

**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.146 OF 2004**

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

**DATE OF ORDER** : **26.02.2005**

**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 related 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 2004-05.

**ORDER**

This order is initiated on the application filed by the Grid Corporation of Orissa Limited (GRIDCO) holder of the Orissa Transmission and Bulk Supply Licence, 1997, (No.2/1997), which was registered as Case No.175/2003, for determination of its Annual Revenue Requirement (ARR) and fixation of Transmission and Bulk Supply Tariffs for the Financial Year (FY) 2004-05. A brief history of the case is as follows:

**1 PROCEDURAL HISTORY**

- 1.1 GRIDCO submitted its application before the Commission on 31.12.2003 for the aforesaid purpose. After due scrutiny, the Commission passed an order dated 14.06.2004 to call for objections from the intending objectors. Accordingly, a public notice was published in one leading English and one Oriya newspaper on 16.06.2004 and 17.06.2004. After such publication, the Commission received objections from different objectors. One of the objectors, Orissa Consumers' Association, Cuttack, challenged the tariff application before the Hon'ble High Court of Orissa in WP(C) No.7160 of 2004 on the allegation that after enactment of the Electricity Act, 2003, the Commission, without enacting the Regulations, could not determine the tariff as prayed for by the GRIDCO & other licensees. The Hon'ble Court, while upholding the validity of the Regulations and tariff applications partly allowed the writ application to the extent that the Regulations came into force not on the date of their publication in the official gazette but on the dates when Gazette publications were put to sale and became available to the

general public. Accordingly, the public notices dated 14.06.2004 and 24.06.2004 were quashed by the Hon'ble Court. The Commission thereafter thought it prudent to require fresh tariff applications from the licensees in conformity with the several observations of the Hon'ble High Court and issue fresh public notices of such tariff applications. Hence, GRIDCO submitted its fresh applications for ARR and Tariff for 2004-05 on 25.11.2004. After receipt of such fresh applications, due publications were made in one leading English and one Oriya newspaper on 02.12.2004 inviting objections. The licensee was also instructed to file its rejoinder to the suggestions and objections by 31.12.2004.

- 1.2 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 (Conduction of Business) Regulations, 2004 and OERC (Terms and Conditions for determination of Tariff) Regulation, 2004. GRIDCO submitted its ARR application for 2004-05 on 25.11.2004 and also proposed the revision of BST.
- 1.3 The tariff applications for the year 2004-05 and 2005-06 were filed under Sections 61 to 64 of the Electricity Act, 2003 read with OERC (Terms and Conditions for determination of Tariff) Regulation, 2004 and OERC (Conduct of Business) Regulation, 2004. The Commission decided to take into consideration the revenue requirement and tariff application for the year 2004-05 along with revenue requirement and tariff applications for the year 2005-06 through a combined hearing. Further, the Commission also decided to dispose of the review petition filed by Energy Department, Govt. of Orissa for review of orders of the Commission dtd.28.6.03 passed in Case No.61/2002 allowing Rs.94.10 crore to GRIDCO (operation of which was stayed vide Commission's order dtd.27.12.03 in Case No.167 of 2003) along with the aforesaid revenue requirement and tariff applications during the ensuing tariff hearing. These applications were taken up along with tariff hearing inasmuch as the questions raised in those applications were tariff related. However, the orders in respect of those applications have been passed separately.
- 1.4 Based on such paper publications the Commission received 16 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, Khetrampur, 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 (16) NALCO, Bhubaneswar.

- 1.5 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.
- 1.6 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 16 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.
- 1.7 The public hearing on GRIDCO's proposed Annual Revenue Requirement and Transmission and Bulk Supply Tariff for the year 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.
- 1.8 The original petition registered as Case No.146 of 2004 dated 25.11.2004 is being disposed of by this order of the Commission.
- 1.9 Further the above Consumers' Association 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 also devoid of any merit.
- 1.10 In the course of the hearing Mr. K.N. Jena 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.
- 1.11 Mr. Jena 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, include the issues relating to the BST Order of 2003-04. The Commission had earlier decided to dispose of the Review Petition filed by the Department of Energy, Govt. of Orissa, for review of the orders of the Commission dt.28.06.2003 passed in case no. 61/2002. This order had allowed Rs.94.10 crore to GRIDCO the operation of which was stayed vide the Commission's order dt. 27.12.2003 in case no.167/2003. Since this matter was tariff related and had bearing on the tariff decisions for 2004-05, the Commission had decided to club the matter along with the tariff petition of GRIDCO for 2004-05.

