest | OPTCL's proposal | Commission's approval |
|---|---------------------------|------------------|------------------|-----------------------|
| A | Govt. Loans               |                  |                  |                       |
|   | State Govt.(Cash Loan)    | 13.00%           | 0.26             | -                     |
|   | State Govt.(CRF)          | 0.00%            | -                | -                     |
|   | Central Govt. Loan        | 9.25%            | 1.04             | 1.04                  |
|   | GoO Bonds                 |                  | 26.00            | -                     |
|   | IBRD Loan                 | 13.00%           | -                | -                     |
|   | Sub Total                 |                  | 27.30            | 1.04                  |
| B | Institutional Loans       |                  |                  |                       |
|   | REC Loan                  | 8.50%            | 3.70             | 2.30                  |
|   | PFC Loan                  | 8.50%            | 8.28             | 4.08                  |
|   | SPA Loan                  | 14.00%           | 0.04             | 0.04                  |
|   | Sub Total                 |                  | 12.02            | 6.38                  |
| C | Secured Loan              |                  |                  |                       |
|   | Union Bank of India       | 8.25%            | 6.68             | 6.38                  |
|   | HUDCO                     | 7.75%            | 16.78            | 16.23                 |
|   | U Co Bank                 | 8.25%            | 14.44            | 13.75                 |
|   | Oriental Bank of Commerce | 8.25%            | 16.50            | 16.50                 |
|   | Other Short term Loans    | 8.50%            | 15.51            | -                     |
|   | Sub Total                 |                  | 69.91            | 52.86                 |
| D | GRIDCO Bonds              |                  |                  |                       |
|   | Open Market Loan          | 11.50%           | 2.76             | 2.76                  |
|   | Pension Trust Bond        | 9.00%            | 10.40            | 9.99                  |
|   | Sub Total                 |                  | 13.16            | 12.75                 |

|   |                               |       |        |       |
|---|-------------------------------|-------|--------|-------|
| E | Deposit from EHT Consumers    |       |        |       |
|   | Neepaz                        | 6.00% | 0.08   | -     |
|   | Zindal Steel                  | 6.00% | 0.39   | -     |
|   | Rohir Ferotech                | 6.00% | 0.12   | -     |
|   | Sub Total                     |       | 0.59   | -     |
| F | Other Loans & Finance Charges |       |        |       |
|   | Employee Housing Loans        |       | -      | -     |
|   | Finance Charge                |       | 15.00  | -     |
|   | Sub Total                     |       | 15.00  | -     |
| G | Grand Total                   |       | 137.98 | 73.03 |
| H | Less:Interest Capitalisation  |       | 5.00   | 5.00  |
| I | Interest Chargeable           |       | 132.98 | 68.03 |

### 5.3 Depreciation

5.3.1 OPTCL has claimed Rs.130.13 crore towards depreciation. The licensee has calculated depreciation at post-94 rate. The asset base adopted for the purpose of calculation is as per the audited accounts for 2004-05 and estimation for FY 2005-06.

5.3.2 **Up-valuation of Assets :** The Deptt. of Energy Notification No.1068/E dated 29.01.03 envisages that “The effect of up-valuation of assets of OHPC and GRIDCO indicated in notification No.52010 dated 01.04.96 and No.5207 dt.01.04.1996 would be kept in abeyance from the financial year 2001 -02 prospectively till 2005-2006 or the sector turns around, whichever is earlier to avoid re-determination of tariff for past years and also re-determination of asset of various DISTCOs. For this purpose, depreciation would be calculated at pre-92 norms notified by the GOI.”. As such, the depreciation shall be calculated for the assets at pre-1992 norms.

