

**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.147 OF 2004**

**DATE OF HEARING** : **17.01.2005**

**DATE OF ORDER** : **22. 03.2005**

**IN THE MATTER OF** : An application for approval of Annual Revenue Requirement and Bulk Supply Tariff under Section 61 to 64 and other applied 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 2005-06.

**ORDER**

M/s. Grid Corporation of Orissa Limited, Janpath, Bhubaneswar (in short, GRIDCO) the holder of the Orissa Transmission and Bulk Supply Licence, 1997, (No.2/1997) has submitted an application in respect of its Annual Revenue Requirement (ARR), tariff for Bulk Supply of electricity and Tariff for use of transmission services. Its application for determination of ARR, Transmission and Bulk Supply Tariff for 2005-06 has been registered as Case No.147/2004. This case is heard by the Commission and the same is disposed of by this order. A brief history of the case is as follows:

**1 PROCEDURAL HISTORY**

- 1.1 The utilities are required to file the ARR applications for the ensuing financial year with the Commission before 30<sup>th</sup> November in accordance with the relevant Regulation of OERC (Conduct of Business) Regulations, 2004 and OERC (Terms and Conditions for determination of Tariff) Regulation, 2004. GRIDCO submitted its ARR application for 2005-06 on 29.11.2004 and also proposed the revision of Transmission and Bulk Supply Tariff.
- 1.2 After due scrutiny, the Commission allowed GRIDCO to publish the above application of the licensee following Section 64 (2) of the Electricity Act, 2003 read with Regulation 53 (7) of the OERC (Conduct of Business) Regulations, 2004, and call for objections from the intending objectors. The licensee was also

instructed to file its rejoinder to the suggestions and objections by 31.12.2004. Accordingly, a public notice was published in one leading English and one Oriya newspaper on 02.12.2004. After such publication, the Commission received objections from different objectors.

- 1.3 A combined hearing was arranged in the premises of the Commission to dispose of the revenue requirement and tariff applications for the year 2004-05 which was pending then along with the present ARR and tariff applications for 2005-06.
- 1.4 Based on such paper publications the Commission initially received 15 nos. of objections. The objectors were : (1) M/s Jindal Stainless Ltd., 50-HIG, Jayadev Vihar, Bhubaneswar (2) Sambalpur Dist. Consumers' Federation, Balaji Mandir Bhawan, Khetrajpur, Sambalpur (3) Organisation for Regional Imbalance & Social Justice of Society, Panitanki Road, Modipada, Sambalpur 768002 (4) M/s Indian Charge Chrome Ltd., Bomikhal, Bhubaneswar (5) Ferro Alloys Corporation Ltd., GD-2/10, Chandrasekharapur, Bhubaneswar-751023 (6) M/s Balasore Alloys Ltd., 199, Forest Park, Bhubaneswar (7) Mr. R. P. Mohapatra, 775, Jayadev Vihar, Bhubaneswar (8) M/s Tata Iron & Steel Co. Ltd., 273, Bhouma Nagar, Unit-IV, Bhubaneswar (9) Orissa Consumers' Association, Debajoyti Upobhokta Kalyan Bhawan, Biswanath Lane, Cuttack-753002 (10) Mr. Jayadev Mishra, N-4/98, Nayapalli, Bhubaneswar (11) Utkal Chamber of Commerce & Industry, N/6, IRC Village, Nayapalli, Bhubaneswar (12) IDCOL Ferro Chrome & Alloys Ltd. Bhubaneswar (13) Confederation of Indian Industry, 8, Forest Park, Bhubaneswar (14) M/s NESCO, Januganj, Balasore (15) State Public Interest Protection Council, Talatelenga Bazar, Cuttack.
- 1.5 The Commission issued public notices in leading local Oriya and English daily newspapers on 31.12.2004 fixing the date of hearing as 17.01.2005 at 11.00 AM in the hearing hall at the Commission's office. The said publication included the names of the 15 nos. valid objectors directing them to appear personally or through their authorised representatives or duly constituted attorney before the Commission on the date and time mentioned for public hearing in the public notices. Later on, NALCO's prayer to participate in the above public hearing was received on 4.01.2005 and the Commission permitted the objector on 07.01.2005 to put forth its views by personal appearance in the said hearing.
- 1.6 The public hearing on GRIDCO's proposed ARR and Transmission and BST for the years 2004-05 & 2005-06 was held in the hearing hall of the Commission at Bhubaneswar on 17.01.2005. The objectors or their authorised representatives and the representatives of GRIDCO participated in the said hearing. The Commission heard all the objectors.
- 1.7 In response to the letter No.JD(F)0175/04/2193 dated 30.12.2004, the representative from Energy Department, Govt. of Orissa, attended the public hearing.
- 1.8 During public hearing, one of the objectors had alleged that the filing was not supported by affidavit as required under Regulation-12 of OERC (Conduct of Business) Regulations, 2004. In this regard, the Appendix-2, as prescribed in the

Regulation, reveals that the format of affidavit should consist of three parts. The affidavit provided by the licensee in support of the tariff application is found to be in accordance with the first two parts of the prescribed formats for affidavit incorporated in the Regulation. As regards the third part of the affidavit, as sworn in by the licensee, the same does not confirm to the third part of the prescribed affidavit. The Commission is of the opinion that the object of the third part of the prescribed affidavit has been made out in the sworn affidavit of the first two parts. That being so, the Commission does not find any serious discrepancy between the sworn affidavit and the prescribed format of the affidavit and as such, the above objector's allegation is devoid of any merit.

- 1.9 It was also alleged that the tariff application was not maintainable on the ground that the application of GRIDCO was not accompanied with the prescribed fee. The Commission clarifies that though the Regulation 10 (5) of OERC (Conduct of Business) Regulation, 2004 postulates that the applicant licensee is to pay the fees fixed by the Commission while presenting the tariff application, no fees has been prescribed by the Commission as yet. Accordingly, GRIDCO has not rightly paid any fees while presenting the tariff application to OERC.
- 1.10 The objector had also questioned how the Commission would take up a number of other applications on different subjects along with the tariff applications as mentioned in the Public Notice issued by the licensee. The Commission is of the view that the additional subject which has been clubbed for decision along with the present tariff application, had bearing on the tariff decisions for 2004-05 and 2005-06. Hence, the Commission has decided to club the matter for a combined hearing.
- 1.11 The objector had further stated that GRIDCO had not filed ARR from 1<sup>st</sup> of April to 31<sup>st</sup> March 2007 by December 2003 for LTTS as per the direction of the Commission. The Commission clarifies that the LTTS applies to the four distribution and retail supply licensees in the state, namely CESCO, NESCO, SOUTHCO and WESCO. As per the LTTS order of the Commission dtd. 18.06.2003, only the DISTCOs shall file ARR and tariff proposals for 2004-05 by 31<sup>st</sup> December 2003, along with the LTTS filing for a period of 3 years i.e. from 2004-05 to 2006-07. GRIDCO rightly has not made the LTTS filing and it may be noted that the licensee had filed the revised ARR and Tariff application for 2005-06 on 29.11.2004 as per the relevant regulations of OERC.
- 1.12 One of the objectors complained that the representation of the objectors at the public hearing has been limited whimsically by the Commission. The Commission has never limited the number of objectors and has afforded sufficient opportunity to all the objectors, including the present objector though he remained absent on the day of the public hearing of GRIDCO and yet the Commission has taken his written objection into consideration.

## **2 GRIDCO'S ARR & TARIFF PROPOSAL FOR 2005-06**

- 2.1 GRIDCO holds the Bulk Supply and Transmission License for the State of Orissa and is a constituent of the Eastern Regional Electricity Board of India. It owns the

EHT network for transmission of power from the various generating stations within the State as well as for interconnection with the neighbouring regions of the country. It also purchases power from the central sector generators and surplus power from some CPPs within the State for supply of bulk power to four DISTCOs within the State for retail supply to their consumers. GRIDCO also allows wheeling of power to industries from their captive power plants and supplies power surplus to the needs of the state to licensees of other states.

- 2.2 GRIDCO has filled an application for Annual Revenue Requirement and revision of Bulk Supply and Transmission Tariff for 2005-06. The licensee has also applied separately for transmission tariff for carrying out the activities of transmission/ wheeling of power and load despatch functions as separated from bulk supply and trading functions. Similarly, the licensee has also applied for bulk supply tariff for carrying out its functions of bulk supply to DISTCOs and trading of electricity. GRIDCO mentions that the separation of activities and the respective applications thereof are consistent with the provisions under Sections 61 to 64 and other applied provisions of the Electricity Act, 2003 read with the related provisions of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004 and OERC (Conduct of Business) Regulations, 2004.

### 2.3 Projections of Demand and Energy

- 2.3.1 The actual demand for 2003-04 and projected figures thereof for 2004-05 and 2005-06 as submitted by GRIDCO in the aforesaid BST and ARR application are given in table-1.

**Table - 1**  
**Demand Projection for 2005-06**  
**(Figures in MVA)**

Name of the Company	2003-04 (Actual)	2004-05 (Projection)	2005-06 (Projection)
CESCO	667.32	670.00	700.00
NESCO	416.77	430.00	450.00
WESCO	603.35	615.00	630.00
SOUTHCO	276.57	280.00	290.00
Total	1964.00	1995.00	2070.00

- 2.3.2 The actual energy requirement for 2003-04 and the respective projected figures thereof for 2004-05 and 2005-06 as submitted by GRIDCO are indicated in table-2.

**Table - 2**  
**Energy Projection for 2005-06**  
**(Figures in MU)**

<b>Name of the Company</b>	<b>2003-04 (Actual)</b>	<b>2004-05 (Projection)</b>	<b>2005-06 (Projection)</b>
CESCO	3899.57	4079.46	4210.00
NESCO	2636.74	2824.00	2850.00
WESCO	3784.16	3912.90	3900.00
SOUTHCO	1608.67	1653.00	1700.00
<b>Total DISTCOs</b>	<b>11929.14</b>	<b>12469.36</b>	<b>12660.00</b>
CPP	9.03	10.00	10.00
Export	3299.37	4300.00	3300.00
<b>Total Sale</b>	<b>15237.54</b>	<b>16779.36</b>	<b>15970.00</b>

#### 2.4 Revenue Requirement for 2005-06

2.4.1 To carry out its various activities, GRIDCO is required to meet the cost of power purchase, the cost of transmission, and maintenance expenses, depreciation, interest on loan, appropriation to contingency reserve and reasonable return. It has also to cover the cost of transmission loss in the system as well as the cost of capital to meet the requirement of new investments to improve and ensure the system reliability and quality of power supply.

2.4.2 GRIDCO earns its revenue through

- i) Bulk Supply Tariff from the four distribution companies,
- ii) Export of power outside the State,
- iii) Exchange of power to some electricity operators other than DISTCOs through ancillary services,
- iv) Wheeling charges on export of power outside the state and
- v) Wheeling charges for transmission of power from CPPs to Industries located at distant places inside the state.

The projection of Revenue Requirement for 2005-06 and Excess or Deficit thereof of clear profit over reasonable return as furnished by GRIDCO is reproduced hereunder in table-3.

**Table : 3**  
**Revenue Requirement For 2005-06 (as furnished by GRIDCO)**

**(Rs. in crore)**

	<b>Item</b>	<b>2003-04 (OERC Approval)</b>	<b>GRIDCO Proposal for 2004-05</b>	<b>GRIDCO Proposal for 2005-06 (Composite Business)</b>	<b>Proposal for Trading Activity for 2005-06</b>	<b>Proposal for Transmission Activity for 2005-06</b>
a)	Power Purchase Cost	1648.72	1974.53	1907.51	1907.51	0.00
b)	Transmission Cost	382.99	501.08	488.61	127.01	361.60
c)	Previous loss	48.72	1372.32	0.00	0.00	0.00
d)	Contribution to contingency reserve	14.12	11.61	12.41	0.00	12.41
e)	Revenue Requirement (a+b+c+d)	2094.55	3859.54	2408.53	2034.52	374.01
f)	<b>(-) Misc. Receipts</b>	<b>540.11</b>	<b>980.16</b>	<b>762.68</b>	<b>729.30</b>	<b>17.50</b>
g)	Net Revenue Requirement (e-f)	1554.44	2879.38	1645.85	1305.22	356.51
h)	Reasonable Return	0.00	0.00	0.00	0.00	0.00
i)	<b>Revenue Requirement (g+h)</b>	1554.44	2879.38	1648.37	1305.62	342.75
j)	Net Revenue Receipt from sale of power to DISTCOs	1554.44	1613.42	1648.37	1305.62	342.75
k)	Net Revenue Receipt from sale of Power to DISTCOs & Wheeling to DISTCOs and CPP			1648.37	1648.37	0.00
l)	<b>Excess or Deficit of Clear Profit over Reasonable Return</b>	<b>0.00</b>	<b>-1265.96</b>	<b>0.00</b>	<b>342.75</b>	<b>-342.75</b>

2.4.3 GRIDCO submits that the present BST applications are driven by the following imperatives:

- GRIDCO has faced an unparalleled increase in power purchase cost, which is its most significant cost item.
- The licensee has little control over the increase in power purchase cost especially that coming from Central Sector Generators.
- Further drawl from CPPs is less in spite of GRIDCO's best efforts.

2.4.4 GRIDCO has considered total energy procurement of 16,497.50 MU by adding transmission loss of 4% over DISTCOs' drawl to the energy sale of 15,970 MU for 2005-06.

2.4.5 A summary of the proposal of GRIDCO's expected revenue for 2005-06 as submitted in TRT-23 is given in table-4.

**Table – 4**  
**Expected Revenue from Charges 2005-06**

(Rs. in Crore)

		<b>(EXPECTED REVENUE WITH ANTICIPATED SALE AT EXISTING RATES)</b>				
<b>Sl. No.</b>	<b>NET TOTAL REVENUE (DISTCOs)</b>	<b>CESCO</b>	<b>NESCO</b>	<b>WESCO</b>	<b>SOUTHCO</b>	<b>TOTAL</b>
1	a)Gross receipt from Energy Charges	387.32	245.10	376.35	142.80	<b>1151.57</b>
2	b)Gross receipt from Demand Charges	168.00	108.00	151.20	69.60	<b>496.80</b>
	<b>c)Miscellaneous Receipts</b>					
3	Wheeling to CPPs					13.76
4	Wheeling to other states					17.50
5	Sale to CPPs					2.90
6	Export					726.00
7	Unscheduled Interchange					0.00
8	<b>Total of Misc. Receipts</b>					<b>760.16</b>
9	<b>d)Net Total Revenue (=a+b+c)</b>					<b>2408.53</b>

## 2.5 Recovery of Cost Through Bulk Supply Tariff for 2005-06

2.5.1 The licensee proposes to recover the full cost of supply of Rs.1645.85 crore comprising Rs.1284.82 crore (78.06%) towards fixed costs and Rs.361.03 crore (21.94%) towards variable costs during 2005-06. In the fixed costs are included Rs.783.81 crore on account of power purchase, Rs.488.61 crore of transmission cost and contingency reserve of Rs.12.41 crore.

2.5.2 GRIDCO has proposed tariff structure options for recovery of the entire cost during 2005-06 keeping the separation of activities in view as explained in para 2.2 above:

- i) BST (Two Part) and Transmission Tariff for undivided GRIDCO having both transmission and trading functions under its ambit;
- ii) and an alternative proposal of
  - a) BST for the trading activity to recover the full costs of supply based on two part tariff structure;
  - b) Transmission Tariff for the transmission activity.

2.5.3 The structuring of demand and energy charges are highlighted in table-5.

**Table – 5**  
**Tariff Structure Options for 2005-06**

<b>Tariff Structure Options</b>	<b>Proposal for GRIDCO's Total activity for 2005-06</b>		<b>Proposal for GRIDCO's Trading activity for 2005-06</b>	
	<b>Demand Charges Rs/kVA/ Month</b>	<b>Energy Charges (P/U)</b>	<b>Demand Charges Rs/kVA/Month</b>	<b>Energy Charges (P/U)</b>
Structuring Demand Charges to cover full cost of transmission and all the fixed cost of power purchase. Energy Charges will cover only the variable costs of generation	517.24	28.52	517.24	28.52
Demand Charges of Rs 250 per kVA per month. Energy Charges will cover balance fixed costs and all variable costs of generation.	250.00	80.95	250	54.05

- 2.5.4 In proposing the above tariff structures, GRIDCO has stated that realisation of fixed costs payable to the generators should be assured to meet its obligation to generators and maintain the system operation. This could be possible only by designing the demand charges for recovery of the entire fixed cost. However, as full cost recovery entails a steep rise, GRIDCO proposes to fix it at the level of Rs.250/- per KVA/ month for 2005-06.
- 2.5.5 GRIDCO has been billing to the distribution companies the demand charge on the basis of simultaneous maximum demand (SMD) for each month. It has submitted that till the contract demand is finalised with the Distribution Companies, the demand to be billed in a month will be the highest of the SMD of the month. If the total actual demand in a quarter is less than the total approved demand, the difference of the demand charges shall be billed additionally as a quarter-ending adjustment.
- 2.6 **Estimation of Demand, Energy & Transmission Charges:** GRIDCO has assessed the revenue receipt from demand charges for its composite business based on a total SMD of 2070.00 MVA per month for 2005-06 as given in table - 6. After deduction of the revenue earnings from demand charges, the balance revenue requirement is proposed to be realised through energy charges. Similarly, the licensee has proposed demand and energy charges for its trading activity as presented in the same table.



**Table - 6**  
**Computation of Demand, Energy & Transmission Charges for 2005-06**

		<b>Separate Business</b>	
	<b>Composite Business</b>	<b>Trading Business</b>	<b>Transmission Business</b>
<b>Item</b>	<b>GRIDCO's Proposal for Total Activity for 2005-06</b>	<b>GRIDCO's Proposal for Trading Activity for 2005-06</b>	<b>GRIDCO's Proposal for Transmission Activity for 2005-06</b>
Total Revenue Requirement includes Rs.483.52 crore of Tr. Cost (Rs. crore)	1645.85	1305.22	356.511
<b>Demand charges per month (Rs./KVA)</b>	<b>250.00</b>	<b>250.00</b>	
Chargeable Demand in MVA per month	2070.00	2070.00	
Annual Revenue from Demand Charges (Rs. Crore)	621.00	621.00	
Balance revenue to be recovered from Energy Charges (Rs. Crore) (a)	1024.85	684.22	
Energy to be sold to DISTCOs(MU) (b)	12660.00	12660.00	12660.00
<b>Energy Charges (a/b) in P/U</b>	<b>80.95</b>	<b>54.05</b>	
Energy to be sold to CPPs (MU)	<b>10.00</b>		10.00
MU to be Wheeled	<b>430</b>		430
<b>Transmission cost with RR less revenue from inter-state wheeling (Rs. crore)</b>	<b>483.52</b>		
<b>Transmission Tariff P/U</b>	<b>36.91*</b>		<b>27.215</b>

(\*) Applicable for wheeling of power inside the state by any person other than DISTCOs.

## **2.7 Transmission Loss**

GRIDCO projects transmission loss of 4.00% for 2005-06 calculated by following the Gross Method as adopted by OERC. GRIDCO has mentioned in page-4 of the ARR filing that the transmission loss of the licensee is the lowest as compared to those in other states like Andhra Pradesh, Haryana, Rajasthan etc. and prays the Commission to have a pragmatic view in regard to its transmission loss.

## **2.8 Over Drawl Charges**

GRIDCO follows the principle of least cost procurement of power to minimise the total annual cost of generation. Any excess drawl from the procurement plan provided by the DISTCOs will force GRIDCO to procure power from the costlier sources not covered in the revenue requirement finalised by the Commission. GRIDCO has drawn the attention of the Commission to the last BST order wherein the Commission has approved as follows: “The Commission, therefore, approves that any expenditure for excess purchase of power over the approved annual quantum of energy should be reimbursed by the DISTCOs in proportion to their excess consumption. Such excess drawl should be billed by GRIDCO at the actual cost of power purchase plus transmission charges and transmission losses, if any and payable as an year-end adjustment. The higher costs resulting from any drawl in excess of the projected requirement by DISTCOs would be charged as a year-end adjustment.” GRIDCO has sought for approval of the same provision in a modified form i.e. “Any drawl over and above the planned drawl given by the DISTCOs will be billed at the marginal cost” for 2005-06.

## **2.9 Delayed Payment Surcharge**

GRIDCO has proposed to retain levy of delayed payment surcharge @ 2% per month for payments received after the period of 30 days from the date of submission of the bills, for 2005-06.

## **2.10 Rebate**

Corresponding to the delayed payment surcharge, GRIDCO has also proposed a rebate for 2005-06. A rebate of 2% on the monthly bill, if payment is made in full within 48 hours of the presentation of the bill, 1.5% rebate, if a minimum of 85% out of billed amount is paid within 48 hours and 1% rebate on the balance amount, if paid in full within 15 days of the presentation of the bill. For full payment made within 15 days from submission of the bill, a rebate of 1% may be allowed.

## **2.11 Pass Through of Previous Loss and Carry Forward of Revenue Gap**

2.11.1 GRIDCO had earlier applied for a pass through of Rs.1372.32 crore of past losses from the year 1996-97 to 2003-04 and requested the Commission to consider the same in the ARR and BST for 2004-05. To the extent the pass through of the above amount is not allowed, GRIDCO

requests that the same may be allowed for recovery in the ARR and BST for 2005-06. The licensee prays the Commission to accord approval for carry forward of the gap between the approved revenue requirements for 2005-06 and the revenue realised for adjustment during the future years. GRIDCO further requests the Commission to allow carry forward of the additional cost, if any, for recovery in future tariffs.

2.11.2 The Commission has also been requested to allow recovery of additional cost against statutory increase or otherwise, if any, which may be passed on to GRIDCO by various utilities on account of OERC / CERC Orders, as surcharge.

## **2.12 Summary of Tariff Filing For 2005-06**

2.12.1 GRIDCO prays that the Commission may kindly approve the following for 2005-06:

(a) Tariff for GRIDCO's composite business for 2005-06:

- i) Demand charges @ Rs.250 per KVA/month. Energy charges @ 80.95 paise/unit on energy supplied.
- ii) Charges for over drawl in demand and energy.
- iii) Delayed Payment Surcharge as proposed.
- iv) Rebate as proposed.

(b) Intra-state transmission tariff covering:-

- i) Wheeling charges @ 36.91 paise/unit.
- ii) Transmission loss @ 4.00%.

This tariff is payable by all users of intra-state system except DISTCOs

2.12.2 (a) In the event of bifurcation of transmission and trading activity the composite tariff will not be applicable. In its place separate tariff is required to be fixed for independent trading and transmission activities. The summary of Tariff Proposal for GRIDCO's Trading Activity for 2005-06 is as under:

- i) Demand charges @ Rs.250 per KVA/month. Energy charges @ 54.05 paise/unit on energy supplied.
- ii) Charges for over drawl in energy.
- iii) Delayed Payment Surcharge as proposed.
- iv) Rebate as proposed.