- 1.12 Mr. Jena had 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 2004-05 on 25.11.2004 as per the relevant regulations of OERC.
- 1.13 One of the objectors assailed impartiality of the Commission on the ground (a) that on the issue of power cut at Soro Division of NESCO, it took no action against NESCO even though its own inquiry confirmed alleged laches and negligence on the part of NESCO and (b) that 6 SLPs each were filed by OERC and GRIDCO through a common counsel alleging identical facts and law. As to the ground (a), the Commission took no action against NESCO because Hon'ble High Court in seisin on the matter and the inquiry was conducted as per the order of the Hon'ble Court and the inquiry report was submitted to the Hon'ble Court. As to the ground (b), the Commission moved the Supreme Court against the order of the Hon'ble Court directing the Commission to show cause why the contempt proceeding shall not be initiated. GRIDCO also moved to the Supreme Court assailing the order of the Hon'ble High Court, as to the facts and circumstances which led to issue of the aforesaid show cause notice. There was no conflict of interest between the Commission and GRIDCO. In the circumstances, the Commission has not thought it improper to engage the same counsel that GRIDCO had engaged. Even though GRIDCO raised certain points in its written objection in response to Commission's notice, none appeared on behalf of the objector to press these points at hearing.
- 1.14 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 its written objection into consideration.

## 2 GRIDCO'S ARR & TARIFF PROPOSAL FOR 2004-05

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. 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 sells surplus power to outside states.

### 2.2 Power Projections

2.2.1 The actual demand for 2003-04 and projections thereof for the year 2004-05 as submitted by GRIDCO in the BST and ARR applications are given in Table-1.

**Table - 1**  
**Demand Projection for 2004-05**

(Figures in MVA)

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

2.2.2 The actual energy requirement for the distribution companies, CPPs and export of power for 2003-04 and projections for 2004-05 thereof as reported by GRIDCO in the aforesaid application are given in Table - 2.

**Table - 2**  
**Energy Projection for 2004-05**

(Figures in MU)

Name of the Company	2003-04 (Actual)	2004-05 (Projection)
CESCO	3899.57	4079.46
NESCO	2636.74	2824.00
WESCO	3784.16	3912.90
SOUTHCO	1608.67	1653.00
<b>Total Distcos</b>	<b>11929.14</b>	<b>12469.36</b>
CPPs	9.03	10.00
Export	3299.37	4300.00
<b>Total Sale</b>	<b>15237.54</b>	<b>16779.36</b>

## 2.3 Revenue Requirement for 2004-05

2.3.1 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. In addition, GRIDCO has proposed for pass through of Rs.1372.32 crore on account of previous losses from 1996-97 to 2003-04.

2.3.2 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 for inter-state transmission of power outside the state and
- v) Wheeling charges for intra-state transmission of power from CPPs to Industries located at distant places inside the state.

The projection of Revenue Requirement for 2004-05 and excess or deficit there-against of clear profit over reasonable return, as furnished by GRIDCO, are reproduced in table-3.

**Table - 3**  
**Revenue Requirement for 2004-05 (as furnished by GRIDCO)**  
**(Rs. in Crore)**

	Item	2003-04 (Approval)	2004-05 (Proposal)
a)	Power Purchase Cost	1648.72	1974.53
b)	Transmission Cost	397.11	512.69
c)	Previous loss	48.72	1372.32
d)	Revenue Requirement (a+b+c)	2094.55	3859.54
e)	<b>(-) Misc. Receipts (at existing tariff)</b>	<b>540.11</b>	<b>980.16</b>
f)	Net Revenue Requirement (d-e)	1554.44	2879.38
g)	Reasonable Return	0.00	0.00
h)	<b>Revenue Requirement (f+g)</b>	<b>1554.44</b>	<b>2879.38</b>
i)	Net Revenue Receipt from sale of power to DISTCOs at existing tariff	1554.44	1613.42
j)	<b>Excess or Deficit of Clear Profit over Reasonable Return</b>	<b>0.00</b>	<b>(1265.96)</b>