5.3.2.1 The Commission in its letter No.460 dtd.22.03.2005 had advised the state Govt. in terms of section 86 of the Electricity Act, 2003 to keep in abeyance the up-valuation of assets as well as moratorium on debt servicing to the state government for a period of another five years beyond FY 2005-06 i.e. till FY 2010-11 as the sector has not so far turned around. The Govt. was reminded in the matter vide Commission’s letter No.1968 dt.16.12.2005 to accept its recommendations to avoid a tariff shock to the consumers. The projected additional liability on this account could have an adverse impact on the consumer tariff. Till date, the Govt.’s decision has not been received.

5.3.2.2 The objectors submitted that as there has been no sectoral turn around and the CERC regulations do not permit such recovery,

effect of up-valuation should not be considered while determining tariff for FY 06-07.

5.3.2.3 The CERC (Terms and Conditions of Tariff) Regulations, 2004 notified on 26<sup>th</sup> March, 2004 at para 56(II)(a)(I) stipulates that the value base for the purpose of depreciation shall be the historical cost of the asset. In OERC regulation, it has also been prescribed for the purpose of tariff determination and the rate of depreciation could be linked to the useful life of the asset, calculated on straight line method. This is in line with the CERC Regulation also. In view of this, the Commission has approved calculation of depreciation on the basis of historical cost.

5.3.3 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 23.06.2003 and treated transmission asset base of undivided GRIDCO, at Rs.514.32 crore as on 01.04.1996.

5.3.4 The year wise asset addition from 1996-97 to 2004-05 is as per the annual accounts submitted by undivided GRIDCO. For the year 2005-06, OPTCL has proposed an addition of asset to the tune of Rs.396.90 crore. The figure in subsequent filing was revised to Rs.381.39 crore. On scrutiny of the OPTCL proposal, the Commission approves the asset addition of Rs.280.684 crore during 2005-06 as given in the table below:

**Table - 17**

**Proposed Revised Capitalization during 2005-06**

| Sl. No. | Name of the Work                                 | To be completed/to be capitalized during 2005-06 (For Tariff Purpose) Rs. Crore |
|---------|--|---|
| 1       | 220 KV Indravati-Theruvalli DC line              | 26.30   |
| 2.      | 220 KV Theruvalli-Narendrapur DC line            | 69.52   |
| 3.      | 220 KV Narendrapur – Balugaon DC line            | 15.12   |
| 4.      | 220 KV Duburi (New-Duburi Old DC line)           | -1.48   |
| 5.      | 132 KV Bolangir Old –Bolangir New line           | 1.21  |
| 6.      | 132 KV Narendrapur – Chatrapur line              | 0.34  |
| 7.      | 132 KV Narendrapur – Berhampur line              | 11.49   |
| 8.      | 132 KV Hirakud – LILO – Chiplima – Baragrah line | -1.54   |
| 9.      | 132 KV Budhipadar-Sundargarh line                | 1.00  |
| 10.     | 220 KV Budhipadar S/s Extn.                      | 3.42  |
| 11.     | 220 KV Theruvali S/s Extn.                       | 1.95  |
| 12.     | 220 KV Rengali S/s Extn.                         | 1.15  |
| 13      | 220/132 KV S/s at Narendrapur                    | -7.44   |
| 14.     | 132/33 KV S/s at Boinda                          | 2.04  |