(b) The summary of Tariff Proposal for GRIDCO's Transmission Activity for 2005-06 is as under:

- i) Transmission charge @ 27.23 p/u applicable for Transmission of Power at 220KV/132KV/66KV over GRIDCO's EHT transmission system for the purpose of transmission of energy from a CPP to its industrial unit located at a separate place as well as for transmission of power from outside the state to an industry located inside the state.
- ii) Transmission loss @ 4%.
- iii) Delayed Payment Surcharge as proposed.
- iv) Rebate as proposed.

**2.13 SUPPLEMENTARY SUBMISSION OF GRIDCO IN THE PUBLIC HEARING (17.01.2005)**

2.13.1 No provision has been made in the ARR application for repayment of the principal component of various loans incurred/to be incurred by GRIDCO during 2005-06. GRIDCO requests that the principal as well as the interest amount be allowed to be recovered from the tariff.

2.13.2 OHPC has intimated vide their letter No.13450 dated 28.12.2004 that it would provide 1.387 MU per month provisionally to MPSEB towards their share from Hirakud power system with immediate effect. In that case GRIDCO would draw 16.644 MU less from Hirakud and would meet the shortfall from high cost power. GRIDCO requests OERC to reduce the quantum of export projected for 2005-06 to 3283.366 MU in place of 3300 MU.

2.13.3 It is observed that CPPs like RSP and INDAL are availing excess power beyond their normal drawl thereby affecting the export quantum. Hence, sale to WESCO for 2005-06 is to be considered as given by WESCO in its RST application for the same year. Accordingly, the export quantum as projected by GRIDCO for 2005-06 may be reduced to that extent. GRIDCO further requests OERC to compensate for the loss of revenue.

2.13.4 Ministry of Power, Govt. of India has intimated that Chukka tariff has been proposed to be revised to Rs.2 per unit from Rs.1.5 per unit with effect from 01.01.2005. Accordingly, the licensee requests to revise the power purchase costs for 2005-06.

2.13.5 GRIDCO has been processing the bills of OHPC at the rates as approved in the tariff order for 2002-03 because of the fact that the Commission has stayed the tariff order of 28.06.2003 and the consequential tariff order dtd. 12.11.2003. Once the approved rates for 2003-04 for these stations were made effective, GRIDCO would be duty bound to pay the above differential amount or the actual differential amount to OHPC in which

case such additional payments should be allowed in the ARR of GRIDCO. This differential amount has been worked out at Rs.12.51 crore.

- 2.13.6 The Commission had acknowledged that there was a revenue deficit to the tune of Rs.94.10 crore in the revenue requirement for the year 2003-04. GRIDCO considers this amount as Rs.96.49 crore consisting of Rs.94.10 crore towards interest due to Parekh Committee recommendations plus Rs.2.40 crore on account of the differential rate of 8 P/U of intra-state wheeling charge from 32 P/U to 40 P/U for 300 MU because of non acceptance of Parekh Committee recommendations. GRIDCO requests the Commission for adequate compensation in this regard or the deficit so calculated may be allowed for recovery through the tariff during subsequent years.

### **3 OBJECTIONS TO THE BULK SUPPLY TARIFF PROPOSAL OF GRIDCO**

- 3.1 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 financial year 2005-06. Based on their nature and type, these objections have been categorised subject-wise as discussed below:-

#### **3.2 Tariff Principles**

Some objectors stated that the correctives suggested by the Soven Kanungo Report and accepted by the State Government have not been carried out and multi-year tariff principles have not been complied.

#### **3.3 Simultaneous Maximum Demand, Contract Demand and Billing Demand**

- 3.3.1 Some objectors stated that GRIDCO's estimate of Maximum Demand should be taken into consideration.
- 3.3.2 Some others suggested that the unilateral determination of energy and demand by GRIDCO was not justified. These estimates provided by DISTCOs should be taken into account.
- 3.3.3 One of the objectors requested the Commission to decide on the issue of determination of SMD. The objector prayed that the demand projected by the licensees in their respective ARRs might be taken into account for determining the income from demand charges.

#### **3.4 Transmission Loss**

- 3.4.1 Some objectors stated that the transmission loss of 4% was very high. GRIDCO has not taken any step to reduce the transmission loss even after huge investments have been made for system improvement.

- 3.4.2 Some others maintained that the transmission loss projected by GRIDCO needed reconsideration. As per its calculation, the transmission loss for 2005-06 comes to 3.7%.
- 3.4.3 One of the objectors suggested that the Commission should follow the norms for transmission losses, which have been prescribed by it. Transmission losses should have a declining trend. The objector suggested that transmission loss of 3.5% should be allowed for 2005-06.
- 3.4.4 Some objectors mentioned that GRIDCO had stated that it had undertaken the construction of a number of lines and substations under various schemes to effectively reduce the transmission loss. But in the rejoinder to the objections, GRIDCO had stated that in some of the new lines the loading being very less, contributed towards adding loss.
- 3.4.5 One of the objectors stated that a target for achieving a transmission loss of 3.5 % be fixed for 2005-06.
- 3.4.6 Another objector suggested that the proposed transmission loss has been shown in the higher side which was a matter of concern. It might be necessary to conduct a study to evaluate the loss reduction due to addition of new assets. If GRIDCO could not reduce transmission loss, it signified that the expenditure incurred on system improvement had not yielded any benefit to the consumer. Therefore, such expenses should be treated as infructuous. According to the objector, the transmission loss should be limited to 2.98% for 2005-06.
- 3.4.7 Some objectors stated that the status quo in regard to transmission losses should be maintained i.e. 3.58% during 2005-06.
- 3.4.8 One of the objectors stated that the licensee had not been able to arrest transmission loss.
- 3.4.9 Another objector stated that Gross method of calculation of transmission loss should be examined.

### **3.5 Tariff Filing by Generators**

One of the objectors stated that no effort has been made to ensure tariff filing by generators as per OERC regulations and the Electricity Act, 2003. No action has been taken to determine the capital cost of the Indravati Project though nearly three years have elapsed in the meanwhile the capital cost has been continued to be shown at Rs.1194.79 crore. The cost of generation should be reduced by 20% in 2005-06 on this account. In accordance with the provision in Sec.61 (h) of the Electricity Act, 2003 certain provisions towards quantum of energy generated from NRSE projects, is to be made.

### **3.6 Power Procurement : Least Cost Drawl**

- 3.6.1 Some objectors stated that power requirements estimated by the DISTCOs for 2005-06 were more reliable and should be considered. Hydropower projection for 2005-06 should be based on design energy.
- 3.6.2 One of the objectors suggested that the estimation of GRIDCO of the net power availability from the state hydro source needed upward revision. The hydro projection for 2005-06 should be based on design energy of 6211 MU. In the absence of the execution of PPA, envisaging two-part tariffs no increase in the rate should be considered in case of OHPC. In case of OPGC, energy availability should be based on 85% PLF. The estimation of energy available from TTPS should be based on firm programme for the shut down of the units under R&M Phase III. GRIDCO has not explained the reasons as to why the drawl from the CGSs was not based on merit order.
- 3.6.3 Another objector stated that the licensee had artificially projected the power purchase requirement, as there was no nexus between purchase of power and sale of energy. The Commission should examine whether GRIDCO has purchased power following merit order.
- 3.6.4 Some objectors stated that power purchase quantity and cost may be estimated as per the PPAs with OHPC and OPGC and not on the basis of declaration by the generators each year.
- 3.6.5 One of the objectors suggested that GRIDCO's proposal for power purchase for DISTCOs was in the higher side. The objector felt that the probable power purchase figure, allowing 5% reduction in distribution loss, should be kept at almost the same level of actuals for the year 2003-04. The objector projected the total requirement of power at 12,200 MU for 2005-06. The generation plan of OHPC as submitted to GRIDCO may be accepted. However, the plan for Upper Kolab needed scrutiny.
- 3.6.6 Another objector did not agree with the projected availability of power by GRIDCO and submitted alternative details of power availability. The objector has estimated the total availability from various sources at 19,420 MU as against 16,497 MU projected by GRIDCO for 2005-06. The objector stated that the drawl from Hydro stations should be put at 7824 MU for 2005-06. The objector requested to consider the auxiliary consumption and compute the availability of energy from OPGC. The objector felt that OPGC could operate on a much higher PLF than indicated in its first half performance. In respect of TTPS, a higher PLF and drawl for 2005-06 was suggested. Drawl from CPPs might be kept at 1370 MU for 2005-06. The energy drawl from the CGSs should be based on TSTPS operating at 85% PLF and FSTPS & KSTPS at 80% PLF. The objector projected the total energy requirement of GRIDCO at 19,420 MU for 2005-06.

### 3.7 Power Procurement Cost

- 3.7.1 One of the objectors stated that power procurement costs have been projected to be very high and optimum utilisation of hydropower had not been considered by GRIDCO. Besides, cost of power from the CGSs units had been projected to be very high and these did not tally with the approved fixed costs and variable costs by CERC. As FSTPS and KHSTPS were old power stations, all loans must have been paid by NTPC. Thus, only equity should be taken into consideration for cost calculation and not the loan.
- 3.7.2 Some objectors estimated the power requirement at 16,831 MU at a cost of Rs.1970 crore for 2005-06. One of the objectors suggested a realistic power mix and reasonable pricing of the same. The power purchase cost was estimated at Rs.1900.95 crore for 2005-06 by the objector.
- 3.7.3 Another objector stated that the power procurement cost in case of TTPS needed close scrutiny. OERC might pass orders as to whether the sale to the CPP should be at rates approved by the OERC or thrice the purchase cost of power from the CPPs.
- 3.7.4 One of the objectors stated that GRIDCO might examine reduction in power purchase cost by looking at the recommendations of Kanungo Committee, Ahluwalia Committee, Deepak Parekh Committee and also recent CERC orders. Low availability of power from Chiplima and low secondary power availability from Hirakud-Chiplima complex should be corrected by OHPC. CPPs might be encouraged to dispatch more to GRIDCO by offering them higher power purchase cost. Reducing wheeling charges could also encourage them. Gains from power trading could reduce power purchase cost. This should be adopted till the sector becomes viable. Thereafter, measures for reduction of past losses of GRIDCO should be taken. GRIDCO should procure off-peak thermal power from other near-by states, as and when available.
- 3.7.5 Another objector stated that the cost calculations for TSTPS and FSTPS needed scrutiny.
- 3.7.6 One of the objectors felt that there was scope for reduction of power purchase cost in case of hydro stations. The renovation and modernisation cost shown for 2005-06 should be capitalised. In case of TTPS, the objector suggested that the proposal of additional capitalisation and incremental fixed cost thereof should be treated as a pass through, as and when the revised fixed cost was approved by the CERC in its order. The objector was of the opinion that interest on loan portion of the additional capitalisation on account of R&M programme was to be calculated @ 7% per annum instead of 14% as assumed by GRIDCO. Accordingly, fixed costs of TTPS have been estimated at Rs 214 crore for 2005-06. A normative PLF of 80% should be adopted for OPGC instead of 68.5%. Oil consumption should be pegged down to 2 ml/kwh instead of 3.5 ml/kwh.



Depreciation should be calculated at 3.6% p.a. Incentive should be provided at 80% PLF or more instead of the normative 68.5% PLF. ROE should be calculated at 14% p.a. In case of CGSs, GRIDCO was entitled to receive the benefits arising out of reduction in fixed charges with effect from 01.04.2001. These benefits needed to be treated as income while determining the ARR of GRIDCO. As far as variable charges are concerned, the objector was keen to know whether the norms specified by the CERC have been taken into account for cost computation of CGSs.

### **3.8 Transmission Cost**

- 3.8.1 Some objectors stated that higher transmission tariff projected by GRIDCO should not be applied to CPPs operating in the state for wheeling of their power from their captive power plants to their load centres as physically no power was transmitted in the system. As a matter of fact, the CPPs were injecting power at the load centre and drawing at a point where the line was lightly loaded thereby contributing to reduction of system loss in transmission. The present levels of wheeling charges levied on the CPPs wheeling power to their load centres were exorbitantly high.
- 3.8.2 Another objector stated that the interest on the long-term bonds should not be allowed for the purpose of determination of transmission cost. Cost on account of price escalation and the additional IDC due to delay in construction should be borne by GRIDCO and not be passed on to the consumers.
- 3.8.3 Some participants suggested that the transmission cost for inter-state consumers was 17.5 P/U whereas it was 32 P/U for state consumers. Why should the state consumers subsidise the outside consumers? The objector stated that the interest charges on bonds issued and loans incurred for clearing arrear energy dues of the generating companies were not to be allowed to the licensee, as the consumers have already paid the cost of energy charges to the DISTCOs through their energy bills. Besides, these costs were not part of the transmission cost.
- 3.8.4 One of the objectors estimated the transmission costs at Rs.476.40 crore for 2005-06.

### **3.9 Employee Cost, A&G, R&M Expenses**

- 3.9.1 Some objectors suggested that the excess expenditure in respect of employee's cost should not be allowed to be passed on to the consumers. A&G and R&M expenses for 2005-06 should be restricted to Rs.17.5 crore and Rs.10 crore respectively.
- 3.9.2 One of the objectors submitted that a standard base of reference was necessary for proper computation of terminal liabilities as part of employee's cost.

- 3.9.3 Another objector stated that the licensee's claim of A&G expenses was unreasonable and inflated.
- 3.10 Depreciation & Asset Register**
- 3.10.1 One of the objectors stated that the licensee had no asset and stock register to calculate the depreciation of its assets.
- 3.10.2 Another objector suggested that the basis of calculation of depreciation should be examined in detail.
- 3.10.3 One of the objectors mentioned that only the assets put to use should be considered for calculation of depreciation. Irrespective of the "transfer value" of the assets, original book value of assets should be used for the purpose of calculation.
- 3.11 Interest on Long Term Liabilities**
- 3.11.1 Some suggested that the interest charges on loan and on bonds issued to the generating companies to clear arrear energy dues should not be passed on to the consumers as they have already paid the same which in turn had been misappropriated by the licensee.
- 3.11.2 One of the objectors was of the opinion that the interest and finance charges of GRIDCO might further be reduced.
- 3.11.3 Another objector stated that the interest attributable to bonds against arrear power purchase dues were not payable by consumers. Interest amount of GRIDCO from DISTCOs was more than the corresponding amount of generators on GRIDCO. The interest amount towards securitisation should be deleted from the revenue requirement.
- 3.12 Previous Loss**
- 3.12.1 Some stated that GRIDCO's profit out of sale of surplus power to other states should be adjusted against the past losses projected by GRIDCO at Rs.1372.32 crore. The proposal of GRIDCO for pass through of past losses to the tune of Rs.1372.32 crore should not be allowed.
- 3.12.2 Some objectors submitted that the past losses of GRIDCO could only be passed on provided the licensee had performed within the benchmark fixed by OERC.
- 3.12.3 Some objectors stated that the issue of passing the past losses of Rs.1372.32 crore into tariff should be debated upon and in case some portion of past losses to be passed on, the same should be done over a period of 10 years.
- 3.12.4 One of the objectors suggested that the prudence of past losses should be examined by the Commission before passing it on to tariff.

- 3.12.5 Another objector suggested that the treatment of past losses might be taken up separately with the state government and should not be considered in the ARR. The recovery of losses incurred in the subsequent periods (1999-00 to 2003-04) was no longer applicable as GRIDCO had securitised such losses. The objector felt that GRIDCO's claim of Rs.1372.32 crore towards recovery of past losses should not be entertained.
- 3.12.6 One of the objectors stated that the past losses of the order of Rs.48.72 crores might be allowed by the Commission for 2005-06.
- 3.12.7 Another objector stated that profit out of trading should be adjusted against past losses.
- 3.13 **Regulatory Assets**
- One of the objectors felt that GRIDCO should have filed a separate petition while claiming regulatory assets.
- 3.14 **Revenue Requirement**
- 3.14.1 Some objectors stated that interests payable for securitisation of overdue power purchase dues of generators was not chargeable to revenue requirement of GRIDCO for tariff purpose. It was improper to collect interest on outstanding power purchase dues of generators by hiking BST particularly when GRIDCO had collected the power purchase dues from the DISTCOs. Revenue requirement for 2005-06 comes to Rs.2355.64 crore and the revenue earning comes to Rs.2486.80 crore indicating a surplus of Rs.131.16 crore.
- 3.14.2 Some objectors had worked out the revenue requirement at Rs.2457.07 crore for 2005-06.
- 3.14.3 One of the objectors had worked out the revenue requirement of GRIDCO at Rs.2458.87 crore for 2005-06.
- 3.15 **Expected Revenue from Charges**
- 3.15.1 Some objectors stated that the total receipt from DISTCOs should be Rs.1719.37 crore for 2005-06. The total revenue receipts should be Rs.2486 crore including exports of power for 2005-06.
- 3.15.2 Some others estimated that GRIDCO should earn Rs.2737.71 crore during 2005-06.
- 3.15.3 One of the objectors stated that the income from wheeling to the tune of Rs.15.94 crore had not been considered while computing the revenue gap for GRIDCO as a transmission company. The objector had estimated miscellaneous receipts at Rs.1479.07 crore for 2005-06.

### **3.16 Availability Based Tariff (ABT)**

- 3.16.1 Another objector stated that GRIDCO had not taken the revenue earned by it out of UI charges while computing anticipated Revenue Receipt.
- 3.16.2 One of the objectors stated that the surplus generated on account of ABT tariff could be booked to a Power Development Fund. ABT and trading gains should be computed.
- 3.16.3 Another objector suggested that rough estimates of earnings from UI charges for 2005-06 should be considered.
- 3.16.4 One of the objectors stated that the UI charges were to be projected. This was feasible as the rate for UI was very high compared to export rate. The Commission might conduct a study to determine whether earning due to more UI of power would bring in higher revenue as compared to export.
- 3.16.5 Another objector stated that since Orissa had very high hydro potential, this opportunity should be commercially utilised to earn more revenue from UI charges than selling the surplus energy availability through traders.

### **3.17 Transmission Tariff**

- 3.17.1 Some objectors stated that wheeling charges should be fixed at 28 P/U for long-term customers and 7 P/U for short-term customers keeping in view the fact that wheeling costs for a short-term customer was 25% that of a long-term customer as per CERC regulation.
- 3.17.2 One of the objectors prayed for a viable transmission tariff without which the company would suffer an irreparable loss. The objector pleaded that expenses considered in GRIDCO's calculation of transmission costs included many items, which did not pertain to the transmission business. It requested the Commission not to charge any transmission tariff to the electricity supply by the company to the grid at Choudwar. As such, the transmission tariff proposed by GRIDCO should be disallowed.

### **3.18 Levy of Over Drawl Charge**

GRIDCO proposed that excess drawl by DISTCOs should be billed at marginal costs. However, one of the objectors suggested that for extra procurement of power from CGSs, GRIDCO paid extra charges in the form of variable costs and incentives. To meet the overdrawl of DISTCOs, GRIDCO should need to procure power from CGSs by paying extra charges in the form of variable costs and incentives. The same amount of the costs should be claimed from the distribution licensees as overdrawl charges.

### **3.19 Rebate**

One of the objectors pleaded that there were some difficulties in implementing the proposal relating to rebate applicable to DISTCOs. For example, if bills were presented on the last hours of a working day and the subsequent two days were holidays, the licensee would not be able to pay the bills in time to avail the rebate. The objector, therefore, prayed to approve the rebate of 2% for prompt payment of BST bills within three working days excluding Sunday and holidays.

### **3.20 Export of Power**

3.20.1 One of the objectors stated that the export of power to other states has been projected to be less than actual energy likely to be exported. GRIDCO had projected an export of 3300 MU during 2005-06, which was less by 1000 MU against their projection for 2004-05. The reasons for low export for 2005-06 may be clarified.

3.20.2 Another objector suggested that the OERC might examine if it would be beneficial to the state consumers by not taking into consideration the export of power. It might be examined whether it would be beneficial to include the export business in the total revenue requirement. The Commission might examine whether the sale of power to outside the state would be in the interest of the state consumers and should be combined with the power purchased for the state.

3.20.3 One of the objectors stated that the additional income expected to be earned on account of trading at a higher rate should be taken into consideration while computing GRIDCO's ARR.

3.20.4 Another objector stated that it had not been explained why rates for power trading outside Orissa were not variable? Since power from CGSs was being traded, the trading rate should be equal to cost of KHSTPS power plus margin. It was not stated whether the revenue from trading was gross or net.

### **3.21 Tariff**

3.21.1 Some of the objectors prayed the Commission not to increase the BST. One of the objectors requested OERC to keep BST constant for a period of five years at the same level. The objector stated that the energy charges should be reduced by 22 P/U for 2005-06 for all DISTCOs.

3.21.2 Some others estimated that GRIDCO should have a surplus of Rs.280.64 crore for 2005-06. The objector suggested that the energy charge should be reduced by 22 P/U for 2005-06 for all DISTCOs. They estimated that the surplus amount to be earned by GRIDCO should be of the order of Rs.131.16 crore for 2005-06 at the existing tariff.

- 3.21.3 Some objectors stated that the prevailing BST was already putting a great deal of strain on the survival of existing Ferro alloys and other power intensive industries.
- 3.21.4 Another objector stated that as the recommendations of Soven Kanungo Committee had been accepted, tariff should not be enhanced for five years.
- 3.21.5 One of the objectors stated that the BST rate should be uniform for all DISTCOs.

### **3.22 Other Issues**

- 3.22.1 Another objector stated that OERC should undertake review of all on going Transmission Projects and fix target dates for their completion.
- 3.22.2 One objector stated that no proper step had been taken to create consumer awareness about the reform process and the establishment cost had increased.
- 3.22.3 Some objectors maintained that BST should be taken up first before considering RST applications. The Commission should consider fixing tariff for industrial consumers for a minimum period of 5 years.
- 3.22.4 One of the objectors stated that the stipulations fixed by the Commission in respect of performance parameters should be adhered to during 2005-06. GRIDCO may create two funds viz. (a) Power Reform Fund as recommended in Deepak Parekh Committee to take over past losses (b) Power Development Fund in which profits from power trading, ABT gains, Higher Secondary Energy Input by OHPC, surplus from off-peak purchase and energy sale etc. might be put. The separation of transmission from trading activity needed a special hearing of OERC.
- 3.22.5 Another objector stated that the efficiency gains due to reforms might be passed on to the consumers in the form of benefits by lowering tariff as recommended by the Deepak Parekh Committee. GRIDCO should have produced separate accounts on both the activities of transmission and trading.
- 3.22.6 One objector mentioned that GRIDCO had stated that Hirakud and Rengali were basically meant for flood control, irrigation and drinking water purposes. The WR Department of GOO controlled these and OHPC and GRIDCO had no control over it. This was a wrong statement. Power was an important part and cost towards Dam had been allocated accordingly. There exists a co-ordination committee to determine the generation schedule.
- 3.22.7 Another objector stated that GRIDCO was entitled to receive 50% share out of the amount collected by the DISTCOs out of the arrears written off by the GOO (Rs.400 crore + Rs.442 crore). GRIDCO had not stated about

the efforts made to collect the same or put in place a system with DISTCOs for determination of this amount.