2.3.3 GRIDCO submits that the present BST application is driven by the following imperatives:

- The licensee cannot meet its current costs with the present tariff structure as it results in a deficit of Rs.1265.96 crore.
- GRIDCO has faced a considerable increase in power purchase cost which constitutes 70% of its total cost. The cost escalations in the Central Sector Generators are exogenous to the licensee and the latter has little control over it. Further, drawl from CPPs is less in spite of GRIDCO's best efforts.

2.3.4 GRIDCO has considered a total energy procurement of 17,298.92 MU by adding transmission loss of 4% over total energy sale of 16,779.36 MU.

2.3.5 GRIDCO prays the Commission to allow Rs.1372.32 crore as a pass through of previous loss from 1996-97 to 2003-04 in the BST of 2004-05.

2.3.6 A summary of the proposal of GRIDCO's expected revenue for 2004-05 as submitted in TRT-23 is given in Table-4.

**Table - 4**  
**Expected Revenue From Charges 2004-05**

		(Rs. in Crore)				
		(EXPECTED REVENUE WITH ANTICIPATED SALE AT EXISTING RATES)				
Sl. No.	NET TOTAL REVENUE (DISTCOs)	CESCO	NESCO	WESCO	SOUTHCO	TOTAL
1	a)Gross receipt from Energy Charges	375.31	242.86	377.60	138.85	<b>1134.62</b>
2	b)Gross receipt from Demand Charges	160.80	103.20	147.60	67.20	<b>478.80</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					946.00
7	Unscheduled Interchange					0.00
8	<b>Total of Miscellaneous Receipts</b>					<b>980.16</b>
9	<b>d)Net Total Revenue (=a+b+c)</b>					<b>2593.58</b>

#### 2.4 Recovery of Cost Through Bulk Supply Tariff for 2004-05

2.4.1 GRIDCO proposes to set the BST so as to recover the full cost of supply of Rs.2876.47 crore based on a two-part tariff structure comprising demand charges and energy charges. It envisages that 95.06% of its total costs to be recovered through BST is fixed and 4.94% is variable. The

fixed costs include Rs.849.46 crore on account of power purchase, Rs.1372.32 crore due to pass through of previous loss from 1996-97 to 2003-04, Rs.501.08 crore as transmission cost and of Rs.11.61 crore as contingency reserve. GRIDCO submits that the variable charges of Rs.1125.07 crore reduces to Rs.142.00 crore after adjustment with miscellaneous receipts of Rs.983.07 crore.

- 2.4.2 For recovery of the entire cost, GRIDCO has projected the following alternative options for structuring demand and energy charges (Page 7 of BST application).

**Table - 5**  
**Tariff Structure Options for 2004-05**

<b>Structuring Option</b>	<b>Demand Charges Rs./kVa/Month</b>	<b>Energy Charges Paisa/unit</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	1142.22	11.39
Demand Charges of Rs.250 per kVa per month. Energy Charges will cover balance fixed costs and all variable costs of generation.	250.00	182.69
Demand Charges of Rs.200 per kVa per month. Energy Charges will cover balance fixed costs and all variable costs of generation.	200.00	192.28
Proposed average energy charge	0	230.68
Existing average energy charge		130.00
% Rise over current average energy charge		77.45%

- 2.4.3 In proposing the tariff structure, 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.
- 2.4.4 GRIDCO has been billing to the distribution companies the demand charges 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.

- 2.4.5 GRIDCO has assessed the revenue receipt from demand charges based on a total SMD of 1995.00 MVA per month as given in Table - 6.

**Table - 6**  
**Computation of Demand Charges (2004-05)**

Demand charges per month (Rs./KVA)	250.00
Chargeable Demand in MVA per month	1995.00
Annual Revenue from Demand Charges (Rs. in crore)	598.50

## 2.5 Energy Charges

After deduction of the revenue earnings from demand charges, the balance revenue requirement is proposed to be realised through energy charges, the computation of which is shown in Table - 7.