|     |  |         |
|-----|--|---------|
| 15. | 132/33 KV S/s at Sundargarh                                    | 4.52    |
| 16. | 220/132 KV S/s at Burla  | 15.63   |
| 17. | 132 Bay Extn. at Sijua   | 0.06    |
| 18. | 132 KV Boinda LILO line  | 0.53    |
| 19. | 220 KV Nayagarh S/s Extn.                                      | 5.49    |
| 20. | 132/33 KV Digapahandi S/s                                      | 6.11    |
| 21. | 400/220 KV Duburi S/s  | 41.03   |
| 22. | 132 KV Cuttack S/s Extn.                                       | 0.72    |
| 23. | 33 KV Balasore Extn.   | 0.006   |
| 24. | 33 KV Baripada Extn.   | 0.008   |
| 25. | 33 KV Bhadrak Extn.  | 0.02    |
| 26. | 33 KV Nuapatna Extn.   | 0.36    |
| 27. | 33 KV Dhenkanal Extn.  | 0.39    |
| 28. | 220 KV Mendhasal – LILO – Bhanjanagar/Chandaka D/C             | 0.17    |
| 29. | 220 KV Mendhasal – LILO Narendrapur/Chandaka D/C               | 0.2     |
| 30. | 132 KV Hirakud – LILO Burla/Sambalpur D/C line                 | 0.18    |
| 31. | 132 KV Meramundali LILO Chainpal/Dhenkanal D/C line            | 0.24    |
| 32. | 132 KV Meramundali LILO Chainpal/Chaudwar D/C line             | 0.04    |
| 33. | 220/132 KV Bolangir New S/s                                    | 25.41   |
| 34. | 400/220 KV Mendhasal S/s                                       | 41.5    |
| 35. | Augmentation of Joda Grid S/s                                  | 2.03    |
| 36. | Augmentation of Balugaon Grid S/s                              | 0.67    |
| 37. | Installation of SF 6 CB in Berhampur Grid S/s                  | 0.26    |
| 38. | Upgradation of S/s capacity from 3x12.5 MVA to 2x20 MVA        | 0.85    |
| 39. | Upgradation of S/s capacity from 2x20 MVA to 1x20 MVA+1x40 MVA | 1.13    |
| 40. | 132/33 KV S/s at Chandikhol                                    | 0.67    |
| 41. | 33 KV Puri Extn.   | 0.30    |
| 42. | 33 KV Balugaon Extn.   | 0.33    |
| 43. | 100 MVA transformer at Jayanagar                               | 5.01    |
| 44. | 220 KV LILO to Meramundali                                     | 2.34    |
| 45. | Others   | 1.40    |
|     | Total  | 280.684 |

5.3.5 The Commission allows the proposed asset addition of OPTCL for the year 2005-06 and calculates the depreciation accordingly. The Commission approves an amount of Rs.43.51 crore towards depreciation for the year 2006-07 to be passed on to tariff. The detailed calculation is shown in the table below:

**Table - 18****(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 01.04.2006 | Depreciation for the year 2006-07 |
|--|--|--------------------------------------|--------------------------------------|-----------------------------------|
| Land and Rights                              |  | 8.07                                 | 19.32                                | 0.00                              |
| Building                                     | 1.80%  | 13.09                                | 50.76                                | 0.91                              |
| Plant & Machinery (other civil works)        | 1.80%  | -                                    | 4.03                                 | 0.07                              |
| Plant & Machinery                            | 3.80%  | -                                    | 372.34                               | 14.15                             |
| Plant & Machinery (line, cables and network) | 2.57%  | 492.71                               | 1076.47                              | 27.66                             |
| Vehicles                                     | 12.86%   | 0.02                                 | 0.90                                 | 0.12                              |
| Furniture, Fixture                           | 4.55%  | 0.19                                 | 1.65                                 | 0.08                              |
| Office equipment                             | 9.00%  | 0.25                                 | 5.78                                 | 0.52                              |
| Grand Total                                  |  | 514.32                               | 1531.26                              | 43.51                             |

#### 5.4 Repayment of Principal

5.4.1 The OPTCL has projected Rs.122.92 crore towards repayment of principal loan during 2006-07. Although, this amount has not been claimed in the revenue requirement, the quantum of depreciation projected for 2006-07 amounting Rs.130.13 crore is sufficient to repay the loan principal amount during 2006-07.