3.22.8 Some objectors stated that the litigation and other expenses as stated by the licensee under heading capital investment was deceptive.

3.22.9 Another objector stated that litigation expenses should be recovered from the erring employees of the licensee. The field staffs and functionaries of the licensee at the division and sub-division levels should be given periodic orientation training at regular intervals.

### **3.23 Queries Raised by the Commission Staff in the Public Hearing**

The Commission staff raised certain vital issues in the beginning of the public hearing. The Commission wanted to know the extent of benefit available to GRIDCO due to revision of tariff of CGSs (Thermal) in Eastern Region with effect from 01.04.2001 to 31.02.2004 and its latest status. Besides, a question was raised as to whether NTPC had filed any tariff petition before CERC by 30-06-2004 as per the CERC Regulations. If so, the possible impact on tariff was to be quantified. The Commission intended to be apprised of the treatment of saving in terms of interest charges on account of swapping of high cost loans and provision for ceiling on interest rate thereof. It was asked as to what extent interest and finance charges should further be reduced. Further, GRIDCO was asked to clarify reasons for the exponential growth in employees' expenses. The Commission also wanted to know as to how there was little addition to asset base despite huge Capital Work in Progress (CWIP) and whether GRIDCO should limit IDC on CWIP to certain extent in a particular financial year beyond which it should be disallowed. This was necessary in view of the fact that there was no drive on the part of GRIDCO to complete the projects in time and reap its benefits

### **3.24 Views of Government of Orissa**

The Govt. of Orissa representative from the Department of Energy stated categorically that the state government would not be able to give any subsidy to the licensee. Further, GoO would not be able to accept Parekh Committee Recommendations. He suggested that gains from UI and profit from trading should be adjusted against past losses of GRIDCO. Uncontrollable expenses should be a pass through in the Bulk Supply Tariff. He suggested for recovery of past losses over a period of at least ten years. He was of the opinion that the Commission might segregate the costs incurred by GRIDCO for running its business into controllable and un-controllable only and consider the latter as Regulatory Assets for recovery in a phased manner over a period of time. He further stated that since GRIDCO had genuinely suffered loss in supplying power to the consumers in the hours of need, it should be allowed to adjust the past losses.

## **4 GRIDCO'S RESPONSE TO THE OBJECTIONS**

In reply to various objections raised by the objectors against GRIDCO's applications for approval of the Annual Revenue Requirement for 2005-06 and the revised Tariff, GRIDCO had filed rejoinders to these queries with the Commission. GRIDCO's reply to these queries has been broadly classified into the following main issues.

### **4.1 Demand Estimation & Energy Requirement**

4.1.1 GRIDCO submitted that the proposed power procurement was based on the forecast submitted by the DISTCOs. In the absence of the energy forecast by some of the DISTCOs, GRIDCO has considered an appropriate percentage growth over the previous year's projections in line with the Long Term Demand Forecast made by the licensee for DISTCOs for the period from 2002-03 to 2006-07.

4.1.2 GRIDCO objected to the alternative demand forecast made by some objectors by stating that the assumptions behind these forecasts were not realistic and were based on hypothetical assumptions. The licensee further stated that 100% metering arrangement with electronic meters of 0.2 accuracy class had been made at all the interconnection points between GRIDCO network and the distribution companies. All power purchases and sales were duly accounted for and metered. Hence, the objections relating to the reliability of the data and the consequent demand forecast of GRIDCO were not based on facts.

### **4.2 Transmission Loss**

4.2.1 GRIDCO in its reply to the various issues raised on transmission loss stated that the calculation of transmission loss of 4% in its ARR application for 2005-06 was based on the power flow in GRIDCO system during April' 01 to September' 04 and further reduction below 4% was not possible as recommended by Kanungo Committee Report. GRIDCO was of the opinion that it had no control over the transmission loss, which was purely technical in nature and depended on several factors, such as, voltage of transmission, cross-section of the conductor, distance over which the energy was being transmitted, reversal of flow of power from one region of the state to the other depending on the generation by different generating stations located at different places, loading of the transformers etc. GRIDCO also added that the transmission loss proposed by it was comparable to those in other states and PGCIL, which operates mostly on 400 kV lines. As regards 3.4% transmission loss suffered by GRIDCO during Nov'04, GRIDCO clarified that this loss percentage was based on the net method and not on the gross method prescribed by the Commission. Hence, GRIDCO's request for 4% transmission loss was reasonable and justified.



- 4.2.2 GRIDCO further stated that it had undertaken construction of new lines and sub-stations for strengthening its transmission infrastructure for improvement in quality of power supply/ to take care of future load growth. In some of the new sub-stations, the loading was very low which was a factor for increase in transmission loss.
- 4.2.3 GRIDCO, in reply to the objection on high distribution loss by the DISTCOs, stated that it was involved in the business of transmission and bulk supply of power at higher voltages and should not be held responsible for the losses in the lower voltages in the distribution network.

#### **4.3 Power Procurement**

In reply to the objections relating to power procurement, GRIDCO submitted that its power procurement projection was based on the generation plan submitted by OHPC, OPGC & TTPS. The energy procurement forecast was based on the merit order procurement by following least cost combination method and as per the allocated share from CGSs. GRIDCO maximised its drawl from the cheaper sources like State Hydro Stations and the CPPs. As regards CGSs, GRIDCO stated that its present plan was to draw its full share from the CGSs in order to optimise the fixed cost burden. GRIDCO traded only the surplus power after meeting the state consumers' demand in full. The suggestion of NESCO to draw higher quantum of power from OHPC hydro stations was not considered feasible as the availability varied from month to month which also determined the quantum of power to be traded.

#### **4.4 Power Procurement Cost**

- 4.4.1 GRIDCO objected to the cost estimates relating to power procurement proposed by the objectors and stated that it considered station-wise actual costs of power based on the energy bills, year-end adjustment bills, tariff notification by CERC / OERC and PPAs. Continuance of rates approved by the Commission last year would put GRIDCO into a loss.
- 4.4.2 To GRIDCO, some of the objectors had furnished detailed calculation of the cost of power purchase for GRIDCO assuming different rates for different stations, which were not based on any evidential documents. The licensee stated that the power procurement cost assessment was based on the proposed tariff submitted by the Hydro Stations and Commission's Orders from time to time, the PPAs, agreement with CPPs, like NALCO and CERC Orders for CGSs. Regarding finalization of two-part tariff for OHPC stations, GRIDCO was of the opinion that it had initiated the requisite steps and there had been several rounds of discussions between GRIDCO & OHPC in this regard. It also pointed out that there were some unresolved issues while fixing the PPA for Rengali station, which had been submitted to the Commission for its approval. GRIDCO further stated that the tariff order for other Hydro stations would be in place in line with the above.

- 4.4.3 CII had suggested to surrender GRIDCO's share in the costlier CGSs. However, GRIDCO replied by saying that it would not be wise to surrender the share because the state consumers might have to face load shedding in the event of hydrology failure or/and sudden surge in demand. Further, GRIDCO was of the opinion that once the share was surrendered, it might not be possible to get back the share in future. GRIDCO reminded the objectors that the cost of power of CGSs would fall further in view of the recent orders of CERC.
- 4.5 **Transmission Cost**
- 4.5.1 **Employees Cost, A&G, R&M Expenses:** GRIDCO made a detailed presentation on actual employee and transmission costs vis-à-vis the approval thereof made by the Commission for the period from 1997-98 to 2003-04 and objected to the alternative cost proposals as suggested by the objectors. The licensee informed that one of the main causes of higher employees' cost was the inheritance of all existing pensioners of the erstwhile OSEB. Further, as per the second Transfer Scheme, GRIDCO was liable for payment of Terminal Liabilities to all employees retiring and getting engaged in distribution business on or before 31st March, 1999. These terminal benefits on account of the employees were required to be paid out of the fund created for the purpose by regular contribution from GRIDCO's revenue account computed through actuarial valuation and the interest earned from that fund would be utilised for payment of the terminal benefits due to the employees. There has also been a decline in the interest rate over the years, which called for a higher contribution from GRIDCO to earn the same amount from investment of funds created for terminal and pensionary benefits. GRIDCO put forth that against sanctioned manpower strength of 8451 as on March, 2000, the same had been reduced to 5551 at present i.e. a reduction of about 3000 posts. Similarly, men in position as on March, 2000, which was 6102 had declined to 5088. GRIDCO operated with all these vacant positions despite the fact that its business had increased manifold over the years.
- 4.5.2 GRIDCO was of the opinion that when the latest accounts are available the projection should be based on the actuals rather than the projections or estimates made earlier when the audited accounts for two to three years were not available. Further, GRIDCO justified its projections stating that the employees cost for the years 2001-02 to 2003-04 as per its accounts, were much higher than those allowed by the Commission in their various tariff orders. GRIDCO also clarified that the audited accounts for 2003-04 would be available by the end of February'2005.
- 4.5.3 In regard to the expenses on interest, GRIDCO submitted that the same was justified as the licensee had to incur loans by way of securitising the dues of generators and raise funds from Banks/ FIs as well as from open market to maintain uninterrupted power supply to the consumers. For instance, GRIDCO had suffered a loss of about Rs.500 crore during 2002-

03 when there was a hydrology failure. GRIDCO had to procure power from central thermal stations at a much higher cost, which was yet to be allowed to be recovered through tariff. Therefore, the licensee was justified to recover the cost of servicing such loans through tariff.

#### **4.6 Interest on Long Term Liabilities**

- 4.6.1 In response to the objections relating to interest on long term liabilities, GRIDCO submitted that it was able to swap high cost loans in a proactive manner as a cost cutting measure and had succeeded in reducing the average interest cost of 12.34% in 2002-03 to 10.76% in 2003-04 and proposed to reduce further the same to 9.25% & 9.00% in 2004-05 & 2005-06 respectively. This was done partly through loan syndication with the help of merchant bankers and partly through direct approach. As the major portion of the finance cost related to payments to merchant bankers and were legitimate costs for raising the funds, the same should be allowed in the tariff. GRIDCO requested the Commission in the event of disallowance of the finance charges through tariff, the rebate allowed to the distribution companies for prompt payments should also be dispensed with and GRIDCO should be allowed interest at pre-swap rates.
- 4.6.2 GRIDCO further clarified that it had already approached Government of Orissa for conversion of Rs.400 crore loans into equity but the same was yet to be notified by the state government till date. In the absence of Government of Orissa Notification for conversion of the above bonds into Equity, necessary provision had to be made towards interest as per original Transfer Notification.
- 4.6.3 In response to NESCO's suggestion that the interest rate for PFC & REC loans should be taken at 8.5% as directed by the Commission, GRIDCO informed that it had approached PFC and REC separately through GoO and GoI for reduction of interest rates. Till date, PFC and REC had declined to consider such reduction in the interest rate to 8.5%. However, both the corporations had considered restructuring of the loan after which the effective rate of interest for both PFC and REC loan came down to around 10.6% with prospective effect. Based on the above, the interest cost for both PFC and REC was projected for the tariff.

#### **4.7 Depreciation**

GRIDCO stated that depreciation cost had always been allowed as a part of the transmission cost by the Commission as per the provisions of Sixth Schedule of Electricity (Supply) Act, 1948. The licensee also mentioned that calculation of depreciation was based on the method adopted by the Commission in its Order dated 28.06.03 for the year 2003-04. GRIDCO further submitted that depreciation was calculated at pre-1992 rate on book value of assets as per Govt. of Orissa Notification dtd. 29.01.03.

#### **4.8 Past Loss**

- 4.8.1 In reply to the objections raised against the proposal for pass through of past losses, GRIDCO stated that the same was based on the Audited Accounts up to 2002-03 & Management Accounts for the year 2003-04. GRIDCO sustained a cumulative loss of Rs.1787.83 crore up to 2002-03 and showed a net profit of Rs. 415.54 crore during 2003-04. As per the previous order of the Commission, this amount of profit was adjusted against the past losses up to 2002-03 and balance cumulative loss of Rs. 1372.32 crore was proposed as a pass through in the ARR for 2004-05. Further, GRIDCO stated that there had been a wide variation between the actual figures and the figures approved by the Commission in the absence of audited accounts for the preceding years. In view of the availability of the Audited Accounts up to 2002-03 and provisional accounts for 2003-04 (prepared for the purpose of Income Tax Return), all expenditure reflected in these accounts should be allowed as a pass through in the tariff.
- 4.8.2 GRIDCO had requested the Commission that the past losses of Rs.1372.32 crore might be passed through in 2004-05 tariff in one go to avoid carrying cost in the long-term interest of the consumers. To the extent the above loss would not be allowed as a pass through in revenue requirement of 2004-05, the same should be allowed for recovery in 2005-06.
- 4.8.3 GRIDCO also added that as past losses were on account of genuine revenue expenditures and well within the purview of Schedule VI requirements of the Electricity (Supply) Act, 1948, the same should be allowed to be recovered through the tariff.

#### **4.9 Miscellaneous Receipts**

- 4.9.1 Many objectors were of the view that GRIDCO should reflect the actual gain/loss from UI charges while proposing Revenue Requirement. GRIDCO, in its reply to the above objection, stated that the receipt/payment of UI charges was dependent on several unknown risk factors like the behaviour of the grid constituents, line availability, demand (peak & off-peak) of the state, hydro generation, management of grid operation and scheduling of drawl in a most efficient manner etc. Since the behaviour of these factors was unpredictable, estimation of receipt or payment of UI charges beforehand would be difficult. Therefore, GRIDCO projected zero income from UI of power. However, the licensee submitted that it would adjust any actual gain/loss due to U.I charges against the past losses.
- 4.9.2 GRIDCO appreciated the view of Sri Jayadev Mishra that GRIDCO should procure off-peak thermal power from other nearby states as and when available and with large hydro backing the same could be converted into peak power and could be sold to others at a profit. GRIDCO was of the opinion that sale of off-peak power had to be undertaken due to

constraints in transmission system, generation capacity and inter-regional evacuation lines, which were beyond its control. In view of the above, GRIDCO could not trade the entire surplus energy during peak hours only and had to trade a substantial quantum of power to other states during off-peak hours also. Therefore, the proposal of the objector to purchase off-peak power and sell equivalent quantity during peak hours only was not a practical and feasible proposition.

- 4.9.3 GRIDCO further mentioned that the revenue/profit from trading/UI charges should not form a part of ARR but should be adjusted against past losses, which were huge at present.

#### **4.10 Bulk Supply Tariff**

- 4.10.1 GRIDCO stated that it was required to operate on a commercial basis as a utility and was entitled to recover its legitimate and prudent costs through the tariff as provided under Schedule-VI of the Electricity (Supply) Act, 1948. The licensee also submitted that its proposal for revision of tariff was based entirely on the Annual Revenue Requirement (ARR) and was computed on the basis of provisions under Section 53 of OERC (Conduct of Business) Regulation, 2004.
- 4.10.2 Reacting to the contention of the objectors that the existing BST should be reduced as the performance parameters like transmission loss, transmission cost were above the benchmark fixed by the Commission, GRIDCO stated that its expenditure were genuine. All figures were based on facts and evidential documents.

#### **4.11 Transmission Tariff**

- 4.11.1 In reply to objections raised by the objector against the high rate of wheeling charges, GRIDCO clarified that the present wheeling tariff was based on postage stamp method, taking into consideration the cost of transmission and the quantum of energy wheeled by it for the distribution licensees and the CPPs.
- 4.11.2 Replying to the suggestion of the objectors to reduce the transmission tariff for CPPs, GRIDCO opined that if wheeling charges were reduced/or made zero as suggested, the revenue receipt from wheeling charge would be accordingly reduced. This would in turn lead to reduction in miscellaneous receipts. This shortfall in miscellaneous receipts would have to be compensated from the expected revenue from DISTCOs and, therefore, the burden would be shifted to the consumers. Therefore, the suggestions to reduce the wheeling charge or to make it nil for CPPs should not be considered in the interest of state consumers. Moreover, GRIDCO's network as a whole was being used by the CPPs for wheeling of power.

#### **4.12 Separation of GRIDCO's Activity**

GRIDCO clarified that in line with the Electricity Act, 2003 and the Govt. of India Notification dated 09.06.2004, it had been empowered to carry out both the functions of trading and transmission till 09.06.2005. However, the provisions of the Act would be complied by GRIDCO.

#### **4.13 Rebate**

To NESCO's request for allowing three working days for payment of monthly BST bill, GRIDCO did not agree to the same and stated that it had to pay to the generators like NTPC on presentation of the power purchase bills in order to avail the rebate. When GRIDCO was not being allowed any time concession by NTPC on this count, it would not be possible on its part to relax the existing arrangement for NESCO. Rather GRIDCO would urge the Commission to modify the existing provision so that the DISTCOs would also pay the monthly bulk supply bills on presentation to avail the rebate.

#### **4.14 Other Issues**

4.14.1 Some objectors took exception to the inability of the licensee to improve the standards of service, quality of supply and reduction in losses due to GRIDCO's mis-management and inefficiency. In response, GRIDCO stated that as no specific instances had been brought out, it preferred not to respond to such queries.

4.14.2 In reply to the objections made on the issue of non-completion of various projects, GRIDCO clarified that load projection envisaged during early 1990's did not materialise due to industrial recession in the state. Moreover, a number of industrial projects like MESCO in NESCO operational area, Tata Steel in SOUTHCO area etc. did not materialise. Therefore, adequate funds could not be raised in time to complete such projects including Meramunduli-Duburi 400 KV line, as it had to finance the counterpart fund requirement from internal sources by way of borrowing. Similarly, IB 3rd & 4th generation units of OPGC did not materialise necessitating any power evacuation through the IB-Meramundali 400KV D/C Line under execution. Some projects like Ib-Meramunuli 400 KV line and Meramundli-Mendhasal 400 KV line, were delayed mainly due to delay in getting forest clearance from Govt. of India, other associated Right of Way (RoW) problems, rampant theft of conductors and tower materials. Further, GRIDCO submitted that it invested on various transmission projects with utmost prudence and was committed to complete such projects. At present, all new industries being set up in the state have been given assurance for power supply in time.

#### 4.15 GRIDCO's Response to Queries raised by the Commission Staff in the Public Hearing

4.15.1 Replying to the query of the Commission regarding the extent of benefit to be made available to GRIDCO due to revision of tariff of CGSs (Thermal) in Eastern Region with effect from 01.04.2001 to 31.02.2004, GRIDCO stated that the total amount due to be received worked out to Rs.53.93 crore after deduction of developmental surcharge from the 50% of the billed amount for the period 1.4.2001 to 30.9.2003 and full amount from 1.10.2003 to 31.3.2004 as presented in the table below. NTPC has retained Rs.53.93 crore for the period from 1.4.2001 to 30.9.2003 as per the orders of the Hon'ble Supreme Court.

<b>Table – 7</b>		<b>(Rs. in Crore)</b>	
	<b>FSTPS</b>	<b>TSTPS</b>	<b>Total</b>
<b>Gross Refund due</b>	20.49	58.57	79.06
<b>Less Development Surcharge</b>	9.44	15.69	25.13
<b>Net Refund due</b>	11.05	42.88	53.93

4.15.2 NTPC has not refunded this amount of Rs.53.93 crore as WESCO, NESCO and SOUTHCO have not been paying the interest regularly to NTPC on Rs.400 crore bond issued by them with effect from 1.10.2000. NTPC has proposed to adjust the above amount against the outstanding interest on distribution companies if the same was not liquidated by the aforesaid DISTCOs immediately. Alternatively, the amount would be released by NTPC, provided the bond amount along with DPS upto 30-09-2001 was securitised under the tripartite agreement executed among Govt. of India, Govt. of Orissa and R.B.I. under the One-Time-Settlement (OTS) Scheme approved by G.O.I.

4.15.3 Responding to the question of the latest status of determination of tariff for CGSs (Thermal) with effect from 01-04-2004 and onwards, GRIDCO stated that the same was yet to be finalised by CERC.

4.15.4 With regard to the query as to whether NTPC had filed any tariff petition before CERC by 30-06-2004 as per the CERC Regulations and if so, the quantification of possible impact on tariff thereof, GRIDCO submitted that NTPC had filed tariff applications for TSTPS (Stage-I) and FSTPS for the period from 1.4.2004 to 31.3.2009 before CERC, which was yet to be finalised. It would not be possible to quantify the impact of above orders on tariff till the same was determined by CERC.

4.15.5 The Commission wanted to know about the treatment of saving in terms of interest charges on account of swapping of high cost loans. GRIDCO replied that it had initiated action to refinance and reschedule the high cost loans as early as 1997-98. Though achievement up to the 2002-03 was negligible, some headway was made during 2003-04 after turning

around of the licensee. The borrowings increased substantially between 1997-98 and 2002-03, particularly during 2001-02 & 2002-03, due to issue of bonds worth Rs.1102.83 crore by GoO to NTPC as per the Tripartite Agreement executed among GoI, GoO and RBI and acute hydrology failure during 2002-03. During these two years, the liabilities increased by more than Rs.1700 crore. Though the average cost of borrowings decreased due to swapping exercise undertaken by GRIDCO, the total interest burden increased from year to year. However, the same started to decline after trading of surplus power to other states which commenced in October 2003. GRIDCO had furnished necessary data from which it might be noticed that the interest liabilities charged to revenue had increased from Rs.192.97 crore in 1999-00 to Rs.299.73 crore in 2003-04. Under the present market conditions, further reduction in interest rates through swapping exercise was not feasible. Thus, the interest quantum would reduce only in case some amount of principal was repaid after payment of the entire interest liabilities during the year. Though there was saving towards interest through swapping, there has been an increase in interest liabilities in absolute terms in view of securitization of all the dues of Banks, Financial Institutions, including power purchase liabilities of generators including NTPC. That is why the licensee urged the Commission to allow the current interest liabilities in full after taking into account the realistic interest rates which could be availed by the licensee through swapping instead of 8.5% flat as ordered in the Tariff Order dated 28.06.2003 for 2003-04.