**Table - 7**  
**Computation of Energy Charges (2004-05)**

Total Revenue Requirement from BST (Rs. in crore)	2876.47
Annual Revenue from Demand Charges (Rs. in crore)	598.50
Balance revenue to be recovered from Energy Charges (Rs. in crore) (a)	2277.97
Energy Quantity to be sold (MU) (b)	12469.36
Energy Charges (P/U) (a/b)	182.69

## 2.6 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 dtd. 19.01.2001 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 a 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".

## 2.7 Delayed Payment Surcharge

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

## 2.8 Rebate

Corresponding to the delayed payment surcharge, GRIDCO has also proposed 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% of the billed amount is paid within 48 hours and 1% rebate on the balance amount, if paid 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.

## 2.9 Pass through of Previous Losses and Carry Forward of Revenue Gap

2.9.1 GRIDCO has applied for a pass through of Rs.1372.32 crore of past losses from the year 1996-97 to 2003-04 and requests 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. GRIDCO further requests the Commission to allow carry forward of the additional cost, if any, for recovery in future tariffs.

2.9.2 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.

## 2.10 Transmission tariff

GRIDCO has estimated that the full cost of transmission including contingency reserve and reasonable return will come to Rs.512.69 crore for 2004-05 (Table-3). However, after adjustment of revenue of Rs.17.50 crore from inter-state wheeling, the total transmission cost boils down to Rs.495.19 crore. On the basis of this cost estimate, the calculation of transmission tariff is proposed at 38.36 P/U by GRIDCO as indicated in Table - 8.

**Table - 8**  
**Transmission Tariff for 2004-05**

Transmission Cost with Reasonable Return less revenue from interstate wheeling (Rs. in crore)	(a)	495.19
Total Units Sold to DISTCOs & CPPs (MU)	(b)	12479.36
Total Units Wheeled (MU)	(c)	430
Transmission Tariff (P/U)	[a/(b+c)]	38.36

## 2.11 Transmission Loss

GRIDCO projects transmission loss of 4.00% for 2004-05 calculated by following the Gross Method as adopted by OERC. GRIDCO has mentioned 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 this regard.

## **2.12 Summary of Tariff Filing For 2004-05**

2.12.1 GRIDCO in its filing has sought for approval of Bulk Supply Tariff comprising :-

- 2.12.1.1 Demand charges @ Rs.250 per KVA/month.
- 2.12.1.2 Energy charges @ 182.69 paise/unit on energy supplied.
- 2.12.1.3 Charges for over drawl in demand and energy.
- 2.12.1.4 Delayed Payment Surcharge as proposed.
- 2.12.1.5 Rebate as proposed.

### **2.12.2 Transmission tariff covering**

- 2.12.2.1 Wheeling charges @ 38.36 paise/unit.
- 2.12.2.2 Transmission loss @ 4.00%.

## **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 2004-05 and 2005-06. GRIDCO requests that the principal as well as the interest amount be allowed to be recovered from the tariff.

2.13.2 PGCIL has submitted a bill of Rs.28.42 crore towards outstanding dues for inter-regional tariff against GRIDCO for the period from 01.04.2001 to 31.11.2004 in line with the CERC order dtd. 03.09.2003. At present, the matter is subjudice in the High Court of Orissa. GRIDCO requests OERC for pass through of this amount in the ARR for 2004-05.

2.13.3 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 2004-05.

2.13.4 PGCIL has submitted a bill of Rs.8.8050 crore on account of contracted power for the period from 01.04.2003 to 31.03.2004 in terms of CERC tariff notification dtd. 26.03.2001. This amount may be considered for pass through in the ARR for 2004-05.