5.4.2 In exercise of the power conferred under Section 178 of the Electricity Act, 2003, the CERC made regulation dated 26<sup>th</sup> March, 2004 in respect of fixation of transmission tariff. As per the provision of that Regulation, an additional amount above normal depreciation the transmission licensee shall be entitled which has been termed as “advance against depreciation”, computed in the manner given hereunder:

*“AAD = Loan repayment amount as per regulation 56(i) subject to a ceiling of 1/10<sup>th</sup> of loan amount as per regulation 54 minus depreciation as per schedule.*

*Provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year;*



*Provided further that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.”*

5.5 The rest of the loan as on 31.03.2005, assigned to OPTCL, based on the segregated account of 2004-05 filed by GRIDCO amounts to Rs.1397.14 crore. The net repayment liability after deducting the zero coupon bond of Rs.400.00 crore, State Govt. loan of Rs.17.00 crore, Central Govt. loan of Rs.11.06 crore and other loan Rs.9.69 crore works out to Rs.959.39 crore. During 2005-06, GRIDCO in their revised repayment schedule assumed an addition of loan amount of Rs.200 crore and repayment of Rs.243.33 crore. The loan balance as on 31.3.06 works out to Rs.916.06 crore. Considering 1/10<sup>th</sup> of the loan balance, the impact per annum would be around Rs.91.60 crore. As stated in earlier paragraph, the depreciation allowed by the Commission amounts to Rs.43.51 crore. The balance amount of Rs.48.09 crore is allowed by the Commission towards advance against depreciation.

#### 5.6 **Contribution to Contingency Reserve**

For the year 2006-07, OPTCL has proposed Rs.12.59 crore towards Contribution to Contingency Reserve to be passed on to tariff. The same is allowed by the Commission.

#### 5.7 **Return on Equity**

OPTCL has projected an amount of Rs.94.82 crore towards Return on Equity for the FY 2006-07. The Commission does not consider the impact of RoE to be passed on to tariff in line with GoO notification dtd.29.01.03.

#### 5.8 **Miscellaneous Receipt**

OPTCL proposed to earn Rs.5.00 crore from inter-state wheeling. OPTCL has not furnished any relevant notification regarding fixation of tariff for inter-state wheeling. However, the Commission approves the same provisionally and allows it to be adjusted against the total revenue requirement.

#### 5.9 **Transmission Cost**

5.9.1 The total energy to be transmitted in the system is estimated at 15153 MU the details of which are presented in the table below:

**Table - 19**

| <b>Transmission Details</b>     | <b>Proposed MU by OPTCL</b> | <b>Approved MU by OERC</b> |
|---------------------------------|-----------------------------|----------------------------|
| Sale to DISTCOs                 | 14977.25                    | 14683                      |
| Wheeling to industries from CPP | 350                         | 350                        |
| Sale to CPP by GRIDCO           | 120                         | 120                        |
| <b>Total</b>                    | <b>15447.30</b>             | <b>15153</b>               |

5.9.2 The details proposed by OPTCL and approved by the Commission towards transmission charges, is depicted in the table below:

**Table - 20****(Rs. Crore)**

| Transmission Cost                | Proposed      | Approved                         |
|----------------------------------|---------------|----------------------------------|
| Employee Cost                    | 158.89        | 115.16                           |
| R&M Cost                         | 116.65        | 36.00                            |
| A&G Cost                         | 15.85         | 14.89                            |
| Interest on loan                 | 132.98        | 68.03                            |
| Depreciation                     | 130.13        | 43.51                            |
| Advance against depreciation     | -             | 48.09                            |
| Sub-total                        | 545.50        | 325.68                           |
| Less Expenses capitalised        | -             | -                                |
| <b>Total</b>                     | <b>545.50</b> | <b>325.68</b>                    |
| Special Appropriation            | -             | -                                |
| Return on Equity                 | 94.82         | -                                |
| Contingency Reserve              | 12.59         | 12.59                            |
| <b>Grand Total</b>               | <b>661.91</b> | <b>338.27</b>                    |
| Less Inter-state wheeling        | 5.00          | 5.00                             |
| <b>Net Transmission Cost</b>     | <b>656.91</b> | <b>333.27</b>                    |
| <b>Total transmission in MU</b>  |               | <b>15153</b>                     |
| <b>Transmission Tariff (p/u)</b> |               | <b>21.99 (rounded to 22 p/u)</b> |