- 4.15.6 The Commission also had desired to know if there was any provision of a ceiling on interest rate as far as swapping was concerned. GRIDCO stated that it had initiated swapping exercise as early as 1997-98 to reduce the financing charges. Though Rs.308 crore approximately was raised from the open market through private placement of bonds, much headway could not be made in view of the bad financial position as well as overhang liability position of the licensee. GRIDCO could not pay the monthly bulk supply power bills of the generators for which NTPC threatened time and again to regulate power supply to the state and on some occasions imposed regulations. GRIDCO also defaulted in paying the dues of PFC, REC and LIC for which the loans availed from PFC and REC was to be re-scheduled. The situation further deteriorated due to hydrology failure in 2002-03. In view of the above, banks and financial institutions did not come forward to lend to GRIDCO. In spite of the above difficulties, consistent and continuous efforts were being made to swap the high-cost loans.
- 4.15.7 Further, in pursuance of the acceptance of the recommendations of the Ahluwalia Committee by the GoI, the outstanding dues of NTPC were securitised @ 8.5%. Moreover, interest rates turned downwards due to the favorable economic policy of GoI. In addition to the above, GRIDCO earned a profit of more than Rs.400 crore during 2003-04 due



to introduction of ABT in the eastern region with effect from 01.4.2003, trading of surplus power and one time settlement with LIC.

- 4.15.8 All the above factors helped GRIDCO in raising funds from banks and financial institutions to swap high-cost past loans. GRIDCO was able to reduce the average cost of borrowed funds from 12.34 % in 2002-03 to 10.76 % in 2003-04. The licensee was also hopeful of reducing the same to 9.5% and 9.0% by March, 2005 and March 2006 respectively. It is worth noting that a portion of the loan carried a floating rate of interest linked to PLR of the respective banks/financial institutions. Hence, a ceiling of 9% might be fixed for 2005-06 linked to current PLR. If the current PLR would increase during 2005-06, the ceiling might be enhanced accordingly. GRIDCO was in favour of putting a ceiling on the interest rate provided the same was reasonable taking into account the financial market in the country, financial position of GRIDCO and its credit rating etc.
- 4.15.9 To the Commission's query as to what extent interest and finance charges might further be reduced, GRIDCO replied that interest rate was governed by several external factors like monetary and fiscal policies of the Government of India and financial conditions of GRIDCO in particular and the power sector in general. The falling interest rate regime has come to an end and the rates have started firming up. Therefore, in the current scenario, there is very little scope for further reduction in interest rates, which has been projected in the ARR & BST applications for 2005-06.
- 4.15.10 The Commission wanted to know why there has been exponential growth of employees' expenses in GRIDCO. The licensee submitted that under the provisions of Accounting Standard 15, it was mandatory to determine the liability towards Terminal Benefits through Actuarial Valuation, which had to be carried out at least once every three years. Moreover, the aforesaid Accounting Standard being mandatory, GRIDCO had to follow the same scrupulously without any deviation. The provision towards Terminal Liabilities through Actuarial Valuation stood at Rs.178.07 crore. as on 01.04.1999. Subsequently, the Actuarial Valuation was carried out as on 31.3.2002, 31.3.2003 and 31.3.2004 and the liabilities increased from Rs.178.07 crore as on 31.03.1999 to Rs.330.34 crore as on 31.3.2002. The same increased further to Rs.409.41 crore and Rs.507.88 crore, as on 31.3.2003 and 31.3.2004 respectively, excluding Leave Encashment which was accounted for in the year of payment for which no separate fund had been created.
- 4.15.11 GRIDCO stated that the provision towards terminal benefits increased due to the following factors: First, the interest rate reduced from 12.00% in 1998-99 and 1999-00 to 11.00% in 2000-01 and 9.50% in 2001-02, 9.00 % in 2002-03 and 8.00% in 2003-04. Second, the exponential increase in employee costs was purely due to additional provisioning

under terminal benefits based on Actuarial Valuation, which was mandatory under the Accounting Standard and duly certified by the Statutory Auditors. Third, due to non-payment of above liabilities to Pension Trust, Gratuity Trust in time, which was beyond the control of GRIDCO, the Trusts could not earn interest on the above amount and the shortfall was to be made good by GRIDCO. Moreover, the Trusts had to pay the distribution companies the principal amount as on 1.4.1999 along with interest till the date of actual payment computed at the rates mentioned above which had been notified by Government of India from time to time. Accordingly, the interest for the above period as well as interest paid to the distribution companies was to be allowed as a pass through as and when determined. In addition, the RPFC was yet to pay a portion of the employees' contribution in respect of certain employees after which the actual liability of the Trusts could be known. GRIDCO mentioned that the liabilities determined as per Actuarial Valuation was a real liability of the corporation and had to be allowed as a pass through in the tariff. Fourth, the number of pensioners had increased to 5702 by 31-3-2004. Payment of pension was a statutory liability of GRIDCO and was an inherited one. It had also no control over the expenditure in view of the fact that the same was a part of the service condition of the employees.

- 4.15.12 Responding to the question that there had been little addition to the total asset base of the licensee despite huge Capital Work In Progress (CWIP), GRIDCO mentioned the following reasons:
- i) Delay in getting forest and environment clearance from GoI.
  - ii) Rampant theft of conductor and tower materials throughout the State and in particular in Western Orissa. The problem could not be addressed fully in spite of GRIDCO and the contractor agreeing to meet the cost of patrolling by the Police.
  - iii) Acute RoW problem.
  - iv) Lack of internal resources to finance the counter-part funding requirements.
  - v) Delay in disbursement of funds from GoO in the initial years of execution of projects under World Bank funding.
  - vi) Suspension of loan by World Bank for a period of 7 months from July'01 to Jan'02.
  - vii) Natural calamities like super cyclone in 1999, flood in 2001 and heavy rains during 2003-04.
- 4.15.13 Besides the above, some of the projects, even though partly completed and put to use, could not be capitalised as per the Accounting Principles. For example, Meramunduli-Mendhasal 400KV D/C Line charged at 220KV upto Chandaka, Theruvalli-Narendrapur 220KV D/C line, Narendrapur-Balugaon portion of Narendrapur – Chandaka 220 KV D/C line which have been put to use but yet to be capitalised.

- 4.15.14 Though some of the assets were put to use, no revenue could be generated as the projected industrial load did not materialise. The examples of such projects are Theruvalli-Narendrapur portion of the Theruvalli-Chandaka, 400KV DC Line and 220/132KV Grid S/S at Narendrapur etc. However, the loans taken for the same were to be serviced which had deleterious effect on other projects also.
- 4.15.15 GRIDCO also mentioned that once a project was finalised and contracts had been awarded and execution had commenced, it would be very difficult to abandon the project halfway. This would result in a much-more financial burden by way of compensation payable to the contractors etc. and the expenditure incurred till such time would also become futile. Moreover, power sector reforms was undertaken in the state for getting the loan from the World Bank, as no other lender was willing to advance funds to GRIDCO. As such, it would have been practically impossible to arrange funds from other sources if a decision would have been taken subsequently to completely abandon the project. All the above facts have contributed to little addition to the asset-base of the licensee.
- 4.15.16 The Commission had posed a question whether IDC on Work in progress would be limited to the extent in certain financial year beyond which it should be disallowed. According to the Commission, this was necessary in view of the fact that there was no drive on the part of GRIDCO to complete the projects in time and reap its benefits. GRIDCO did not agree that the IDC should be limited to the extent beyond which the same should be disallowed in view of the fact that once a loan was incurred and money was borrowed, interest had to be paid on the loan. GRIDCO maintained that whether the interest would be capitalised as IDC or to be charged to the revenue as current expenditure was a separate matter. To elaborate this part, if the IB-Meramunduli 400KV D/C line, 400KV Duburi-Meramunduli D/C Line, Theruvalli-Chandaka 220KV D/C Line, 220KV/132KV Grid S/S at Narendrapur and 400KV S/S at Duburi & Mendhasal would have been completed and commissioned in time, there would not have been enough load in view of acute industrial recession encountered in the state. In such an eventuality, the current tariff would have gone up as the interest on the above loans would have been charged to revenue, subsequent to the commissioning of the projects. In addition, depreciation cost would have also increased.
- 4.15.17 In view of the tariff orders of the recent years, it would not have been possible to pass on the above cost in tariff and would have been carried-forward as a regulatory asset along with the carrying cost. Due to non-completion of the projects in time, the IDC would be capitalised and recovered through depreciation over a much longer period of time in future reducing the pressure on tariff. However, it might be mentioned that GRIDCO was serious to complete the projects at the earliest and it

was not correct to say that there was no drive on the part of GRIDCO to complete the projects. The Commission should allow two years to complete all the projects and by that time the demand of the industrial sector as well as of the entire state would increase and the tariff could bear the cost of the current interest which would be charged to the revenue.

## **5 OBSERVATION OF STATE ADVISORY COMMITTEE (SAC)**

- 5.1 The SAC constituted under Section 87 of the Electricity Act, 2003 met for the third time on 2<sup>nd</sup> February 2005 to deliberate on the tariff related issues pending before the Commission. The discussion related to the review application pending before the Commission for the year 2003-04, the Annual Revenue Requirement and Tariff Application for the year 2004-05 & 2005-06, of all licensees. Further, application of WESCO, NESCO, and SOUTHCO for recognition of regulatory assets for the past losses from 1999-00 to 2002-03, application for special tariff for Power Intensive Industries, implementation of Availability Based Tariff were also discussed.
- 5.1.1 Members in general, were concerned about the consumer services offered by the licensees and wanted them to be more consumer friendly through awareness campaign, interaction with consumer groups and licensee's staff, training of lower level functionaries of licensees for handling consumer grievances. Other suggestions included simplification of the procedures for tariff filing for larger participation of objectors including supply of application free of cost, publication of gist of notices in local languages.
- 5.1.2 Members offered their views on a host of issues like cross subsidy in tariff, bench-marking of T&D loss, correctness of data filing, improvement in metering, accuracy in load forecast, penalty for non-performance by the employees, linking tariff to performance, payment of interest on security deposit, additional security deposit, increase in AT&C Loss on account of rural electrification, determination of peak and off-peak tariff.
- 5.1.3 In addition, views were expressed regarding segregation of past losses and allowing only uncontrollable losses as pass through in tariff, benefit from trading of power & UI charges to be set off against past losses and the issue of revisiting past losses on receipt of audit reports.
- 5.1.4 Early clearance of government dues, revisiting of distribution loss, collection efficiency, AT&C loss were also some of the major issues deliberated. Minutes of the meeting among the SAC members have been circulated and the Commission will give due consideration to these views expressed by the Hon'ble members in the tariff order.

## **6 COMMISSION'S OBSERVATION AND ANALYSIS OF LICENSEE'S PROPOSAL**

On detailed scrutiny and examination of the Annual Revenue Requirement and Bulk Supply Tariff Applications for 2005-06, the written and oral submissions of the objectors and the views of the members of the State Advisory Committee, the Commission has passed the order as enunciated in the subsequent paragraphs.

### **6.1 Quantum of Power Purchase**

6.1.1 GRIDCO as Bulk Supply and Transmission Licensee procures power from the generating stations inside and outside the state to meet the requirements of the consumers of the State. The licensee supplies power through the Distribution Companies as well as exports the surplus power to different regions of the country. In addition, GRIDCO also provides emergency supply to the Captive Power Plants (CPPs) connected to its system at the time of emergency. Introduction of Availability Based Tariff (ABT) for the Central Generating Stations (CGSs) has brought about qualitative improvement in the power system operation throughout the country. Further, the enactment of the Electricity Act, 2003 opened new vista for Open Access customers, to utilise both the State as well as the interstate transmission systems. Currently GRIDCO, after meeting the total demand for power in the state, exports surplus power during peak and off peak hours through the Central Transmission System, taking advantage of the State's high hydro generation and strategic location of inter-connections with other regions of the country.

6.1.2 The estimate for purchase of power for a financial year is worked out in accordance with the following principles:

*"The quantum of power purchase for the ensuing financial year shall be estimated on the basis of actual purchase made during the previous financial year(s), actuals to the extent available for the current year and any projections for the balance period of the current year with appropriate adjustments for any abnormal variations during the period. The licensee through appropriate documentation shall justify all the abnormal deviations. This quantity will be evaluated at the price based on the power purchase agreements, bulk supply agreements etc. consented by the Commission."*

6.1.3 The Distribution Companies have furnished projections for 2005-06 for drawl of power from GRIDCO and the latter has prepared the estimate for the same. GRIDCO has projected its power drawl after taking into account requirements of (i) distribution companies (ii) CPPs and (iii) export of power outside the state.

6.1.4 GRIDCO as well as Distcos have submitted the ARR for 2005-06 to the Commission for approval. The quantum of energy drawl by DISTCOs

from GRIDCO has been projected differently both by GRIDCO and DISTCOs in their respective filings. The details are presented in table-10 below.

- 6.1.5 The Commission examined the figures filed by GRIDCO and DISTCOs in the ARR for 2005-06 in respect of drawl of power by DISTCOs, and approves the quantum of drawl of power as proposed by NESCO, WESCO & SOUTHCO in their ARR for 2005-06 for the respective companies.
- 6.1.6 As far as CESCO is concerned, there has been continuous decline in drawl of energy in the past years attributable to switch over of Nava Bharat Alloys to its own CPP, closure of Oswal Industries Ltd. and Fertilizer Corporation of India and non-addition of EHT consumers during the period under review. The estimated purchase of power 2004-05 in respect of CESCO was based on the current year's drawl up to the month of December, 2004 and projection for the balance part of the current financial year. CESCO has projected annual rise in purchase @ 60 MU per annum for the succeeding financial year in its ARR of 2005-06. Since the figure for 2004-05 is expected to be near the actual, the Commission estimates the requirement of power for the financial year 2005-06 by escalating the power purchase figure by 60 MU over the approved figure of 2004-05.
- 6.1.7 Drawl from GRIDCO also includes the units lost on account of EHT transmission, as the DISTCOs receive metered power supply at HT & EHT. For CPPs, the drawal as projected by GRIDCO has been considered for the year 2005-06. The Commission has worked out the surplus availability from different sources after fully meeting the State's demand and considers the balance amount of power for the purpose of export by GRIDCO during 2005-06. These have been projected in the table below:

**Table : 8**  
**Purchase of Power by GRIDCO for 2005-06**

(Figures in MU)

<b>Name of the DISTCOs</b>	<b>DISTCOS' Proposal in RST 2004-05</b>	<b>Commission's Approval 2004-05</b>	<b>GRIDCO's proposal in ARR 2005-06</b>	<b>DISTCOS' Proposal in RST 2005-06</b>	<b>Commission's Approval 2005-06</b>
CESCO	4140.00	3872.88	4210.00	4200.00	3930.00
NESCO	2778.58	2955.05	2850.00	3308.14	3308.14
WESCO	4028.00	4028.60	3900.00	4150.00	4150.00
SOUTHCO	1630.00	1613.31	1700.00	1800.00	1800.00
<b>TOTAL DISTCOs</b>	<b>12,576.58</b>	<b>12,469.84</b>	<b>12,660.00</b>	<b>13,458.14</b>	<b>13,188.14</b>
CPP		20.00	10.00		10.00
Export		4301.65	3300.00		2808.28

<b>TOTAL SALE</b>		<b>16791.48</b>	<b>15,970.00</b>		<b>16,006.42</b>
Transmission loss for DISTCOs @ (4 % on DISTCOs drawal)		519.58	527.50		549.50
Transmission loss for export		84.10			84.10
<b>Total purchase</b>		<b>17395.16</b>	<b>16,497.50</b>		<b>16,640.02</b>

## 6.2 Determination of Simultaneous Maximum Demand (SMD) in MVA

BST contains a component of demand charge, which is calculated on the basis of average system demand of the distribution companies. The Commission in the last BST order dtd. 26.02.2005 had approved the SMD at 2066.18 MVA for the GRIDCO system taking into account the actual SMD figures available upto December, 2004 for 2004-05, and is of the view that this figure has hardly undergone any change in the recent past. Therefore, the Commission retains the SMD figure at 2066.18 MVA for 2005-06. The proposed SMD by GRIDCO and DISTCOs along with the approved figures for 2005-06 are presented in the table below:

**Table : 9**  
**Demand in MVA**

<b>DISTCO</b>	<b>Proposal by DISTCO in RST</b>	<b>Proposal by GRIDCO in ARR</b>	<b>Commission Approval for 2004-05</b>	<b>Commission Approval for 2005-06</b>
CESCO	717.50	700.00	671.86	671.86
NESCO	525.00	450.00	467.12	467.12
WESCO	670.00	630.00	651.21	651.21
SOUTHCO	307.50	290.00	275.99	275.99
<b>TOTAL</b>	<b>2,220.00</b>	<b>2,070.00</b>	<b>2,066.18</b>	<b>2,066.18</b>

## 6.3 Computation of Transmission Loss

6.3.1 GRIDCO in para 1.2 of its ARR Application for 2005-06 had submitted that the actual transmission loss for the first six months of the current year worked out to 4%, adopting gross method of calculation (summarised in DF-1). Further, GRIDCO had also stated that the transmission loss was dependent on the voltage of transmission, cross section of the conductor, length of the transmission lines, number of lines and sub-stations, loading of lines and sub-stations, export/import in tie lines etc.

6.3.2 The Commission in its earlier BST orders has categorically reiterated that the loss was determined on the basis of “ as the system operates” and the total loss computed in GRIDCO’s transmission system was apportioned to all users of the system. For the period from April, 2004 to September, 2004, of the total transmission loss of 310.94 MU, loss in transmission on

account of wheeling to outside the state through EREB is 42.05 MU. The estimated loss on account of export of power during the year 2005-06 works out to 84.10 MU.

- 6.3.3 The apportionment of loss on all the users of the GRIDCO's transmission system based on the consumption figures of the first six months of 2004-05 is furnished in the table below:

**Table : 10**  
**Actual Transmission Loss from April, 04 to September, 04**

	Source	Gross Input (MU)	Gross Output (MU)	Proportionate Loss sharing (MU)	Proportionate Loss sharing (%)
	<b>State Station</b>				
I	Hirakud	512.64			
ii	Balimela	759.52			
iii	Rengali	469.70			
iv	Upper Kolab	477.39			
v	Indravati	844.21			
<b>A</b>	<b>OHPC</b>	3063.46			
<b>B</b>	<b>Machhkund</b>	181.09			
<b>C</b>	<b>OPGC</b>	262.96			
<b>D</b>	<b>TTPS</b>	1388.40			
	<b>Total State Gen. Input</b>	<b>4895.91</b>			
<b>2</b>	<b>CPPs</b>				
I	ICCL	253.99	213.80	8.91	0.11%
ii	NALCO	402.70	94.13	3.92	0.05%
iii	INDAL	0.08		0.00	0.00%
iv	RSP	29.84		0.00	0.00%
v	NINL	3.73			
	<b>Total CPP</b>	<b>690.34</b>	<b>307.93</b>	12.84	0.17%
<b>3</b>	<b>EREB</b>			0.00	0.00%
I	Meramandali –TSTPP	971.43	0.00	0.00	0.00%
ii	Rengali –TSTPP	0.00	285.24	11.89	0.15%
iii	TTPS - TSTPP	141.07	11.11	0.46	0.01%
iv	Rourkela-Tarkera	222.46	43.13	1.80	0.02%
v	Rengali (SY) - Rengali ( PG )	560.22	2.49	0.10	0.00%
vi	Jeypore-Jaynagar	8.82	606.92	25.30	0.33%
vii	<b>Rengali-Kolaghat</b>			0.00	0.00%
viii	<b>Indravati PH-Indravati PG</b>			0.00	0.00%
ix	<b>Rengal - Rengali (PG)</b>			0.00	0.00%
x	Joda – Jamshedpur	148.98	19.10	0.80	0.01%
xi	Joda – Ramchandrapur	129.36	6.39	0.27	0.00%
xii	Joda - Kenduposi-Joda	0.00	34.10	1.42	0.02%
xiii	Rourkela – Goelkera			0.00	0.00%



xv	<b>Budhipadar-Korba</b>			0.00	0.00%
	<b>Total EREB</b>	<b>2182.34</b>	<b>1008.480</b>	42.05	0.54%
	Balimela-Upper Sileru		0	0.00	0.00%
	Export to APTRANSCO		0	0.00	0.00%
	<b>Distco</b>		<b>6141.24</b>	256.05	3.30%
	<b>Grand Total</b>	<b>7768.59</b>	<b>7457.65</b>	310.94	4.00%
	Loss (MU)	310.94			
	<b>Loss (%)</b>	<b>4.00</b>			

6.3.4 Therefore, the cost of power for the year 2005-06 has been determined incorporating 84 MU lost on account of export to EREB.

6.3.5 The percentage of transmission loss has been retained at 4% for 2005-06.

#### 6.4 Purchase of Power from Different Generating Stations

#### 6.5 State Hydro

6.5.1 The installed capacity of various Hydro Stations owned by Orissa Hydro Power Corporation (OHPC) is 1896 MW as on 1<sup>st</sup> of April 2004 including Orissa share of Machkund. The details of drawl approved by the Commission for 2004-05 and the projections made by OHPC for 2005-06 are presented in the following table.

**Table : 11**  
**Hydro Drawl and Projections For 2005-06**

Sl. No.	Name of the HE Project	Installed Capacity (MW)	Design Energy (MU)	Commission's Approval for 04-05	Proposed Drawl by GRIDCO for 2005-06
1	Hirakud (Burla & Chiplima)	331.5	1174.00	808.27	1153.35
2.	Balimela	360	1183.00	1501.43	1188.00
3.	Rengali	250	525.00	747.47	751.41
4.	Upper Kolab	320	832.00	881.68	542.52
	<b>Total</b>		3714.00	3936.87	3635.28
5.	UIHEP	600	1962.00	2742.13	1942.38
	<b>Total Hydro</b>		<b>5676.00</b>	<b>6679.00</b>	<b>5577.66</b>

6.5.2 In accordance with Section 61(a) of the Electricity Act, 2003, the Commission is to be guided by the principles and methodologies specified by the CERC for determination of tariff applicable to generating companies. This has been suitably incorporated in the OERC (Terms and Conditions for determination of Tariff) Regulation, 2004. As per CERC regulation, "primary energy means the quantum of energy generated upto

*the design energy on at par basis at the generating stations".* Auxiliary energy consumption for surface hydro Electric Power Generating Station with static excitation system is to be determined at 0.5% of energy generated and transformation loss from generation voltage to transmission voltage is to be calculated at 0.5% of energy generated. Accordingly, energy sent out from the generating stations in respect of OHPC should be determined deducting 1% on gross generation treating 0.5% towards auxiliary consumption and 0.5% towards transmission loss.