2.13.5 GRIDCO has been processing the bills of OHPC at the rates as approved in the tariff order for 2002-03 because 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 are

made effective, GRIDCO will be duty bound to pay the differential amount to OHPC in which case such additional payment 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 which registered an increase from 32 P/U to 40 P/U for 300 MU because of non acceptance of Parekh Committee recommendations. GRIDCO requests the Commission to make good the loss recoverable 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 years 2004-05. Based on their nature and type, these objections have been categorised subject-wise as discussed below:-

#### **3.2 Legal Issues**

One of the objectors stated that OERC has not framed any regulation by notification to determine terms and conditions for fixation of tariff. The Central Commission also has not laid down the principles and methodology for tariff fixation. The Commission, therefore, cannot proceed to consider the application of the licensee for determination of tariff. The application filed by the licensee is not supported by affidavit as required under Regulation 12 of OERC (Conduct of Business) Regulation, 2004 and, therefore, the facts mentioned in the application cannot be relied upon for the purpose of revenue requirement and fixation of tariff. It is not disclosed by the licensee in the application as to whether the said application is accompanied by fee so determined by the OERC Regulation, which is mandatorily required under Section 64 of the Electricity Act, 2003. It is submitted that the Commission has not yet prescribed any fee for filing application for determination of tariff u/s 62 of the Act by Regulation. The application is not valid and legal without payment of the prescribed fee. The representative of the association further iterated that the licensee has filed revenue requirement and tariff applications in compliance with the directives of the Commission made before the Electricity Act, 2003 came into force. As such, the directive issued by the Commission is not legal and valid. The tariff proceedings, therefore, are not in accordance with the law. Further, in the public notice issued by the licensee it is found that a number of other applications on different subjects shall be considered along with tariff setting, which is not permissible under law. The licensee has not filed ARR from 1<sup>st</sup> of April 2003 to 31<sup>st</sup> March 2007 by December 2003 for LTTS as per the direction of the Commission. Further,

composite application for 2005-06 is confusing and is in contravention of the erstwhile law.

### **3.3 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.

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

3.4.1 Some objectors stated that GRIDCO's estimate of Maximum Demand should be taken into consideration.

3.4.2 Some objectors suggested that the unilateral determination of energy and demand by GRIDCO was not justified. These estimates provided by DISTCOs should be taken into account.

3.4.3 Some objectors stated that with T&D loss reduction, DSM activity and proper metering both by GRIDCO and DISTCOs, peak demand and energy demands for 2004-05 could be met from state's-own generation with some off-peak energy purchase from neighbouring states. The objector wanted to know if correct meters have already been placed at all power purchase points at generation and sale points at DISTCOs' end.

3.4.4 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 DISTCOs in their respective ARR's might be taken into account for determining the income from demand charges.

### **3.5 Transmission Loss**

3.5.1 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.

3.5.2 Some others maintained that the transmission loss projected by GRIDCO needed reconsideration. As per its calculation, the transmission loss for 2004-05 comes to 3.8%.

3.5.3 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. This loss on gross basis for 2004-05 is only 3.4%. Therefore, transmission loss of 3.5% might be allowed for 2004-05.

3.5.4 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.

- 3.5.5 One of the objectors stated that the target for achieving transmission loss at 3.5 % be fixed for 2004-05.
- 3.5.6 Another objector suggested that the proposed transmission loss have 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 3.28% for 2004-05.
- 3.5.7 Some objectors stated that the status quo in regard to transmission losses should be maintained i.e. 3.58% during 2004-05.
- 3.5.8 One of the objectors stated that the licensee had not been able to arrest the transmission loss.
- 3.5.9 Another objector stated that Gross method of calculation of transmission loss should be examined.

### **3.6 Tariff Filing by Generators**

- 3.6.1 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 2004-05 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.

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

- 3.7.1 Some objectors stated that power requirements estimated by the DISTCOs for 2004-05 were more reliable and should be considered.
- 3.7.2 One of the objectors suggested that the estimation of GRIDCO of the net power availability from the state hydro source needed upward revision. It does not command to logic why Hiraakud generation has been projected at 772.20 MU for 2004-05 against design energy of 1174 MU and how the loss of generation due to high reservoir level of Hiraakud and Rengali before on set of monsoon would be apportioned. As such, the consumers should not meet this loss. The water should have been utilised by not drawing KHSTPS power whose variable cost was 111 P/U and was higher than OHPC cost. The aggregated hydro generation (OHPC+ Indravati + Machhkund) during 2004-05 would be in excess of 7,200 MU as against 6794.2 MU projected by GRIDCO. In the absence of the execution of the two-part tariff, 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.