### 5.9.3 Transmission Charges

5.9.3.1 Transmission Charges worked out to 21.99 paise per unit which is rounded of 22 paise per unit shall be applicable for transmission of power at 220 KV/ 132KV over OPTCL's EHT transmission lines and sub-stations and shall be payable by the DISTCOs and CPPs. It will also be applicable for the purpose of transmission of energy from a CPP to its industries located at a separate place(s) within the State. The customer availing Open Access under relevant

Regulations of OERC shall pay Rs.5278.42/MW/Day towards transmission charges.

5.9.3.2 The Commission has notified the Open Access Regulation under section 42 (2) of the Electricity Act, 2003. Consumers availing 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 15,153 MU or an average of 1729.80 MW. The net transmission cost as indicated in the table above is Rs.333.27 crore. The Commission fixes the transmission charge on the basis of MW flow which works out to Rs.5278.42 per MW per day from 01.04.06 onwards. This will be in addition to other charges in accordance with Open Access Regulation.

5.9.4 GRIDCO shall purchase power from the generator end and at inter-state points from outside sources while OPTCL will bill the customers at the delivery point. There would be a gap between the units treated as lost on account of delivery to the customers on the normative basis approved by the Commission and the actual figure since part of this is to be assigned for export of power outside the state taking place in the intra-state system due to power exchange. It will be desirable that existing practice of actual loss shall be followed and final adjustment shall be carried out at the end of FY 2006-07 between GRIDCO and OPTCL. GRIDCO shall give credit to OPTCL for the units deemed to have been lost on account of export of power, if any.

#### **5.9.5 Transmission Loss for Wheeling**

OPTCL has proposed that out of the energy supplied to transmission licensee, 4.61% shall be deducted towards transmission loss. And balance is liable to be delivered at delivery point at 220/132 kV. In para 5.1.3 of this order we have directed that transmission loss shall be calculated at the rate of 4% for the FY 06-07. Therefore, the purpose of billing, the transmission loss shall be 4%.

#### **5.9.6 Transmission Charge Payment Mechanism**

As per clause 11 of the Orissa Electricity Reforms (Transfer of Transmission and Related Activities) Scheme, 2005, the transmission charge of OPTCL shall be duly secured by a first charge over the receivables of GRIDCO in favour of OPTCL.

#### **5.9.7 Rebate**

5.9.7.1 For payment of bills through a letter of credit on presentation/upfront by cash within 48 hours, 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 Transmission Licensee, a rebate of 1% shall be allowed.

**5.9.7.2 Late Payment Surcharge:** In case payment of bills by the licensees is delayed beyond a period of 1 month from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied by GRIDCO.

**With regard to GRIDCO's application for determination of Bulk Supply Price for the FY 2006-07 (Case No. 42/2005); the Hon'ble High Court of Orissa, on 31.01.2006, has passed interim order in Misc. Case No. 114/2006 (arising out of WP(C) No.165/2006), as follows:-**

*“As an interim measure, we direct that the proceeding in case No. 42 of 2005 shall continue but the order passed therein shall be subject to the result of the writ application.”*

**The Commission has applied the integrated approach for deciding the tariff/price for various licensees/generating company/utility simultaneously. So, if the result of the above writ application have any impact on GRIDCO's Bulk Supply price, it may have some direct/indirect impact on others. Hence, the Commission is of the considered view that this transmission tariff order for OPTCL shall be subject to the result of the aforesaid writ application.**

**5.9.8** The transmission tariff in respect of OPTCL will become effective from 1<sup>st</sup> April, 2006 and shall continue until further orders.

The application of M/s OPTCL is disposed off accordingly.

**-Sd-  
(S.K. JENA)  
MEMBER**

**-Sd-  
(B.C. JENA)  
MEMBER**

**-Sd-  
(D.C. SAHOO)  
CHAIRPERSON**