- 6.5.3 As indicated in the above table, the annual energy generated by OHPC old stations in a year of normal hydrology is 3714.00 MU. After deduction of auxiliary consumption and transformation loss energy sent out to GRIDCO comes to 3676.86 MU. This was approved by the Commission in its order dated 09.07.2001 in Case No.15/2000. In case of UIHEP, the design energy is 1962.00 MU. After deduction of auxiliary consumption and transformation loss, energy sent out to GRIDCO comes to 1942.38 MU. The Commission had approved the same quantity as the net energy for the year 2002-03.
- 6.5.4 The tentative monthly generation programme has been furnished by different units of OHPC considering the inflow trends from April 2005 to March 2006. The same has been furnished by OHPC to GRIDCO in regard to generation during 2005-06. GRIDCO has accepted the proposal furnished by OHPC and projects a drawl of 3635.28 MU from the old stations during the year 2005-06. The annual design energy has been taken into consideration for the year 2005-06 in case of Upper Indravati Hydro Electric Project.
- 6.5.5 While approving the quantum of energy drawl from different stations of OHPC for 2004-05, the Commission had considered the actual generation of different generating stations up to 10<sup>th</sup> February, 2005 and the balance generation scheduled up to 31.03.2005 as per projections made by OHPC. The detailed generation data and the reservoir level of various stations of OHPC as on 11.02.2005 and the corresponding level on the same day of the previous year provided sufficient data to arrive at the drawl by GRIDCO during 2004-05 from hydro sources.
- 6.5.6 As indicated earlier, the design energy of OHPC old stations in a year of normal hydrology being 3676.86 MU, there is absolutely no justification for adopting a figure lower than that for the ensuing year. As such, the Commission considers it appropriate to accept a figure of 3676.86 MU as energy available from these stations for the year 2005-06. As far as UIHEP is concerned the Commission approves the energy availability at 1942.38 MU.
- 6.5.7 **Machkund :** This hydro power station is a joint venture of Government of Orissa and Andhra Pradesh with an installed capacity of 114.5 MW.

GRIDCO has projected drawl of 265.00 MU corresponding to 34.2 MW firm power for 2005-06.

6.5.8 GRIDCO had drawn 320 MU during 2004-05 as per Commission's approval. The Commission approves 320 MU to be drawn from this station during 2005-06 based on the drawl during the previous year.

6.5.9 GRIDCO's proposal and the Commission's approval for 2005-06 for various stations of OHPC are given in the table below.

**Table : 12**  
**Drawl From Hydro Stations (2005-06)**

Source of Generation	GRIDCO Proposal (2005-06)	Commission's Approval (2005-06)
OHPC (Old stations)	3635.28	3676.86
Upper Indravati	1942.38	1942.38
Machkund	265.00	320.00
<b>Total Hydro</b>	<b>5842.66</b>	<b>5939.24</b>

6.5.10 **Talcher Thermal Power Station (TTPS):** This 460 MW generating station is owned and operated by NTPC, but its generation is fully dedicated to the State. GRIDCO had submitted in the ARR application that the CERC in its order dtd.18.06.02 had approved PLF in respect of this station at 75% and auxiliary consumption at 11% for 2003-04. NTPC has not declared any unit to be under R&M during 2005-06 implying thereby that all Units shall be fully operational. GRIDCO had proposed the net drawl at 2688.92 MU for 2005-06. Taking the CERC guidelines into consideration, the Commission approves net drawl of 2689.76 MU from TTPS for the year 2005-06.

6.5.11 **Ib Thermal (OPGC):** Orissa Power Generation Corporation (OPGC) owns the thermal generating stations at Ib with an installed capacity of 2x210 MW.

6.5.12 OPGC in its generation plan for 2005-06 had projected a target generation of 3275.00 MU with auxiliary consumption of 327.50 MU thereby showing net availability of 2947.50 MU at PLF of 89%. Accordingly, GRIDCO has proposed to draw 2947.50 MU from OPGC during the year considering 10% auxiliary consumption.

6.5.13 The PPA envisages auxiliary consumption at 9.5%. Hence, assuming auxiliary consumption @ 9.5% as per the provisions of the PPA, the Commission approves the proposal of GRIDCO for a net drawl of 2963.41 MU at 89% PLF as against 2947.50 MU proposed by GRIDCO.

6.5.14 **Captive Power Plants (CPPs) :** GRIDCO had submitted in its application that power purchased from the captive power plants was not firm in

nature and was supplied to the system as and when available. The actual availability from the CPPs varied widely from the quantum approved by the Commission in the past years. NALCO & ICCL have furnished their generation plan to GRIDCO for 2005-06. Based on the aforesaid generation plan NALCO & ICCL intimated that they could inject 514 MU & 69.5 MU respectively to Orissa grid during the year 2005-06. The injection from Nilachal Ispat Nigam Ltd., RSP & INDAL are very less. Taking the above factor into Consideration, the total drawl from CPPs as proposed by GRIDCO is 685 MU for 2005-06.

- 6.5.15 Considering the past trend and also the relatively low cost of power, GRIDCO should maximise the drawl from the CPPs. The Commission scrutinised the proposal of GRIDCO and approves drawl of power to the extent of 685 MU from CPPs for 2005-06.

## 6.6 Power Purchase from Central Generating Stations

- 6.6.1 **Transmission Loss in Central Transmission System:** The constituents of power utilities of the eastern region share the losses occurring in the central transmission system. GRIDCO in its filing for 2005-06, had stated that the scheduled system loss for ER system varied from 2.3% to 3.4% for the period from April,04 to October,04. So GRIDCO had considered the Central sector system loss at 3.3% in the ARR for 2005-06. The Commission has examined the proposal submitted by GRIDCO and on scrutiny, it is observed that the average Transmission Loss in this regard works out to 2.98% in 2003-04 and 2.94% upto December, 2004 in 2004-05. The Commission has already approved the central transmission loss of 2.94% for the year 2004-05. As ABT system is in operation and Loss has been calculated by ERLDC on weekly basis, the Commission retains the Central Sector loss at 2.94% for 2005-06 i.e. at the same level as 2004-05.
- 6.6.2 **Central Generating Stations:** Orissa has been allocated shares in all the NTPC stations located in the Eastern Region as well as from the Chukha Hydro Electric Project in Bhutan. The entitlement from these stations is based on share allocation made by the CEA from time to time. The energy accounting from these stations is done on a monthly basis as per the ABT based Regional Energy Account (REA) prepared by the Eastern Regional Electricity Board. Since ABT has been implemented from 01.04.2003 in the Eastern Region, GRIDCO proposed to draw the entire share from ER stations of NTPC considering generation at 80% PLF. The details of GRIDCO's proposal to draw power from NTPC's ER stations in 2005-06 are furnished in a table below:

**Table : 13**  
**Energy Sent Out and Drawl For 2005-06**

Central Thermal Stations	Availability at 80% PLF (MU)	Share of GRIDCO (%)	GRIDCO Share excluding Central loss 3.3% (MU)	GRIDCO proposed drawal (MU)
TSTPS	6448.93	31.90	1989.32	1989.32
FSTPS	10270.00	15.37	1526.41	1526.41
KhSTPS	5265.00	11.43	581.93	581.93
TOTAL	21983.93		4097.66	4097.66

6.6.3 The availability from the Central Sector Thermal Generating Stations at 80% PLF would entitle them for recovery of full capacity charge as per CERC notification. That is why the energy drawl from the above central sector stations has been estimated taking 80% PLF for the ensuing financial year. The Commission considers the Central Sector transmission loss @ 2.94% for the above drawl as stated earlier. Further, CEA vide its letter no. 3116 dt.29.09.04 has revised the share allocation of power from CGSs in the Eastern Region and Chukka Hydro Electric Power effective from 1<sup>st</sup> October, 2004. With the above consideration, the details of GRIDCO's drawl from CGSs, as approved by the Commission, are given in the table below.

**Table : 14**  
**Drawl From Central Generating Stations(2005-06)**

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons (%)	Estimate PLF (%)	Net Availability	GRIDCO Share (%)	GRIDCO Share (MU)	Share Excluding Central Sector Transmission Loss of 2.94% (MU)	Comm. Approval for 2005-06 (MU)
TSTPS	1000	7.50	80.00	6482.40	31.90	2067.89	2007.17	<b>2007.17</b>
FSTPS	1600	7.56	80.00	10365.11	15.37	1593.12	1546.34	<b>1546.34</b>
KhSTPS	840	9.00	80.00	5356.92	11.43	612.30	594.32	<b>594.32</b>
TOTAL				22204.43		4273.30	4147.82	<b>4147.82</b>

6.6.4 **Chukha:** Orissa has been assigned share of 15.19% in 270 MW Chukha Hydro Power Station, Bhutan. The Orissa quota on an average works out to 41 MW. Drawl from Chukha has been projected by GRIDCO at 235.75 MU for 2005-06.

6.6.5 In absence of the Load Generation Balance Report (LGBR) of the Eastern Region for the year 2005-06, the actual receipt of power at Birpara for the

period from April, 2004 to January, 2005 and for 2/04 to 3/04 has been considered for projecting Chukha drawl by GRIDCO for 2005-06. The total GRIDCO's share for 2005-06 comes to 214.79 MU after deducting the Central Sector transmission loss @ 2.94%. Hence, the Commission adheres to the share estimates and approves 214.79 MU in respect of drawl from Chukha Hydro Station for 2005-06.

- 6.6.6 A summary of GRIDCO's proposal for purchase of power from different generating stations and the Commission's approved quantum of purchase for 2005-06 is given in the table below:

**Table : 15**  
**Quantum of Power Purchase from Various Sources for 2005-06**  
**(Figures in MU)**

Sources of Purchase	GRIDCO's Proposal	Commission's approval
<b>OHPC (OLD)</b>	3635.28	3676.86
Machhkund	265.00	320.00
Indravati	1942.38	1942.38
<b>TOTAL HYDRO</b>	<b>5842.66</b>	<b>5939.24</b>
TTPS	2688.92	2689.76
OPGC	2947.50	2963.41
CPP	685.00	685.00
<b>TOTAL ORISSA</b>	<b>12,164.08</b>	<b>12277.41</b>
Chukha	235.75	214.79
TSTPS	1989.32	2007.17
FSTPS	1526.41	1546.34
KSTPS	581.93	594.32
<b>TOTAL EREB</b>	<b>4333.41</b>	<b>4362.61</b>
<b>TOTAL GRIDCO PURCHASE</b>	<b>16,497.50</b>	<b>16640.02</b>

## 6.7 Power Procurement Cost

- 6.7.1 Some of the Objectors had provided different cost estimates relating to the proposed power procurement by GRIDCO during 2005-06. Some had alleged that the power purchase cost proposed by GRIDCO was exorbitant and station-wise cost computation needed scrutiny. The Objectors had requested the Commission to explore the possibility of reduction in power purchase cost for 2005-06. GRIDCO in its reply to the Objectors had maintained that the cost estimation provided by the objectors was not based on evidential documents. The licensee stated that cost assessment

with regard to power procurement was based on the proposed tariff submitted by the hydro stations, Commissions' order, PPAs, agreement with CPPs etc.

- 6.7.2 The Commission is of the view that Section-86 of the Electricity Act, 2003, among other things, provides for determination of the tariff by the Commission for generation. Further, under Section-61 of the Electricity Act, 2003, the OERC shall be guided by the principles and methodologies specified by the CERC for determination of tariff applicable to generating companies.
- 6.7.3 In the meanwhile, GRIDCO had submitted the PPA for Rengali Power Station and Commission has approved the same with certain observations in conformity with CERC Regulations. PPAs in respect of other old stations of OHPC, namely Hirakud, Upper Kolab and Balimela shall be framed following the principles enunciated in PPA of Rengali Power Station.
- 6.7.4 Further, OHPC had submitted the application for approval of its Annual Revenue Requirement and Tariff for the financial year 2004-05 in terms of Section-62, 64 and 86 of the Electricity Act, 2003. The Commission registered a case and after following due procedures, a public hearing was conducted on 28-02-05 in the matter. While calculating the tariff of OHPC for 2005-06 due recognition was given to the points raised by the objectors during the hearing.
- 6.7.5 The tariff calculation in respect of these stations has been made by OHPC taking into account the design energy as approved by the Commission in its order dt.15.7.2000 and the same has been submitted by GRIDCO for the purpose of tariff determination. Pending decision on establishment of design energy and finalization of two-part tariff, the Commission has determined tariff on provisional basis for the purpose of determination of revenue requirement for 2005-06.
- 6.7.6 **OHPC:** GRIDCO had submitted that the pooled tariff calculated by OHPC for old stations namely, Balimela, Upper Kolab, Rengali and Hirakud was 31.41 paise/unit (TRT-10) with pass through of electricity duty on auxiliary consumption. Subsequently, GRIDCO had submitted revised calculation of tariff at 30.46 paise/unit for 2005-06.
- 6.7.7 The revised rate of 30.46 paise/unit as proposed by GRIDCO for the year 2005-06 has been duly examined and the Commission approves the tariff on the following considerations:
- O&M Expenses are taken as per actuals for the year 2003-04 and annual escalation of 4% allowed for 2005-06.
- (i) Depreciation is linked to loan repayment.
  - (ii) ROE taken @ 12% for new projects only commissioned after 01.04.1996 (as per Govt. of Orissa notification dated 29.01.2003).

- 6.7.8 On the basis of the above parameters, the total annual revenue for the year 2005-06 in respect of old OHPC stations comes to Rs.112.02 crore computed at the rate of 30.47 paise/unit for 3676.86 MU. This is based on the annual generation of 3714 MU.
- 6.7.9 Energy generated in excess of the design energy during 2005-06 will be treated as secondary energy and the energy sent out (ESO) i.e. secondary energy less auxiliary consumption and transmission loss shall be priced @ 30.47 p/u.

## **6.8 Upper Indravati Hydro Electric Project**

- 6.8.1 Some objectors had raised queries about delay in approval of the project cost of UIHEP by CEA, despite the Commission's order in case no 23/2000 dt.12.02.2002. The correspondence between OHPC and GRIDCO shows that the approval is yet to be obtained from CEA. The Commission urges OHPC to expedite the matter and get the approval for final project cost from CEA. Till the matter comes to final conclusion, the tariff may be treated as provisional.
- 6.8.2 GRIDCO had proposed a rate of 64.82 paise/unit in respect of UIHEP with pass through of ED on auxiliary consumption of power. The detailed calculation of the proposed rate of 64.82 paise/unit has been furnished in form TRT-11 of ARR application of GRIDCO for 2005-06.
- 6.8.3 The calculation submitted by GRIDCO for the year 2005-06 was examined and found that the rate of 64.82 paise/unit needed certain modifications as under:
- (i) O&M escalation factor was not considered for calculating O&M expenses for 2004-05.
  - (ii) Annual escalation @ 5% was charged for 2005-06.
  - (iii) Besides, OHPC had submitted that the major repairs of rotor poles of all four units is to be taken up at a cost of Rs.16 crore of which 50% of the repair cost i.e. Rs.8 crore is to be passed in the tariff of 2005-06. GRIDCO had submitted the revised calculation of tariff for UIHEP on 06.01.2005, which indicated a rate of 61.88 paise/unit excluding the repair expenses of the rotor poles and of 66 paise/unit including the repair expenses.
- 6.8.4 For the purpose of computation of annual fixed charges as approved by the CERC, the following elements are taken into consideration:
- (a) Interest on loan capital
  - (b) Depreciation including Advance Against Depreciation
  - (c) Return on Equity
  - (d) Operation and Maintenance Expenses
  - (e) Interest on working capital
- 6.8.5 The Commission had examined the proposals of GRIDCO and approved the repair expenses to be spread over a period of 3 years instead of 2



years as proposed by GRIDCO. The repair cost of Rs.5 crore is thus passed on to tariff of 2005-06 apart from the usual annual escalation of 4% on O&M expenses.

- 6.8.6 As per CERC Regulations, a two part tariff structure for sale of electricity from this hydro generating station shall be followed for 2005-06. The two part tariff shall comprise of recovery of (1) **annual capacity charge** and (2) **primary energy charges**. The extract of the CERC Regulation is reproduced below:

*“37(i) The capacity charge shall be computed in accordance with the following formula:*

*Capacity charges = (Annual Fixed Charges – Primary Energy Charge)*

*Recovery through primary energy charge shall not be more than annual fixed charge.*

*39(2) Rate of primary energy for all hydro electric power generating stations except for pumped storage generating stations shall be equal to the lowest variable charges of the Central Sector Thermal Power Generating Station of the concerned region. The primary energy charge shall be computed based on the primary energy rate and saleable energy of the station.”*

- 6.8.7 The Commission adopted the parameters as applicable to OHPC old stations for calculation of tariff of UIHEP. Accordingly, the total fixed cost comes to Rs.125.44 crore taking annual generation of 1962.00 MU for the year 2005-06.
- 6.8.8 In case of UIHEP, the annual fixed cost for 2005-06 comes to Rs.125.44 crore. Taking the lowest variable charges of the Central Sector Thermal Station i.e. TSTPS which is 46.38 paise/unit as the primary energy charge the total amount recoverable through energy charges on design energy of 1942.38 MU comes to Rs.90.09 crore during the year. The balance of Rs.35.35 crore is to be recovered as annual capacity charges in the manner prescribed in CERC Regulations dated 26.03.2004.
- 6.8.9 In the event of favourable monsoon and high reservoir levels, if UIHEP will generate excess energy over and above the design energy, the extra energy may be considered as secondary energy and as per CERC Regulations, it may be priced at the same rate as applicable to the primary energy. The Commission directs the same principle to be followed during 2004-05 and 2005-06 for pricing the secondary energy so generated. This order of the Commission supersedes the order at para 6.8.5 dated 26.02.2005 in Case No.146/2004 in the matter of BST application of GRIDCO, wherein the secondary energy charges were to be calculated @ 62.86 paise/unit but the same stands revised to 46.38 paise/unit for the year 2004-05 and 2005-06.

## 6.9 Machhkund

6.9.1 OHPC had furnished a rate @17.43 paise/unit for Machhkund Power Station for the year 2004-05 inclusive of the arrear O&M charges based on energy drawl of 320 MU. On scrutiny of the calculation, the following observations are made:

- I. Orissa share of actual O&M expenditure during 2003-04 was Rs.2.83 crore instead of Rs.3.07 crore as indicated in the tariff calculation.
- II. OHPC has claimed O&M escalation @5% per year instead of 4% as per CERC norms.

6.9.2 The Commission has taken into consideration the net share payable by Orissa towards O&M expenses for the year 2003-04 (actual) to the tune of Rs.2.83 crore. Allowing an escalation of 4% per annum for the year 2004-05 and subsequently for 2005-06, O&M expenses comes to Rs.3.06 crore and the rate per unit comes to 17.18 paise for the year 2005-06. Accordingly, the procurement cost works out to Rs.5.50 crore for an approved energy drawl of 320 MU.

## 6.10 Talcher Thermal Power Station (TTPS)

6.10.1 The determination of tariff for TTPS depends on CERC terms and conditions of tariff, 2004. However, the CERC is yet to finalize the per unit cost of power available from different CGSs. Hence, the tariff determination in case of CGSs effective from 01.04.2004 has been computed on the basis of GRIDCO's filing and the same shall be considered provisional till CERC's Order in this respect is made available.

6.10.2 **Fixed Cost:** GRIDCO has claimed fixed cost of Rs.228.25 crore for 2005-06. The CERC has already approved the TTPS tariff (Petition No.62/2000 dated 5<sup>th</sup> November, 2003) in which the total fixed cost has been determined as Rs.159.28 crore for the year 2003-04.

6.10.3 The R&M expenditure upto October, 2003 allowed by the CERC is Rs.437 crore. As the matter of TTPS tariff comes under the purview of the CERC, the Commission will be guided by the fixed cost as approved by CERC. Thus, the Commission accepts the fixed cost as Rs.159.28 crore for 2005-06 until amended by CERC.

6.10.4 In the CERC's order, it has been stated that for the purpose of computation of PLF, the period of unit(s) under R&M should not be reckoned and related fixed charges for the unit(s) under R&M should not be paid. Further, the method of computation of fixed charges and incentive should be in accordance with CERC notification dated 26.03.2001. Based on the CERC order, the Commission approves the fixed charges of Rs.159.28 crore for the year 2005-06 with all the units under operation.

6.10.5 The Commission had allowed Rs.126.35 crore towards R&M expenditure in the tariff order dated 19.04.2002 for the financial years 2000-01 and 2001-02. As per the existing MOU, GRIDCO is liable to pay additional fixed cost due to R&M @ Rs.1.7 lakh/month/crore of investment. The actual expenditure on account of R&M would be considered after receipt of due approval from CERC. Taking Rs.126.35 crore as R&M capitalisation, the Commission approves provisionally Rs.25.78 crore of additional capital cost subject to final order of CERC. As such, the total fixed cost for TTPS for the year 2005-06 comes to Rs.185.06 crore.

#### **6.11 Variable Charges**

CERC had approved 48.37 paise/unit as variable charge in the TTPS tariff for the years 2000-01, 2001-02, 2002-03, and 2003-04. The same rate as proposed by GRIDCO for 2004-05 has been accepted by the Commission. GRIDCO proposes FPA at 4.90 paise/unit considering 10% escalation over the average rate of 4.45 paise/unit. The Commission approves FPA rate of 4.90 paise/unit as proposed by GRIDCO for 2005-06.

#### **6.12 Year-end Charges**

GRIDCO had submitted that the year-end charges of TTPS included cess on water, water charges, electricity duty and income tax. GRIDCO in its BST application estimated the year-end charges aggregating Rs.25.81 crore for 2005-06 which included Rs.20.03 crore towards Income Tax. The Commission on examination of the claims has observed that GRIDCO has received credit bills against Income Tax paid to the tune of Rs.17.42 crore during 2002-03 raised by NTPC, but has not adjusted or considered the same while calculating tariff for 2004-05 and 2005-06. It is not prudent on the part of GRIDCO to claim Rs.20.03 crore on account of Income Tax without considering the credit bills. Hence, this amount is not approved in the ARR of 2005-06 and the same may be passed on at actual through the tariff as and when the relevant documents would be produced before the Commission. The following projections as year-end adjustments for 2005-06 have been accepted by the Commission. (i) Electricity duty of Rs.6.65 crore calculated @ 20 paise/unit on auxiliary consumption on normative level of generation and (ii) Income tax as nil. The year-end charges approved for 2005-06 come to Rs.6.65 crore as against Rs.25.81 crore, proposed by GRIDCO in its application.

#### **6.13 Orissa Power Generation Corporation (OPGC)**

6.13.1 OPGC did not file its ARR with OERC for the year 2004-05 and 2005-06. Recently while disposing of the OJC No.13338 of 2001, the Hon'ble High Court of Orissa has held that PPA of OPGC is to be approved by the Commission. Accordingly, the Commission has initiated appropriate action. However, till it is finalised, the per unit rate for OPGC has been provisionally accepted based on GRIDCO's filing of the cost components of OPGC station for 2005-06 subject to revision at a later date, if deemed necessary.