- 3.7.3 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.
- 3.7.4 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.
- 3.7.5 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 16,706 MU for 2004-05. The generation plan of OHPC as submitted to GRIDCO may be accepted. However, the plan for Upper Kolab needed scrutiny.
- 3.7.6 Another objector did not agree with the projected availability of power by GRIDCO and submitted alternative details of power availability. The total availability from various sources has been estimated by the objector at 19,238 MU as against 17,299 MU projected by GRIDCO for 2004-05. The objector stated that the drawl from Hydro stations should be put at 7824 MU for 2004-05. 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. Drawl from CPPs might be kept at 1370 MU for 2004-05. 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 19,238 MU for 2004-05.

### **3.8 Power Procurement Costs**

- 3.8.1 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. Against design energy of 3942 MU available from Old Power Houses of OHPC, GRIDCO had projected 3795.74 MU thereby loosing 146 MU of low cost power. 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.

- 3.8.2 Some objectors estimated the power requirement at 17,299 MU at a cost of Rs.1974 crore for 2004-05. One of the objectors suggested a realistic power mix and reasonable pricing of the same. The power purchase cost was estimated at Rs.1906.21 crore for 2004-05. by the objector.
- 3.8.3 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 three times of purchase cost of power from the CPPs.
- 3.8.4 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 became viable. Thereafter, measures for reduction of past losses of GRIDCO, should be taken. The power purchase cost for the state's own need of 12,164 MU worked out to Rs.1188.54 crore and the average cost was 93.6 P/U. GRIDCO should charge this rate to DISTCOs. GRIDCO should procure off-peak thermal power from other near-by states as and when available.
- 3.8.5 Another objector stated that the cost calculations for TSTPS and FSTPS needed scrutiny.
- 3.8.6 One of the objectors felt that there was a scope for reduction of power purchase cost in case of hydro stations. The O&M expenses projected by OHPC for 2004-05 is Rs.102.92 crore as against the actual of Rs.83.43 crore for 2003-04. This represents an increase of 23% which is far above the escalation factor of 5% adopted by OHPC. In case of TTPS, NESCO 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.221 crore for 2004-05. 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 were



concerned, the objector was keen to know whether the norms specified by the CERC have been taken into account for cost computation of CGSs. The objector has estimated the cost of power at Rs.1920.68 crore for 2004-05 in place of GRIDCO's projection at Rs.1974.55 crore.

- 3.8.7 Another objector stated that the costs of power procurement from different sources had been projected to be very high and optimum utilisation of hydropower had not been considered. Against design energy of 3942 MU available from old power stations of OHPC, GRIDCO has projected 3672 MU, thereby losing 270 MU of low cost power. Cost of fuel price adjustment has been taken to be 10%, but it should be as per actual for the previous year.

### **3.9 Transmission Costs**

- 3.9.1 Some objectors stated that GRIDCO had projected higher transmission cost at Rs.501.08 crore as compared to Rs.441.86 crore in the earlier filing. The depreciation cost amounting to Rs. 44.58 crore in the calculation of transmission cost for 2004-05 should not be allowed. Considering the earlier projection of transmission cost of Rs.441.86 crore, total energy handled of 18,209 MU, the transmission tariff comes to 24.26 P/U for 2004-05. However, the objector revised its submission during hearing and estimated the transmission cost at Rs.368.66 crore and transmission tariff at 21.2 p/u. This tariff should not be applied to CPPs operating in the state for wheeling 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 the reduction of system loss in transmission. The present level of wheeling charges levied on the CPPs wheeling power to their load centres were exorbitantly high.
- 3.9.2 Transmission cost was worked out at Rs.395.70 crore for 2004-05 by one of the objectors.
- 3.9.3 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.
- 3.9.4 Some participants in the hearing 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 felt that the proposed transmission cost of Rs.501.08 crore was not justified and should not be allowed. The interest charges on bonds issued and loans incurred for clearing arrear energy dues of the generating companies was 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 that, these costs were not part of the transmission cost.

- 3.9.5 One of the objectors estimated the transmission cost at Rs.468.36 crore for 2004-05.