- 6.13.2 **Fixed Cost:** The fixed cost of OPGC for 2004-05 as accepted by GRIDCO was Rs.225.39 crore. GRIDCO has proposed the same amount of Rs.225.39 crore as annual fixed cost for 2005-06 (DF-13). The Commission approves the fixed cost at Rs.229.31 crore for the year 2005-06, after taking into account escalation of O&M expenses during the year.
- 6.13.3 **Variable Charges:** GRIDCO has proposed variable charges in respect of Ib Thermal Power Stations at 56.54 paise/unit for the 2005-06. The Commission after detailed scrutiny of these proposals accepts 56.54 paise/unit as variable charges.
- 6.13.4 **FPA:** GRIDCO has proposed the FPA rate for 2005-06 at 0.36 paise/unit considering 10% escalation over the approved rate of 0.33 paise/unit for 2003-04. The Commission on scrutiny approves the FPA at 0.38 paise/unit for 2005-06.
- 6.13.5 **Year-end Charges:** GRIDCO had proposed year-end charges of Rs.26.30 crore on account of land tax, water cess, electricity duty, income tax and incentive. In its proposal, Rs.6.87 crore is towards income tax, land tax, water charge and water cess and Rs.6.62 crore is towards Electricity Duty @ 20 paise/unit on auxiliary consumption. The Commission after scrutiny of the available documents approves Rs.6.83 crore towards income tax, land tax and water charges and Rs.6.22 crore towards Electricity Duty for 2005-06. Since generation has been accepted at 89% PLF, an incentive of Rs.22.83 crore has been allowed over the normative fixed cost at 68.5% PLF for the year 2005-06. Considering all the factors mentioned above, the total year-end charges as provisionally approved for 2005-06 by the Commission comes to Rs.35.88 crore.

#### 6.13.6 Captive Power Plants (CPPs)

GRIDCO in its application for 2005-06 had stated that an agreement has been executed between GRIDCO & NALCO on 30.08.2004 for procurement of surplus power of NALCO by GRIDCO. Based on that agreement, the surplus power of NALCO was made available to GRIDCO at the following basic price:

- Upto 40 MU/Month at a rate of 110 paise/unit
- Beyond 40 MU upto 60 MU per month at a rate of 112 paise/unit
- Beyond 60 MU upto 80 MU per month at a rate of 114 paise/unit
- Beyond 80MU upto 100 MU per month at a rate of 118 paise/unit
- Beyond 100 MU/Month at a rate of 122 paise/unit

Beyond the above basic price the fuel price Escalation will also be charged. Based on the above, GRIDCO proposes cost for energy

received from CPPs at 110.00 paise/unit. The Commission has provisionally accepted this rate for determining the cost of power purchase from the CPPs. Further, the Commission directed GRIDCO to file this agreement before it for necessary approval.

#### **6.14 Central Power Stations**

#### **6.15 Transmission Charge for PGCIL Lines**

6.15.1 The tariff for central transmission lines is fixed by the principles and norms as determined by the CERC from time to time. Based on CERC notification and CEA's share allocation, PGCIL claims transmission charge for use of central transmission systems by the Eastern Regional customers. The weighted average of percentage share allocation of the fixed cost towards PGCIL transmission charge has also been reflected in Regional Energy Accounts based upon ABT norms.

6.15.2 In the BST application, GRIDCO has considered the annual fixed charges of Rs.321.194 crore for PGCIL transmission system, consisting of both regional transmission system and inter-regional transmission system, in place of Rs322.691 crore claimed by PGCIL. The calculation furnished by GRIDCO in form DF-18 has been checked at the Commission's end wherein GRIDCO has shown an aggregate figure of Rs.348.22 crore (Rs.321.194 crore: fixed charges and Rs.27.03 crore year-end charges) as annual fixed charges for PGCIL transmission for 2005-06. However, it is ascertained from the monthly bill for December, 2004 prepared by PGCIL that it has claimed Rs 332.1439 crore as annual fixed cost towards transmission charges for both regional and inter-regional transmission systems which also has been accepted by GRIDCO. So, the Commission considers a sum of Rs.332.1439 crore as fixed cost towards PGCIL transmission charges for 2005-06.

6.15.3 Further, GRIDCO has considered a sum of Rs.27.03 crore as year-end charges which comprises income tax of Rs.9.20 crore, incentive of Rs.12.98 crore, FERV of Rs.4.80 crore and AMC for special meter of Rs.0.05 crore.

6.15.4 The observations of the Commission on year-end charges claimed by GRIDCO are given below:

6.15.4.1 PGCIL is eligible for incentive for availability of transmission system above 98% as per CERC notification. GRIDCO has considered Rs.12.98 crore towards incentive to be paid by ER constituents to PGCIL for the year 2002-03. The Commission accepts the same amount for 2005-06.

6.15.4.2 The amount of income tax for the current year has been calculated by prorating the actual advance income tax paid by PGCIL (Rs.1.88 crore upto 3rd quarter) in 2003-04 i.e. Rs.2.51

crore as no information about advance income tax payment of 2004-05 has been furnished.

- 6.15.4.3 The Commission approves an amount of Rs.5.00 lakh for maintenance of the special type of energy meter for 2005-06.
- 6.15.4.4 PGCIL has levied Rs.4.08 crore towards foreign exchange rate variation (FERV) in accordance with CERC notification dt 19.08.2004. The Commission accepts the same amount for 2005-06 as against Rs.4.80 crore claimed by GRIDCO.
- 6.15.4.5 The details of GRIDCO's proposal & Commission's approval towards year-end adjustment charges during 2005-06 are given in the table below:

**Table : 16**  
**Year-end Adjustment Charges (2005-06) Rs. in crore**

Description	GRIDCO's Proposal	Commission's Approval
Incentive	12.98	12.98
FERV	4.80	4.08
Income Tax	9.20	2.51
AMC for Special meters	0.05	0.05
Total	27.03	19.62

- 6.15.5 The total fixed cost in respect of PGCIL transmission charge comes to Rs.351.76 crore inclusive of year-end charges for 2005-06. GRIDCO's share of 18.33% comes to Rs. 64.48 crore. Further, a sum of Rs. 4.375 crore for the period from 4/04 to 12/04 was to be deducted from the PGCIL claims for use of transmission system by short-term customers. Prorating for the whole year, the same comes to Rs.5.83 crore. Thus, GRIDCO's net share towards PGCIL transmission charges has been pegged down to Rs.58.65 crore as indicated below:

**Table : 17**  
**PGCIL Transmission Charges**

	GRIDCO's Proposal	Commission's Approval
Regional Transmission System (Rs. in crore)	185.440	204.44
Inter-Regional Transmission system (Rs. in crore)	135.754	127.70
TOTAL FIXED COST	321.194	332.144*
Year end Charges (Rs. in crore)	27.03	19.62
Total Transmission Cost (Rs. in crore)	<b>348.22</b>	<b>351.76</b>
GRIDCO's Share (Rs. in crore) (18.33 %w.e.f Oct,04)		64.48

Less allocated to Short term customers (Prorating actual receipt from 4/04 to 12/04 for whole year as billed by PGCIL) (Rs. in crore)		5.83
Net amount payable by GRIDCO towards Tr. Charge (Rs. in crore)		<b>58.65</b>
Energy Drawal by GRIDCO (MU)		4494.59
PGCIL Tr. Charge P/U		13.05
PGCIL Tr. Charge P/U Including Central loss of 2.94%	15.13	13.44

\* The Commission's approval for PGCIL Transmission Charges is based on the bill claimed by PGCIL for the month 12/04.

6.15.6 **Chukka** : GRIDCO has stated that the procurement cost of power from Chukka for 2004-05 has been arrived at as per the Government of India notification dated 26.08.99 as summarised below:

- 100 paise/unit for the period from June to September;
- 150 paise/unit for the balance period (April to May and October to March);
- From the GOI letter dated 11.01.2005, it is revealed that with effect from 1.1.2005 the tariff for Chukka would be revised from Rs.1.50 to Rs.2.00 per/unit due to withdrawal of subsidy by MEA, GOI.

6.15.7 Further, handling charges @ 5 paise/unit has to be added to the above rates based on PGCIL letter dated 19<sup>th</sup> November, 1999 addressed to the beneficiaries. GRIDCO has also to bear the expenditure on account of the transmission charges and central transmission losses on the PGCIL network. On detailed analysis of aforesaid cost parameters, GRIDCO had proposed a rate of 147.24 paise/unit for 2005-06.

6.15.8 Based on GOI letter dt.11.01.2005, the average rate per unit of Chukka power has been worked out by the Commission at 224.65 paise/unit inclusive of central transmission loss and transmission charges for 2005-06.

## 6.16 Central Thermal Power Station

6.16.1 The terms and conditions for determination of tariff for CGSs applicable from 01.04.2004 have been notified in the GOI Gazette on 29.03.2004. However, CERC vide its letter dated 30.04.2004 has stated that the determination of tariff by the CERC based on the revised terms and conditions would take some more time. It was, therefore, directed by the CERC vide its notification dated 30.04.2004 that with effect from 1<sup>st</sup> April 2004, the billing of charges should be done on the following basis for a period of six months i.e. upto 30<sup>th</sup> September, 2004. The relevant extract of CERC notification is reproduced below:

*"The terms and conditions of for determination of tariff applicable from 01.04.2004 have been notified in the Gazette of India (Extraordinary) Part III Section 4 dated 29.03.2004. The determination of tariff by the*

*Commission based on the revised terms and conditions is to take some time.*

*It is, therefore, directed that w.e.f. 01.04.2004, the billing of charges shall be done on the following basis, for a period of 6 months, that is, up to 30.09.2004.*

*Thermal Power Generating Stations: The annual fixed charges as applicable on 31.03.2004 shall be billed at the target availability and variable charges based on norms of operation notified on 29.03.2004.*

*The billing of charges as directed above shall be on provisional basis and shall be further subject to adjustment after final determination of tariff by the Commission. In accordance with the revised terms and conditions notified on 29.03.2004, for which the petitions shall be filed by the utilities latest by 30.06.2004.”*

- 6.16.2 The Commission's estimate is based on the above order of CERC and takes into account the fixed cost as on 31<sup>st</sup> March, 2004 applicable to FSTPS, KHSTPS & TSTPS. For variable charges, NTPC has furnished assessment based upon new norms fixed by CERC and the same also takes into account coal price and oil price for April 2004 as the base for 2004-05. Any variation in the variable cost due to change in the cost and GCV of coal and oil would be billed separately through FPA (fuel price adjustment). The above estimation is provisional subject to final adjustment after due notification by CERC.

## 6.17 Fixed Cost

- 6.17.1 It transpires from GRIDCO's proposal that the licensee has calculated the fixed cost based on CERC's notification dated 30.04.2004 and the share allocation made by CEA on 29.09.2004. Accordingly, the GRIDCO's share towards fixed cost has been arrived at Rs.303.866 crore for central sector thermal stations for 2005-06. The Commission approves the same amount of fixed cost i.e. Rs.303.866 crore for 2005-06, as indicated in the table below:

**Table : 18**  
**Fixed Cost of Central Thermal Power Stations**

Central Thermal Stations	Date of Order	Fixed cost approved by CERC for FY03-04 (Rs. in crore)	GRIDCO Share (%)	GRIDCO Proposal (Rs. in crore)	Provisional fixed cost for GRIDCO approved by Commission for 2005-06 (Rs. in crore)
Talcher STPS	24.08.2004	501.27	31.90	159.904	<b>159.904</b>
Farakka STPS	19.07.2004	581.26	15.37	89.340	<b>89.340</b>
Kahalgaon STPS	18.06.2002	477.88	11.43	54.622	<b>54.622</b>
Total		1560.41		303.866	<b>303.866</b>



## 6.18 Variable Charges

6.18.1 GRIDCO in para 1.5.8.2 of the BST application for 2005-06 has furnished the calculation for variable charges based on the CERC's revised norms as applicable from 1<sup>st</sup> April, 2004. The Commission has accepted the variable charges calculated by GRIDCO. The proposed and approved variable charges are indicated in the table below.

6.18.2 Fuel Price Adjustment (FPA) has been calculated by GRIDCO on the basis of actual bills for the period from April, 2004 to Sept, 2004 with an escalation of 10% including Central Sector Transmission Loss @ 3.30%.

6.18.3 The commission calculates the FPA rate based on the average price and GCV of coal and oil for the period from 4/04 to 12/04. The details of the variable charges for the year 2005-06 are given in the table below:

**Table : 19**  
**Variable Charges of Central Thermal Power Stations (P/U)**

Stations	GRIDCO's Proposal for 2005-06 (Excluding Central Tr. Loss)			Provisional Variable cost calculated by the Commission for 2005-06 (Excluding Central Tr. Loss)		
	V.C	F.P.A.	TOTAL	V.C	F.P.A.	TOTAL
<b>FSTPS</b>	107.32	1.45	108.77	107.32	-2.03	105.29
<b>KHSTPS</b>	107.48	6.42	113.90	107.48	7.02	114.50
<b>TSTPS</b>	41.06	4.70	45.76	41.06	5.32	46.38

6.18.4 **Year-end Charges:** GRIDCO has projected the year-end charges for 2005-06 based on the basis of income tax bill and water cess bill for 2002-03 & electricity duty on the auxiliary consumption @20 P/U for TSTPS only which is inclusive of central transmission loss of 3.3%. The details are given in the table below.

**Table : 20**  
**GRIDCO's Projection of Year-end Charges of Central Thermal Power Stations**  
**Paise/KWH**

	<b>FSTPS</b>	<b>TSTPS</b>	<b>KhTPS</b>
Income tax	7.371	6.286	7.046
Electricity duty		1.794	
Water Cess	0.150	0.024	0.042
Incentive:	0.800	0.080	0.080
Total	8.321	8.183	7.168
<b>Total including Trans. Loss @3.30%</b>	<b>8.595</b>	<b>8.453</b>	<b>7.404</b>

6.18.5 The Commission has scrutinised the proposal and adopted the following parameters for the purpose of calculation of the year-end charges for the year 2005-06.

- i) Income tax constitutes a major segment of the year-end charges. As per CERC's norm dated 26.03.2004, the income tax has been calculated station-wise. From the statement indicating estimated income tax liability for 2004-05 furnished by NTPC, it emanates that the income tax for FSTPS is Rs.25.72 crore and that for KHSTPS and TSTPS for the corresponding year is nil. The commission provisionally accepts the same amount of income tax for 2005-06.
- ii) Water cess has been computed on the basis of claims raised from April to September, 2002 against GRIDCO and prorated for the whole year.
- iii) Electricity duty for TSTPS has been calculated @ 20 paise/unit based on the auxiliary consumption for 2005-06.
- iv) Since generation has been considered on normative PLF of 80% for 2005-06, no incentive has been taken into account at present for CGSs.

6.18.6 Accordingly, the year-end charges approved by the Commission including central transmission loss, are given in the table below.

**Table : 21**  
**Approved Year-end Charges (2005-06) )(Paise/unit)**

Central Thermal Stations	GRIDCO's Proposal	Commission's Approval
Talcher STPS	8.45	1.68
Farakka STPS	8.60	2.75
Kahalgaon STPS	7.40	0.02

6.18.7 GRIDCO's proposal for the cost of power purchase from various generating stations and the Commission's approval thereof are given in the table-22 & 23 respectively.

**Table : 22**  
**GRIDCO's Proposal for Power Purchase Cost for 2005-06**

Source	Energy Drawal	Fixed Cost P/U	Variable Cost P/U	FPA P/U	Misc (Yr.end) P/U	PGCIL Tr. Charge P/U	Total Cost P/U	Total Cost (Rs.in Crs.)
OHPC	3635.28		31.41				31.41	114.17
MACHAKUND	265.00		19.35				19.35	5.13
INDRAVATI	1942.38		64.82				64.82	125.90
<b>TOTAL HYDRO</b>	<b>5842.66</b>		<b>41.97</b>				<b>41.97</b>	<b>245.20</b>
TTPS	2688.92	84.88	48.37	5.34	9.60		148.19	398.48
IB TPS	2947.50	76.47	56.54	0.40	8.92		142.33	419.51

CPPs	685.00		110.00				110.00	75.35
<b>TOTAL STATE</b>	<b>12,164.08</b>	<b>37.29</b>	<b>50.74</b>	<b>1.28</b>	<b>4.28</b>	<b>-</b>	<b>93.60</b>	<b>1138.54</b>
FSTPS	1526.41	58.53	110.98	1.46	8.60	15.40	194.98	297.61
KHSTPS	581.93	93.86	111.15	6.64	7.41	15.40	234.46	136.44
TSTPS	1989.32	80.38	42.46	4.72	8.46	14.89	150.91	300.21
CHUKKA	235.75		132.58			14.65	147.24	34.71
<b>TOTAL C.S.</b>	<b>4333.41</b>	<b>70.12</b>	<b>80.72</b>	<b>3.57</b>	<b>7.91</b>	<b>15.13</b>	<b>177.45</b>	<b>768.97</b>
<b>TOTAL</b>	<b>16497.50</b>	<b>45.92</b>	<b>58.62</b>	<b>1.88</b>	<b>5.24</b>	<b>3.97</b>	<b>115.62</b>	<b>1907.51</b>

**Note :** (Central transmission loss of 3.30% for central stations included)

**Table : 23**  
**Commission's Approval of Power Purchase Cost for 2005-06**

Source	Energy Drawal	Fixed cost (Rs. in crore)	Fixed Cost P/U	Variable Cost P/U	FPA P/U	Misc (Yr.end) P/U	Tr. Charge P/U	Total Rate P/U	Total Cost (Rs.in Crs.)
OHPC	3676.86			30.47				30.47	112.02
MACHAKUND	320.00			17.18				17.18	5.50
INDRAVATI	1942.38	35.35	18.20	46.38				64.58	125.44
<b>TOTAL HYDRO</b>	<b>5939.24</b>	<b>35.35</b>	<b>5.95</b>	<b>34.95</b>				<b>40.91</b>	<b>242.96</b>
IB TPS	2963.41	229.31	77.38	56.54	0.38	12.11		146.40	433.85
TTPS	2689.76	185.06	68.80	48.37	4.90	2.47		124.53	334.97
CPPs	685.00			110.00				110.00	75.35
<b>TOTAL STATE</b>	<b>12277.41</b>	<b>449.71</b>	<b>36.63</b>	<b>47.29</b>	<b>1.16</b>	<b>3.46</b>		<b>88.55</b>	<b>1087.13</b>
FSTPS	1546.34	89.34	57.78	110.57	- 2.10	2.75	13.44	182.44	282.11
KHSTPS	594.32	54.62	91.91	110.74	7.23	0.02	13.44	223.33	132.73
TSTPS	2007.17	159.90	79.67	42.30	5.48	1.68	13.44	142.57	286.16
<b>TOTAL NTPC</b>	<b>4147.82</b>	<b>303.87</b>	<b>73.26</b>	<b>77.56</b>	<b>2.90</b>	<b>1.84</b>	<b>13.44</b>	169.00	701.00
CHUKKA	214.79			211.20			13.44	224.65	48.25
<b>TOTAL C.S.</b>	<b>4362.61</b>	<b>303.87</b>	<b>69.65</b>	<b>84.14</b>	<b>2.76</b>	<b>1.75</b>	<b>13.44</b>	<b>171.74</b>	<b>749.25</b>
<b>GRAND TOTAL</b>	<b>16640.02</b>	<b>753.58</b>	<b>45.29</b>	<b>56.95</b>	<b>1.58</b>	<b>3.01</b>	<b>3.52</b>	<b>110.36</b>	<b>1836.38</b>

**Note :** (Central transmission loss of 2.94% for central stations are included in the per unit cost)

## 6.19 Rebate for Prompt Payment from the Generators

6.19.1 The PPA between the generators and GRIDCO provides for a rebate of 2% on the gross power bill, if payment is made through Letter of Credit. 1% rebate on the billed amount is allowed when payment is made within 30 days. In case of payment beyond the due date, delayed payment surcharge @ 2% per month on the billed amount is payable by GRIDCO to the generators.

6.19.2 For the purpose of calculation of revenue requirement, the cost of power should be calculated at its gross value as the rebate available from the generator is likely to offset the rebate that will be allowed to the DISTCOs for payment through L.C. However, this will be subject to the actual figure as per the transaction at the end of the year, the effect of which is treated as nil for the year 2005-06.

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

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

Employees Cost

Administration & General Expenses

Repair and Maintenance Expenses

Less expenses capitalized

### 6.20.1 Employees Cost

6.20.1.1 GRIDCO has projected employee expenses of Rs.187.23 crore for the year 2005-06. Major components are:

**Table : 24**

**Rs. in crore**

Basic Pay	38.01
DA	26.23
HRA	4.56
Others	2.73
Terminal benefit (Pension Gratuity)	117.54
Total	189.07
Less capitalisation	1.84
Net	187.23

6.20.1.2 The provisional expenditure for the year 2003-04 of GRIDCO submitted during filing vis-a-vis the expenditure approved by the Commission for the year are given below:

**Table : 25**  
**FY 2003-04**

	<b>Rs. in crore</b>	
	As per provisional figures	As approved by OERC
Basic Pay	36.53	40.75
DA	20.61	24.67
HRA	3.87	4.94
Other	1.83	7.68
Terminal Benefits	117.54	33.57
Total	181.38	111.61
Less capitalisation	1.78	11.55
Net	179.60	100.06

6.20.1.3 So far as the basic pay is concerned, it is found that the figure approved by the Commission for 2003-04 is more than the provisional expenditure. Therefore, Commission accepts the figure based on provisional account for 2003-04 and allows escalation of 3% in the basic pay towards normal annual increment on year to year basis, as per the previous orders of the Commission.

6.20.1.4 As regards DA, GRIDCO has proposed 69% on the basic pay for 2004-05. The DA rate revised from time to time by Govt. of Orissa is given below:

**Table : 26**

	<b>DA (%)</b>
With effect from 01.01.2001	43
01.07.2001	45
01.01.2002	49
01.07.2002	52
01.02.2003	55
01.07.2003	59
01.01.2004	61

6.20.1.5 In the past years, there has been a periodic rise in DA on 1<sup>st</sup> of January and 1<sup>st</sup> of July of each year. With anticipated half-yearly rise in DA @ 3% the annual average DA rate may be around 70%. The Commission approves the D.A. rate of 70% over the Basic pay for 2005-06.

6.20.1.6 **Terminal Benefits** : GRIDCO has claimed a sum of Rs.117.54 crore towards terminal benefits for the year 2005-06. The amount claimed is uniform during three years i.e. 2003-04, 2004-05 & 2005-06.

6.20.1.7 In a reply to Commission's query regarding huge provision towards terminal benefits, GRIDCO stated that the same was due to the creation of corpus fund to meet the pension and gratuity liabilities of 5702 retired employees. The amount comes to Rs.117.54 crore. Provision towards terminal benefits is based on the report of actuary upto 31.03.2004 appointed by GRIDCO. Until the actuary report is available for 2004-05 and 2005-06 the amount of Rs.117.54 crore is projected to be the terminal liability for the year 2004-05 and 2005-06 on provisional basis.

6.20.1.8 The Commission views that provisioning for terminal liabilities like pension and gratuity based on periodic actuarial valuation should be done 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.

6.20.1.9 Provisions of the Clause (ii) para 28 of Accounting Standard 15 issued by ICAI dealt in Annual actuarial valuation is produced below.

*“In case the liability for retirement benefits is funded through creation of a trust, the cost incurred for the year should be determined actuarially. Such actuarial valuation should normally be conducted at least once in every three years. However, where the actuarial valuations are not conducted annually, the actuary's report should specify the contributions to be made by the employer on annual basis during the inter-valuation period. This annual contribution (which is in addition to the contribution that may be required to finance unfunded past service cost) reflects proper accrual of retirement benefit cost for each of the years during the inter-valuation period and should be charged to the statement of profit and loss for each such year. Where the contribution paid during a year is lower than the amount accrued liability as certified by the actuary, the shortfall should be charged to the statement of profit and loss for the year. Where the contribution paid during a year is in excess of the amount required to be contributed during the year to meet the accrued liability as certified by the actuary, the excess should be treated as a pre-payment.”*

6.20.1.10 The Commission allowed terminal benefits of Rs.117.54 crore for 2004-05 subject to verification by independent actuary appointed by the Commission. But the Commission does not feel it prudent to allow an amount of Rs.117.54 crore towards terminal benefit for the year 2005-06, till the actuary valuation report is received. As such, for the present, the Commission allows terminal benefit by escalating 10% annually over the

approved figure of 2003-04 which works out to Rs.40.62 crore for 2005-06.

6.20.1.11 The statement of employee's cost proposed by GRIDCO and approved by the Commission is shown in the table below.

**Table : 27**  
**Employee's Cost**

**Rs. in Crore**

Sl. No.	Particulars	FY-04-05 (Prop.)	FY-04-05 (Appr.)	FY-05-06 (Prop.)	FY-05-06 (Appr.)
1	Salaries	36.90	37.63	38.01	38.76
2	Over-time	0.00	0.00	0.00	0.00
3	Dearness Allowance	23.61	24.08	26.23	27.13
4	Other Allowance	0.35	0.35	0.35	0.35
5	Bonus	-	-	-	-
6	<b>Sub Total (1 to 5)</b>	<b>60.87</b>	<b>62.07</b>	<b>64.59</b>	<b>66.25</b>
	<b>OTHER STAFF COST</b>				
7	Reimbursement of Medical Expenses	1.48	1.48	1.52	1.49
8	Lease Travel Concession	-	-	-	-
9	Reimbursement of House Rent	4.43	3.99	4.56	4.11
10	Interim Relief to Staff	0.00	0.00	0.00	0.00
11	Encashment of Earned Leave	-	-	0.00	-
12	Honorarium	0.01	0.01	0.01	0.01
13	Payment under Workmen compensation Act	0.04	0.04	0.04	0.04
14	Ex-gratia	0.00	0.00	0.00	0.00
15	Miscellaneous	0.20	0.20	0.21	0.21
16	<b>Sub Total (7 to 15)</b>	<b>6.15</b>	<b>6.27</b>	<b>6.34</b>	<b>5.68</b>
17	Staff Welfare Expenses	0.60	0.60	0.60	0.60
18	Terminal Benefits	117.54	117.54	117.54	40.62
19	<b>Total (6+16+17+18)</b>	<b>185.16</b>	<b>185.93</b>	<b>189.07</b>	<b>113.32</b>
	Less :Capitalisation	1.80	1.82	1.84	1.10
	<b>Net Total</b>	<b>183.36</b>	<b>184.11</b>	<b>187.23</b>	<b>112.22</b>

#### 6.20.2 Repair & Maintenance Expenses

6.20.2.1 GRIDCO has proposed an expenditure of Rs.20.73 crore in its BST application for 2005-06 towards repair and maintenance expenses after capitalisation of Rs.0.01 crore.

6.20.2.2 As per the audited accounts for the year 2002-03, the total R&M expenses were Rs.8.35 crore and the provisional figure for the year 2003-04 was Rs.9.87 crore. The Commission had approved Rs.13.35 crore for 2003-04 towards R&M expenses. It shows

that GRIDCO has not taken proper care to maintain the system which is essential to prevent major breakdown ensuring uninterrupted power supply. This is substantiated by the reports reaching the Commission on failure of transmission lines either due to equipment problem or snapping of conductors etc. As such, the Commission allows escalation of 5.2% over the approved figure of 2004-05, due to inflation to factor in changes in WPI and CPI, as indicated below:

**Table : 28**

**(Rs. in Crore)**

<b>2004-05</b>		<b>2005-06</b>	
<b>GRIDCO's Proposal</b>	<b>Commission's Approval</b>	<b>GRIDCO's Proposal</b>	<b>Commission's Approval</b>
17.59	14.07	20.73	14.80

6.20.2.3 The Commission sincerely hopes that GRIDCO shall take effective steps to take up urgent R&M works of transmission lines, substations by spending the money and bring down the interruptions to an acceptable level.

#### **6.20.3 Administration and General Expenses**

Administration and General Expenses include property related expenses like license fee, rent, taxes, insurance, communication charges, professional charges, consultancy charges, conveyance, travel expenses and other sundry expenditure. GRIDCO proposed Rs.18.54 crore under this head for 2004-05 excluding capitalization expenses of Rs.0.91 crore. The Commission had approved an amount of Rs.14.19 crore towards A&G expenses excluding capitalization for 2003-04 chargeable to revenue on the basis of annual escalation of 5% over the approved figure of 2002-03. In absence of audited accounts for the year 2003-04, the Commission follows the same principle on year to year basis and approves an amount of Rs.15.73 crore for 2005-06 which is 5.2% more than the approved figure of Rs.14.96 crore for the current year to factor in changes in WPI and CPI, as given in the table below:

**Table : 29**

**(Rs. in Crore)**

<b>2004-05</b>		<b>2005-06</b>	
<b>GRIDCO's Proposal</b>	<b>Commission's Approval</b>	<b>GRIDCO's Proposal</b>	<b>Commission's Approval</b>
18.02	14.96	18.54	15.73

#### **6.21 Interest on Loan**

In para 3.8 of the ARR application for 2004-05, GRIDCO has proposed gross interest expenses of Rs.355.49 crore. A loan-wise interest payment schedule for the year 2005-06 is reproduced below:



Table : 30

Rs. in crore

					2005-06			
		Rate of Interest	As on 31.03.2005	Interest	Addition	Repayment	As on 31.03.2006	Interest
A	GRIDCO Bonds including Securitisation							
I	Exisisting							
	Power Bond-I	15%	-				-	
	Power Bond-I(residual)	7%	-				-	
	Power Bond-II	15.25%	-				-	
	Power Bond-II(residual)	9.00%	46.65			46.65	-	
	OPGC-I	15%	-				-	
	OHPC-I	15.00%	50.00				50.00	
	Nalco-I	15%	-				-	
	Nalco-II	10.95%	-				-	
	NTPC-I	15%	-				-	
	NTPC-II	12.50%	-				-	
	NTPC-III (GoO Bonds)	8.50%	1,102.88				1,102.88	
	NTPC-IV	10.00%	342.85			33.50	309.35	
	Sub Total		1,542.38	-	-	80.15	1,462.23	
II	Proposed							
	Loan Syndication	8.25%	50.00			3.57	46.43	
	Unrated New Bonds	10.00%	-				-	
	Sub Total		50.00	-	-	3.57	46.43	
III	Other Bonds							
	Pension Trust Bonds	9.00%	132.00			18.00	114.00	
	GoO Bonds	0.00%	400.00			20.00	380.00	
	Sub Total		532.00	-	-	38.00	494.00	
	Total Bonds		2,124.38	-	-	121.72	2,002.66	
B	Other Loans							
	PFC Loan	16.05%	72.25			20.93	51.32	
	PFC WCL	9.50%	-				-	
	PFC STL	7.50%	100.00			100.00	-	
	IBRD Loan	13.00%	241.12				241.12	
	REC Loan	12.15%	256.25			67.67	188.58	
	LIC Loan	14.00%	-				-	
	State Govt. Loan	14.00%	157.76			12.23	145.53	
	Central Govt. Loan	9.25%	10.51			0.68	9.83	
	Open Market Loan	11.50%	24.03				24.03	
	Commercial Banks	15.00%	0.00				0.00	
	SPA Loan	14.00%	-				-	
	ICICI	13.12%	-				-	
	Union Bank of India (loan Synd)	8.25%	180.49			17.86	162.63	
	Allahabad Bank(loan synd)	8.25%	146.43			5.06	141.37	
	HUDCO	7.75%	552.63			63.16	489.47	
	Dena Bank	8.25%	100.00			8.35	91.65	
	U Co Bank	8.25%	200.00			14.29	185.71	

	Short term Borrowings	10.00%	-				-	
	<b>Other Loan Total of B</b>		<b>2,041.47</b>	-	-	<b>310.23</b>	<b>1,731.24</b>	
	Finance Charge							
<b>C</b>	<b>Grand Total(A+B)</b>		<b>4,165.85</b>	<b>410.74</b>	-	<b>431.95</b>	<b>3,733.90</b>	<b>355.49</b>
	Interest O/s		589.41				534.01	
<b>D</b>	<b>Total Loan</b>		<b>4,755.26</b>				<b>4,267.91</b>	
<b>E</b>	Less: Int. on Loan receivable from Distco		129.05					129.05
<b>F</b>	Less: Interest Capitalisation			46.47				25.03
<b>G</b>	<b>Interest Chargeable</b>			<b>235.22</b>				<b>201.40</b>
	Average rate of interest			9.25%				9.00%
				364.28				

6.21.1 The interest chargeable to revenue proposed by GRIDCO is Rs.201.40 crore after deducting interest on back to back loan for Rs.129.05 crore and capitalisation of interest of Rs.25.03 crore. GRIDCO has not furnished the loan-wise detailed calculation of interest but calculated the impact of interest at a flat rate of 9% on the average loan balance.

6.21.2 Govt. of Orissa, vide its notification No.1068 dt.29.01.2003 had decided certain corrective measures based on the recommendations of Committee of Independent Experts and also the Commission. The relevant extract of the notification is reproduced below:

- i) The outstanding dues payable to OHPC by GRIDCO till 31.03.2001 on account of power purchase would be securitised through issue of power bond by GRIDCO to OHPC.
- ii) World Bank loan would be passed on by State Govt. to GRIDCO and DISTCOs as 70% loan @ 13% interest per annum and balance 30% as grant.
- iii) Tax-free bonds @ 8.5% interest would be guaranteed by Govt. of Orissa for PFC & REC loan.
- iv) Swapping of Govt. dues from GRIDCO against dues of GRIDCO from Govt. and balance receivables, if any be settled.

### 6.21.3 GRIDCO Back to Back Loan (PFC/REC etc.)

6.21.3.1 At the time of reform and restructuring distribution assets were transferred from GRIDCO to the DISTCOs. Project related loans taken by GRIDCO for the purpose of creation of distribution assets from PFC, REC were also transferred to the DISTCOs. However, GRIDCO continued to serve the lenders for the loans taken for both transmission and distribution assets. On the other hand, distribution companies were bound by Subsidiary Loan

Agreement to service the transferred loans through back to back arrangement.

- 6.21.3.2 DISTCOs propose that the project related asset loan may be recovered through bulk supply tariff. The revenue requirement of DISTCOs takes into consideration the bulk supply tariff as well as the cost of distribution. Once the project related loan liabilities are not serviced through the back to back agreement, it will have the impact of raising the revenue requirement of GRIDCO. This in turn will raise the bulk supply tariff. With rise in BST, the input cost of DISTCOs will go up but it will be neutralised due to non-service of interest payment by back to back arrangement to GRIDCO for asset loans. The net effect of income and expenditure on DISTCOs remains the same. It has the advantage of upfront monthly recovery of these loan elements through BST rate as LC is already in place.
- 6.21.3.3 The Commission directs for appropriate amendment in the Subsidiary Loan Agreement. GRIDCO shall continue to service the interest liability to PFC, REC and other institutions for the asset loan taken for TRANSCO and DISTCOS. Earlier, GRIDCO also used to service these loans. It was being reimbursed for the asset created loan of Distribution Companies through the back to back arrangement.
- 6.21.3.4 Now, GRIDCO will be reimbursed for the interest on DISTCO related loan through BST. Obviously, the net effect on DISTCO in toto for servicing of asset related loan remains unchanged but asset loans vary from company to company. Obviously, with the same rate of interest on project related loan, company-wise liabilities were variable. With recovery through BST, it is likely that a company with high asset loan may get an undue profit unless a differential BST is in place. Naturally, this aspect is to be taken into consideration while designing the BST.
- 6.21.3.5 The revenue requirement of GRIDCO for the year 2004-05 will take into consideration the total interest liability on account of asset related loan. In case of DISTCOs, the interest liability of asset related loans will not be taken into consideration for the purpose of revenue requirement calculation.
- 6.21.3.6 The summary of back to back loan as per GRIDCO and as per DISTCOs is given in the table below:

**Table : 31**  
**Summary of back to back loan including GRIDCO portion of IBRD loan**  
**(Position as on 31.03.2004)**

						<b>Rs. in crore</b>
Source	WESCO	NESCO	SOUTHCO	Reliance Total	CESCO	Total
As per GRIDCO	138.81	94.64	134.36	367.81	307.62	675.43
As per DISTCOs	129.60	94.31	121.31	345.22	255.46	600.68
Difference	9.21	0.33	13.05	22.59	52.16	74.75

Note : Back to back loan of GRIDCO does not include cash support of Rs.174 crore availed by CESCO.

6.21.3.7 The Commission in its previous orders directed the DISTCOs as well as GRIDCO to reconcile the loan amount. But they had failed to reconcile the same till date. The Commission views it seriously and directed the licensees to reconcile the same in the Tariff Order for 2004-05 and submit the joint reconciliation statement early.

#### **6.21.4 GRIDCO Bond**

6.21.4.1 GRIDCO has issued bonds during 1998-99 to 2001-02 for meeting liabilities on account of power purchase. As reported by GRIDCO in its subsequent clarification the following bonds are issued at different time with varying rates of interest.

#### **Total : 32**

			<b>Rs. in crore</b>
Bonds issued	Original rate of interest (%)	Amount of Bond issued	
Power Bond-I	15	109.48	
Power Bond-II	15.25	198.08	
OPGC-I	15	60	
NALCO-I	15	50	
OHPC-I	10.95	50	
NTPC-III	8.5 (tax free)	1102.87	
NTPC-IV	10	342.85	
NALCO-II	10.95	150	
Total Bond		2063.28	

6.21.4.2 Out of the above bonds, the power bond I&II were issued to meet working capital needs, the major amount of which was utilised for clearing outstanding power purchase liabilities.

6.21.4.3 GRIDCO in the meantime has swapped and rescheduled all high cost interest bonds i.e. Power Bond I, Power Bond II, OPGC I.

NALCO I and NALCO II at a very low rate of interest. The details of the loans swapped are given in table 33.

6.21.4.4 Since, the Commission in its earlier tariff order has allowed recovery of interest on these bonds in the annual revenue requirement, the Commission accepts the entire amount securitised by GRIDCO and allows the interest to be passed on to tariff for 2005-06.

#### **6.21.5 Loan from PFC**

6.21.5.1 GRIDCO has estimated an amount of Rs.159.21 crore as on 31.03.2004 and assumes repayment of Rs.86.96 crore for the year 2004-05 and Rs.20.93 crore for 2005-06 thereby reducing the loan balance to Rs.51.32 crore by 31.03.2006. This loan was taken for the purpose of construction of EHT lines at an interest rate of 16.05% per annum. In a reply to Commission's query regarding the high rate of interest and asking for prepayment of high cost loans, GRIDCO stated in its reply that prepayment of these loans could not be done as the terms and conditions of repayment were regulated as per the guidelines of PFC. However, the Commission in line with their earlier order approves the interest to be passed on to the tariff at 8.5% free of tax as per Govt. of Orissa notification discussed in earlier paragraphs.

6.21.5.2 In addition, GRIDCO has availed Rs.400 crore of loans from PFC @9.5% interest per annum to meet the cash deficit which has arisen due to hydrology failure during 2002-03 resulting in drawl of high cost power. Originally, GRIDCO proposed to draw a loan of Rs.1200 crore within a period of three years. But due to favourable monsoon in 2003-04, GRIDCO has only drawn Rs.400 crore @ 9.5% during 2002-03 and 2003-04. GRIDCO in its ARR filing for 2004-05 has stated that the loan from PFC @9.5% would be swapped towards the end of 2004-05 by availing a short term loan from PFC and other sources like HUDCO at a rate of 7.50% and 7.75% respectively. As such, no interest on loan amount of Rs.400 crore is due for the year 2005-06.

#### **6.21.6 REC Loan**

The loans from REC are project related ones, which GRIDCO availed at different rates of interest at different times. Average rate of interest on the above loan is shown as 12.15%. The loan balance as on 31.03.2004 and 31.03.2005 and 31.03.2006 is shown as Rs.317.40 crore, Rs.256.25 crore and Rs.188.58 crore respectively. The Commission in its last tariff order approved the interest to be passed on to tariff @8.5% (tax free) as per

Govt. notification dated 29.01.2003. The Commission now adopts the same principle for calculation of interest on REC loan.

#### **6.21.7 Loan from LIC**

LIC loan of Rs.140.66 crore drawn during 1981 to 1996 bears an interest rate of 14% per annum. Because of the failure on the part of GRIDCO to service the loan, the interest started accumulating. By the end of 31.03.2003, the loan along with accumulated interest reached Rs.383.14 crore (Source: Audited Accounts for 2002-03). Finally, during 2003-04, LIC agreed for one time settlement with GRIDCO and reduced the quantum of principal and interest to Rs.191.51 crore. GRIDCO paid the entire amount on 14.05.2004 by availing loan of Rs.86.11 crore at a cheaper rate and balance amount from its own sources. The Commission allows interest on a loan balance of Rs.140.66 crore at 14% rate of interest for a period of one and half month pertaining to 2004-05. For the year 2005-06, no interest is due on the loan amount of Rs.140.66 crore.

#### **6.21.8 World Bank Loan**

6.21.8.1 The Commission had held in the past orders that the State Government should onlend the World Bank loans on terms available to them from the Government of India to DISTCOs treating 70% as loan and 30% as grant.

6.21.8.2 GRIDCO has availed World Bank loan of Rs.441.12 crore (Net of 30% grant) by the end of 2003-04. GRIDCO has proposed to retire Rs.200 crore of World Bank loan during 2004-05 by availing loans from commercial bank at a cheaper rate of interest. The Commission approves the same as the interest calculation done by GRIDCO is in accordance with Govt. notification dated 29.01.2003.

#### **6.21.9 State Govt. Loan**

GRIDCO has reported that the loan from State Govt. as on 31.03.2004 amounted to Rs.168.71 crore. It has estimated repayment of Rs.10.95 crore during 2004-05 and Rs.12.23 crore during 2005-06. Since servicing of the State Govt. loan has been kept in abeyance upto 2005-06 as per Govt. of Orissa notification of 29.01.2003, the Commission does not consider the interest impact on the above loan to be passed on to tariff.

#### **6.21.10 Central Govt. Loan**

GRIDCO has proposed payment of Rs.1.01 crore on Central Govt. loan of Rs.11.26 crore taken during 1987-88 by the erstwhile OSEB at an average interest rate of 9.25%. The Commission approves the same and allows it to be passed on to tariff for 2005-06.

#### 6.21.11 Open Market Loan

GRIDCO has inherited all these loans from OSEB (as per details given in table-35) drawn by the latter during 1981 to 1989. The Commission approves the same and allows the interest to be passed on to tariff for 2005-06.

#### 6.21.12 ICICI Loan

GRIDCO took loan amounting to Rs.31.46 crore at the average rate of 13.12% from ICICI for construction of 400 KV lines from Meramundli to Mendhasal and 220 KV line s/s at Cuttack. This loan has already been swapped with loan bearing lower rate of interest during 2003-04. As such, no interest is due during 2005-06.

#### 6.21.13 Loan brought from different Commercial Banks at cheaper rate for swapping High Cost Loans

6.21.13.1 Besides, GRIDCO raised loans from different commercial banks and financial institutions during 2002-03 to 2004-05 for swapping of high cost and old loans and has requested for passing on the interest burden through tariff. A statement showing loans availed by GRIDCO for swapping and its utilisation thereof is given in the table below:

**Table : 33**

**Rs. in crore**

		2002-03	2003-04	2004-05	
Particulars	Rate of Interest	Principal	Principal	Principal	Total
<b>Loans Brought</b>					
Union Bank of India	8.25	100.00		100.00	200.00
Allahabad Bank	8.25	25.00	125.00		150.00
HUDCO	7.75		300.00	300.00	600.00
Dena Bank	8.25		100.00		100.00
U Co Bank	8.25			200.00	200.00
PFC STL	7.50			150.00	150.00
Loan Syndication	8.25			50.00	50.00
<b>Total</b>		<b>125.00</b>	<b>525.00</b>	<b>800.00</b>	<b>1,450.00</b>
<b>Swapped</b>					
Bond-I/98 (Pvt.Placement)	15.00	31.34	58.41		89.75
Bond-II/98 Pvt. Placement	15.25	55.50	49.28		104.78
Bond-IA/98 OPGC	15.00	38.16	21.84		60.00
ICICI	13.50		26.00		26.00
OPGC Dues( including Rs.15Crore DPS)	18.00		43.36		43.36
NTPC Dues	15.00		240.00		240.00
LIC-Principal	14.01		86.11		86.11
Bond-IC/99 NALCO	15.00			50.00	50.00

Bond-I/2002(2017) NALCO	15.00			150.00	150.00
IBRD Loan	13.00			200.00	200.00
PFC WCL	9.50			400.00	400.00
<b>Total</b>		<b>125.00</b>	<b>525.00</b>	<b>800.00</b>	<b>1,450.00</b>

6.21.13.2 The loan availed by GRIDCO upto December 2004 comes to Rs.530 crore during 2004-05. GRIDCO plans to further borrow Rs.270 crore by the end of 2004-05. Thus, the high cost loan to be retired would aggregate Rs.800 crore by the end of the 2004-05. Upto December 2004, GRIDCO had drawn a total of Rs.1180 crore for the purpose of swapping. As such, GRIDCO at the end of the year will draw Rs.1450 crore from different sources at a lower rate of interest for swapping high cost loans.

6.21.13.3 The Commission has found that GRIDCO as a result of swapping has saved around Rs.78 crore on account of interest during 2004-05. The Commission, therefore, considers the interest on Rs.1450 crore loan for the purpose of retiring high cost loan to be passed on to tariff.

#### 6.21.14 Pension Trust Bond

The Commission in line with previous order approves the pension trust bond of Rs.150 crore and its interest impact.

#### 6.21.15 Capitalisation of Interest

6.21.15.1 GRIDCO in its application has projected a sum of Rs.25.03 crore as interest during construction. An abstract of interest during construction on project related works is given below:

**Table : 34**

<b>Rs. in crore</b>		
<b>Sl.No.</b>	<b>Particulars</b>	<b>Interest</b>
1.	PFC/ADB Funded Project	16.70
2.	REC Funded Project	-
3.	HIW Funded (ICICI Fund) Project	-
4.	World Bank Funded Project	-
5.	Other Funded Project	8.33
	<b>Total</b>	<b>25.03</b>

6.21.15.2 The Commission approves the same to be deducted from the gross interest.



6.21.15.3 Therefore, considering the above factors, the interest liability of GRIDCO has been calculated and the average rate of interest during 2005-06 works out to 7.70% on the average loan balance. The Commission for the purpose of simplification rounded it to 8% on the loan outstanding and approves Rs.290.96 crore towards interest chargeable to revenue for 2005-06 as detailed in the table-35. Of this amount Rs.151.03 crore relates to interest on project related loans which shall be taken into consideration while designing the transmission tariff.

**Table : 35**

	<b>Rs. in crore</b>	
	<b>2004-05</b>	
<b>Source</b>	<b>GRIDCO's proposal</b>	<b>Commission's approval</b>
Power Bond-I	-	-
Power Bond-I residual	-	-
Power Bond-II	-	-
Power Bond-II residual		2.10
OPGC-I	-	-
OHPC-I	-	7.50
Nalco-I	-	-
Nalco-II	-	-
NTPC-I	-	-
NTPC-II	-	-
NTPC-III (GoO Bonds)	-	93.74
NTPC-IV	-	32.61
Loan Syndication	-	3.98
Unrated New Bonds	-	-
<b>Sub Total</b>	-	<b>3.98</b>
Pension Trust Bonds	-	11.07
GoO Bonds	-	-
<b>Total Bonds</b>	-	<b>151.00</b>
<b>Other Loans</b>		
PFC Loan	-	5.25
PFC WCL	-	-
PFC STL	-	3.75
IBRD Loan	-	31.35
REC Loan	-	18.91
LIC Loan	-	-
State Govt. Loan	-	-
Central Govt. Loan	-	0.94
Open Market Loan	-	2.76
Commercial Banks	-	-
SPA Loan	-	-
ICICI	-	-

UBI	-	14.15
Ahalabad Bank	-	11.87
HUDCO	-	40.38
Dena Bank	-	7.91
UCO Bank	-	15.91
Short term Borrowings	-	-
<b>Other Loan Total of B</b>	-	<b>153.18</b>
Finance charges	-	-
<b>Grand Total(A+B)</b>	<b>355.49</b>	<b>304.18</b>
Interest O/s	-	-
Total Loan	-	-
Less: Int. on Loan receivable from DISTCOs	129.05	0.00
Less: Interest Capitalisation	25.03	25.03
Interest Chargeable to revenue	201.40	279.15
Average rate of interest	9.00%	7.70%
Av. rate of interest approved by Comm.		8%
Total interest impact 8% average rate		315.99
Less interest capitalised		25.03
Net interest chargeable to revenue	<b>201.40</b>	<b>290.96</b>

## 6.22 Depreciation

- 6.22.1 GRIDCO has claimed Rs.58.53 crore towards depreciation. The licensee has calculated depreciation at pre-92 rate prescribed by Govt. of India.
- 6.22.2 The depreciation was being calculated at post-94 rate as prescribed by Govt. of India on asset base that was revalued on 01.4.96. The Commission, in order to neutralize the impact of revalued cost on the tariff, had directed in the tariff order dtd.19.4.2002 to calculate depreciation at pre-92 rate which is substantially lower than post-94 rate linked to the life of the assets. The intention was to balance the interest of the consumers as well as the licensees. This would avoid front loading of tariff but at the same time would ensure necessary cash flow for the licensee for loan repayment and funds for asset replacement.
- 6.22.3 The Commission has extensively dealt with the asset valuation and calculation of depreciation in para 5.36.1 to 5.37.5 of tariff order dated 23.06.2003 and treated the asset base of GRIDCO at Rs.514.32 crore as on 01.04.1996.
- 6.22.4 The year wise asset addition from 1996-97 to 2003-04 is as per the annual accounts submitted by GRIDCO. For the year 2004-05, GRIDCO has originally proposed an addition of Rs.555.22 crore which was subsequently revised to Rs.389.99 crore. The detailed project wise

completion of assets during 2004-05 submitted by GRIDCO is given in table below:

**Table : 36**

<b>Sl.No.</b>	<b>Name of the Project</b>	<b>Rs. in crore</b>
1.	400 KV Meramundali-Mendhasal D/C line	88.02
2.	220 KV Indravati-Theruvalli D/C line	29.72
3.	220 KV Bidanasi-Mendhasal D/C line	11.18
4.	220 KV Theruvalli-Narendrapur D/C line	31.83
5.	220 KV Narendrapur-Balugaon D/C line	25.19
6.	220 KV Nalco-Meramundali D/C line	6.59
7.	220 KV Duburi (New)-Duburi (Old) D/C line	3.59
8.	132 KV Bolangir (Old) – Bolangir (New) line	0.27
9.	132 KV Narendrapur-Chatrapur line	2.04
10.	132 KV Narendrapur-Berhampur line	1.73
11.	132 KV Hirakud LILO Chiplima-Baragarh line	2.04
12.	132 KV Budhipadar-Sundargarh line	5.68
13.	132 KV Chhend-Nuagaon line	5.07
14.	LILO of 132 KV Baripada-Rairangpur SC line to Kalabadia	0.32
15.	132 KV line Gundhichapada (Dhenkanal) Grid S/S to Railway Traction at Joranda Road	4.03
16.	400/220 KV Meramundali sub-station	103.54
17.	220 KV Budhipadar S/S extension	6.53
18.	220 KV Thruvali S/S extension	2.78
19.	220 KV Rengali S/S extension	2.91
20.	220/132 KV S/S at Narendrapur	8.93
21.	132/33 KV S/S at Boinda	11.55
22.	132/33 KV S/S at Sundargarh	9.54
23.	132/33 KV S/S at Burla	26.38
24.	132 KV Bay Extn. at Sijua	0.53
	<b>Total</b>	<b>389.99</b>

6.22.5 The Gross Book Value of assets as on 01.04.1996 and yearwise addition upto 2004-05 as approved by the Commission for the purpose of calculation of depreciation is shown below:

**Table : 37**

			<b>Rs. in Crore</b>
Year	Gross Book Value	Average rate	Depreciation
Upto 01.04.1996	514.32		
Yearwise addition			
1996-97	49.46		
1997-98	39.94		
1998-99	62.50		
1999-00	111.79		
2000-01	134.10		
2001-02	86.44		
2002-03	132.17		
2003-04	69.46		
2004-05	389.99	3.13%	49.77
Total upto 2004-05	1590.17		

6.22.6 The Commission approves Rs.49.77 crore towards depreciation for 2005-06 at par with the weighted average rate of depreciation based on pre-92 rate as approved in the tariff order dated 24.06.2003. It will not be out of place to mention here that Hon'ble High Court while disposing the OJC No.6751 of 2001 on the tariff for 2003-04 had categorically held that depreciation is to be calculated at pre-92 rates prescribed by Govt. of India.

### **6.23 Contribution to Contingency Reserve**

For the year 2004-05, GRIDCO has proposed Rs.12.41 crore towards contribution to contingency reserve to be provided. The same is allowed by the Commission to be passed on to tariff.

### **6.24 Miscellaneous Receipts**

6.24.1 The Licensee had proposed Rs.762.67 crore as miscellaneous receipts for the year 2005-06 at the transmission tariff of 36.91 paise/unit as indicated below:

**Table : 38**  
**Miscellaneous Receipts (GRIDCO's Proposal 2005-06)**

	<b>Quantity In MU</b>	<b>Rate Paise/unit</b>	<b>Amount Rs. Crore</b>
Wheeling to CPPs	430	36.91	15.87
Wheeling to other States	1000	17.50	17.50
Sale to CPPs	10	330.00	3.30
Export	3300	220.00	726.00
<b>Total</b>			<b>762.67</b>

6.24.2 **Revenue from Export of Power:** GRIDCO had proposed revenue earning of Rs.726.00 crore by way of export of 3300 MU to outside state at an average rate of 220 paise per unit. The Commission scrutinised the proposal of GRIDCO and approves 2808.28 MU for export after meeting the state demand. The total revenue from export @234.575 p/u (average of actual export rate for the period from 4/04 to 2/05) works out to Rs.658.75 crore.

6.24.3 In calculating the expected aggregate revenue for 2005-06, the revenue earning by GRIDCO from export of power has also been taken into account. The rate at which this power has been sold being higher than the procurement cost of GRIDCO, this will benefit the consumers of the State in the form of reduction of Bulk Supply Tariff. It is needless to emphasize that the extra revenue earned due to export of power will reduce the burden of the consumers of the State by way of liquidating the past liabilities of GRIDCO.

6.24.4 The estimated Miscellaneous Receipts excluding export of power has been recalculated by the Commission as mentioned in the table below.

**Table : 39**

	<b>Quantity In MU</b>	<b>Rate Paise/unit</b>	<b>Amount Rs. Crore</b>
Wheeling to CPPs	430.00	25.00	10.75
Wheeling to other States	1000.00	17.50	17.50
Sale to CPPs	10.00	330.00	3.30
<b>Total</b>			<b>31.55</b>

6.24.5 **Revenue from UI :** UI charges are dependent on several unknown risk factors like the behaviour of grid constituents, demand (peak and off peak) of the state, hydrology condition, line availability, etc. for which GRIDCO has not considered the revenue from UI charges for 2005-06. GRIDCO has projected 'nil' figure towards UI charges. The Commission directs that any revenue earning by GRIDCO on account of UI charges during 2005-

06 should be accounted for and adjusted against the past liabilities of GRIDCO.

**6.25 Bulk Supply Tariff for 2005-06**

**6.26 Tariff Hike**

6.26.1 It is the duty of the Commission to scrutinize the claims of licensee with a fine tooth-comb and allow properly/prudently incurred expenditure for revenue requirement. But after we do so, Revenue Requirement finally determined has to be allowed to be raised through tariff. This is precisely the position of Law and has to be appreciated by the consumers of all categories. Keeping the above objective in view, the Commission has gone ahead in deciding the various parameters regarding determination of revenue requirement of the licensee in an endeavour to strike a balance between the interests of end consumers on one hand and financial viability of licensee on the other.

6.26.2 Condition 8.2 of the Bulk Supply and Transmission licensee (2/97) provides for use of system services to any user on price or other terms which materially differ from those offered to other users, where such differences reflect different circumstances of service including load factor, power factor, level and timing of peak demand and any other relevant factors.

6.26.3 It is a fact that some amount of cross-subsidy through a higher BST will be available from one utility to the consumers of another utility with lower BST to maintain uniform retail tariff through out the State.

6.26.4 Based on the aforesaid considerations the Commission deems it desirable to continue with differential Bulk Supply Tariff for the four distribution companies and uniform retail tariff through out the State.

**6.27 Determination of Demand and Energy Charge**

6.27.1 Demand Charge is levied in consonance with the philosophy of realisation of cost in proportion to the capacity requirement of the utilities. Energy charge is recovered in proportion to the actual quantum of energy consumed by the utilities.

6.27.2 After taking into consideration the revenue requirement for 2005-06, the Commission does not consider it necessary to revise the existing rate of demand charge upwards to Rs.250/KVA/month or Rs517.24 KVA/Month as proposed by GRIDCO. Therefore, the existing demand charge at Rs.200/KVA/month is retained by the Commission for 2005-06. The expected revenue from the demand charge based on the maximum demand for the various distribution companies approved by the Commission for 2005-06 is given in the table below:

**Table : 40**  
**Annual Demand Charges (Estimated)**

	<b>FY 2005-06 (MVA)</b>	<b>Demand Charge (Rs./KVA/month)</b>	<b>Expected annual Revenue from Demand charges (Rs. Crs.)</b>
CESCO	671.86	200	161.25
NESCO	467.12	200	112.11
WESCO	651.21	200	156.29
SOUTHCO	275.99	200	66.24
<b>TOTAL</b>	<b>2066.18</b>		<b>495.88</b>

6.27.3 Taking into account the facts placed before the Commission the following energy charges are approved which shall be applicable to various distribution licensees.

		<b><u>Existing</u> (for 2004-05)</b>	<b><u>Revised</u> (effective from 1.4.05)</b>
CESCO	Demand charge:	Rs.200/KVA/month	Rs.200/KVA/month
	Energy charge :	92.00 paise/unit	85.00 paise/unit
WESCO	Demand charge:	Rs.200/KVA/month	Rs.200/KVA/month
	Energy charge :	96.50 paise/unit	98.82 paise/unit
NESCO	Demand charge:	Rs.200/KVA/month	Rs.200/KVA/month
	Energy charge :	86.00 paise/unit	86.00 paise/unit
SOUTHCO	Demand charge:	Rs.200/KVA/month	Rs.200/KVA/month
	Energy charge :	84.00 paise/unit	75.00 paise/unit

6.27.4 Based on the aforesaid rates, the expected revenue from the energy charges for the different distribution companies is given in the table below:

**Table : 41**  
**Energy Charges**

<b>Name of the Company</b>	<b>Estimated 2005-06 (MU)</b>	<b>Energy Charge (In p/u)</b>	<b>Revenue from energy charges (Rs. in Cr.)</b>
CESCO	3930.00	85.00	334.05
NESCO	3308.14	86.00	284.50
WESCO	4150.00	98.82	410.10
SOUTHCO	1800.00	75.00	135.00
<b>Total</b>	<b>13188.14</b>		<b>1163.65</b>

6.27.5 As against GRIDCO's total revenue requirement of Rs.2302.56 crore, it will recover Rs.495.88 crore through demand charge and Rs.1163.65 crore

from energy charge meeting its revenue requirement of Rs.1659.53 crore for the year 2005-06 from the DISTCOs and the company will earn an amount of Rs.690.30 crore on account of export of power outside the state and miscellaneous revenue.

#### **6.28 Charges for Overdrawal of Energy**

6.28.1 GRIDCO in its application proposes that any expenditure of GRIDCO in respect of purchase of power in excess of the approved annual quantity of energy should be reimbursed by the Distribution and Retail Supply Licensee in proportion to its drawl in excess of the quantity approved by OERC.

6.28.2 The Availability Based Tariff has been implemented in the Eastern Region w.e.f. 1<sup>st</sup> April 2003. The principle of ABT aims at enforcing grid discipline with an objective to maintain stability in frequency excursion and efficient use of available energy resources. The Commission will frame suitable guidelines/regulations for intra-state ABT which will be binding on all the users of the system. Any excess drawl of energy by a Distribution and Retail Supply Licensee would be payable at the actual cost of power purchase plus transmission charges and transmission loss subject to necessary changes due to implementation of state ABT.

#### **6.29 Rebate**

6.29.1 For payment of bills through a letter of credit on presentation/upfront by cash, 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 GRIDCO, a rebate of 1% shall be allowed.

#### **6.30 Late Payment Surcharge**

6.30.1 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.

#### **6.31 Duty and Taxes**

The Commission approves that 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.

#### **6.32 Revenue Requirement for the Year 2005-06**

In the light of above discussion, the Commission approves the revenue requirement of GRIDCO for 2005-06 as given in the table below:



Table : 42

		Rs. in crore	
		2005-06	
A.	Expenditure	Proposed	Approved
	Cost of Power Purchase	1907.51	1836.38
	Employee costs	189.07	113.32
	Repair & Maintenance	20.73	14.80
	Administrative and General Expenses	18.54	15.73
	Provision for Bad & Doubtful Debts	0.00	
	Other expenses	1.84	1.84
	Depreciation	58.87	49.77
	Interest Chargeable to Revenue	201.40	290.96
	Sub-Total	2397.96	2322.80
	Less: Expenses capitalised	1.84	1.10
	<b>Total expenses</b>	<b>2396.12</b>	<b>2321.70</b>
B.	Special appropriation		
	Carry forward of Previous Losses	0.00	
	Contingency reserve	12.41	12.41
	<b>Total</b>	<b>12.41</b>	<b>12.41</b>
	<b>TOTAL(A+B)</b>	<b>2408.53</b>	<b>2334.11</b>
C.	Less Miscellaneous Receipt	762.68	31.55
D.	Total Revenue Requirement	1645.85	2302.56
E.	Expected Revenue (Full year) from DISTCOs	1645.85	1659.53
F.	Revenue from Export		658.75
G.	<b>Total Revenue</b>		2318.28
	<b>Surplus (G-D)</b>	<b>0.00</b>	<b>+15.72</b>

### 6.33 Treatment of Pass Through of Past Losses

6.33.1 GRIDCO had applied for pass through of Rs.1372.32 crore of accumulated losses from the year 1996-97 to 2003-04, as a part of revenue requirement of the licensee for 2004-05. To the extent, it could not be dealt in the ARR of 2004-05, GRIDCO requested that the same may be allowed in the revenue requirement for 2005-06.

6.33.2 The Commission while approving the tariff for 2004-05 had directed to address this issue in tariff order of 2005-06. The balance sheet of GRIDCO as on 31.03.04 indicates accumulated loss of 1376.70 crore & the accumulated depreciation of Rs.624.99 crore. This depreciation seems to have been calculated applying post-94 rate on the value of assets which needs to be re-cast in compliance with the orders of the Hon'ble High Court of Orissa at pre-92 rate. But both the figures of accumulated depreciation and commercial loss as on 31.03.2004 will undergo change. The Commission allowed the interest payable by GRIDCO due to securitisation of power purchase of Rs.2063.00 crore on account of conversion of current liability (power purchase liability) to long-term liability. GRIDCO, on the other hand, has receivables of 1800.08 crore

from sundry debtors towards power sale. GRIDCO should take follow up action for realisation of the receivables to reduce its long-term liabilities. The Commission is aware of the fact about export of power outside the state and earning of additional revenue on account of unscheduled interchange consequent upon implementation of ABT. The Commission, therefore, directs that the revenue earned out of such transactions should be utilised to wipe out the past losses without burdening the general consumers of the state.

- 6.33.3 In the wake of power sector reforms in State of Orissa, GRIDCO was carved out of OSEB and started functioning from 01.4.96 with bulk supply, transmission and distribution and retail supply throughout the State. Till disinvestment of GRIDCO's share in DISTCOs by 31.3.99/01.9.99, GRIDCO sustained loss primarily on account of its distribution business. This loss was further accentuated due to failure in monsoon in 2002-03 requiring purchase of high cost powers from the central generating stations in lieu of low cost power from old stations of OHPC. The High Power Committee appointed by the Govt. of Orissa in 2001 for suggesting mid-course correction of the reform process made certain recommendations such as keeping in abeyance the effect of upvaluation of assets, no return on equity to GRIDCO etc. had the beneficent effect of reducing the revenue requirement which were accepted by the Commission and led to reduction in BST. Besides completion of inter-state regional links facilitated evacuation of bottled up generation in the eastern region, provided scope for export of power outside the state in case of a good monsoon. The liberalisation effect resulted in reduction of interest on borrowings that helped swapping of high cost loans by GRIDCO for which GRIDCO after sustaining financial losses has started showing signs of improvement in financial parameters. The Commission shall separately advise the Govt. to keep in abeyance the upvaluation of assets and other measures, as approved vide Government of Orissa letter dt.29.01.03 to continue for a period of five years beyond 2005-06 for the sector to fully turn around. However, the surplus in GRIDCO revenue should be utilised to wipe out the past losses appearing in the books of account as indicated earlier.

#### 6.34 **Transmission Tariff**

- 6.34.1 The total energy to be transmitted in the system is estimated at 13628.14 MU, the details of which are presented in the table below:

**Table : 43**

Transmission Details	MU
Sale to DISTCOs	13188.14
Wheeling to CPP	430.00
Sale to CPPs	10.00
<b>TOTAL</b>	<b>13628.14</b>

6.34.2 The net cost of transmission works out to Rs.340.30 crore as approved by OERC. The details of the calculation of transmission charges is depicted in the table below:

**Table : 44**

<b>Transmission Cost</b>	<b>Rs.in crore</b>
Employee Cost	113.32
R&M Cost	14.80
A&G Cost	15.73
Interest on project related Loan	151.03
Depreciation	49.77
Other expenses (ERLDC fees)	1.84
<b>Sub-total</b>	<b>346.49</b>
Less Expenses capitalised	1.10
<b>Total</b>	<b>345.39</b>
Special Appropriation	0.00
Contingency Reserve	12.41
<b>Grand Total</b>	<b>357.80</b>
Less Inter-state wheeling	17.50
<b>Net Transmission Cost</b>	<b>340.30</b>
Total transmission in MU	13628.14
Transmission Tariff (p/u)	24.97 p/u (rounded to 25.00 p/u)

6.34.3 The transmission charges work out to 24.97 paise/unit which is rounded off to 25 paise/unit for 2005-06 to be applicable for transmission of power inside the State through the use of GRIDCO's EHT transmission system by any user. As far as DISTCOs are concerned, this transmission tariff has been included in their BST.

6.34.4 NALCO had requested OERC to decide on the question of existence of bilateral agreement between NALCO & GRIDCO. It had further requested that if any transmission tariff is fixed before the same is decided, the said tariff might not be made applicable to NALCO. The Commission reiterates that the issue in question has already been addressed vide its order dt.31<sup>st</sup> January, 2005 in case Nos.4 of 99 and 12 of 99. The Commission directs that any user of transmission system of GRIDCO including NALCO shall have to pay transmission tariff as fixed by the Commission from time to time.

#### **6.34.5 Transmission Loss for Wheeling**

GRIDCO has proposed that out of the energy supplied to transmission and bulk supply licensee, 4% shall be deducted towards transmission loss and balance is liable to be delivered at delivery point at 220/132 kV. Based on the facts and figures submitted to the Commission, it is observed that the

transmission loss for 2005-06 works out to 4%. For the purpose of billing, the transmission loss shall be 4%.

**6.34.6 Rebate**

For payment of bills through a letter of credit on presentation/upfront by cash, 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 GRIDCO, a rebate of 1% shall be allowed.

**6.34.7 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.

- 6.35 The Commission has approved GRIDCO's revenue requirement for 2005-06 at Rs.2302.56 crore as indicated in para 6.32 which GRIDCO is allowed to recover at the approved tariff during the financial year 2005-06.
- 6.36 The Commission directs the licensee to implement the Bulk Supply Tariff and Transmission Charges as determined by the Commission in this order to become effective after expiry of seven days of the publication under section 57 of the OERC (Conduct of Business) Regulation, 2004.
- 6.37 The Commission is likely to issue the Open Access Regulations consequent to which there may be a necessity for reconsideration of the revenue calculation and tariff of the licensees. This may require amendment to the existing tariff and revenue requirement calculation made hereunder, if deemed necessary.
- 6.38 The composite Bulk Supply and Transmission Tariff now approved by the Commission may undergo change as a sequel to grant of separate licenses for trading and transmission activities.
- 6.39 The Bulk Supply Tariff and Transmission Tariff in respect of GRIDCO will become effective from 1<sup>st</sup> April, 2005.

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

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

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

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