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

- 3.10.1 Some objectors suggested that the excess expenditure in respect of employees' cost should not be allowed to be passed on to the consumers. A&G and R&M expenses for 2004-05 should be restricted to Rs.17 crore and Rs.10 crore respectively.
- 3.10.2 One of the objectors submitted that a standard base of reference was necessary for proper computation of terminal liabilities as part of employees' cost.
- 3.10.3 Another objector stated that the licensee's claim of A&G expenses was unreasonable and inflated.

### **3.11 Depreciation & Asset Register**

- 3.11.1 One of the objectors stated that the licensee had no asset and stock register to calculate the depreciation of its assets.
- 3.11.2 Another objector suggested that the basis of calculation of depreciation should be examined in detail.
- 3.11.3 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.

### **3.12 Interest on Long Term Liabilities**

- 3.12.1 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.
- 3.12.2 One of the objectors was of the opinion that the interest and finance charges of GRIDCO might further be reduced.
- 3.12.3 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.

### **3.13 Previous Loss**

- 3.13.1 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.

- 3.13.2 Some objectors submitted that the past losses of GRIDCO could only be passed on provided the licensee had performed within the benchmarks fixed by OERC.
- 3.13.3 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.
- 3.13.4 One of the objectors suggested that the prudence of past losses should be examined by the Commission before passing it on to tariff.
- 3.13.5 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.
- 3.13.6 One of the objectors stated that the past losses of the order of Rs.48.72 crore might be allowed by the OERC for 2004-05. Since the new BST would be applicable from 01.03.2005, GRIDCO ought to state the methods by which it would realize the past losses of Rs.1372 crore.
- 3.13.7 Another objector stated that all the past losses had been put in tariff of 2004-05. Profit out of trading should be adjusted against past losses.

#### 3.14 **Regulatory Assets**

- 3.14.1 One of the objectors felt that GRIDCO should have filed a separate petition while claiming regulatory assets.

#### 3.15 **Revenue Requirement**

- 3.15.1 Some objectors stated that interests payable for securitisation of overdue power purchase dues of generators were 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 2004-05 based on existing BST should be considered at Rs.2420 crore as against the claim of Rs.3859 crore by GRIDCO. In the revenue requirement, DPS receivables from DISTCOs had not been taken into account by GRIDCO. As per the calculation of the objector, the revenue requirement for 2004-05 comes to Rs. 2420.36 crore whereas the revenue earnings comes to Rs. 2635.92 crore indicating a surplus of Rs.215.36 crore.

3.15.2 The revenue requirement had been worked out at Rs. 2465.86 crore for 2004-05 by some objectors.

3.15.3 One of the objectors had worked out the revenue requirement of GRIDCO at Rs.2389.04 crore for 2004-05.

### **3.16 Expected Revenue from Charges**

3.16.1 Some objectors stated that the total receipt from DISTCOs should be Rs.1624.26 crore for 2004-05. The objector stated that the total revenue receipts should be Rs.2635 crore including exports of power for 2004-05.

3.16.2 Some others suggested that Rs.2667.68 crore should be collected on account of sale of energy, wheeling to CPP and other states, sale to CPPs, trading and UI during 2004-05.

3.16.3 One of the objectors stated that the income from wheeling should be Rs.31.20 crore for 2004-05. The objector had estimated miscellaneous receipts at Rs.1462.80 crore for 2004-05.

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

3.17.1 Another objector stated that GRIDCO had not taken the revenue earned by it out of UI charges while computing anticipated Revenue Receipt.

3.17.2 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.

3.17.3 Another objector suggested that the actual earnings through UI charges in 2004-05 might be considered.

3.17.4 One objector stated that the UI charges were to be projected. This was feasible. As the rate for UI was very high as compared to export rate, OERC might conduct a study to determine whether earnings due to more UI of power would bring in higher revenue as compared to export.

3.17.5 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 available through traders.

### **3.18 Transmission Tariffs**

3.18.1 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 cost for a short-term customer was 25% that of a long-term customer as per CERC regulation.

3.18.2 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.

### **3.19 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.

### **3.20 Rebate**

3.20.1 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.

### **3.21 Export of Power**

3.21.1 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.

3.21.2 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. The Commission should examine GRIDCO's proposal for export of 4,300 MU against the actual of 3,299 MU in 2003-04. 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.

3.21.3 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.

3.21.4 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 as to whether the revenue from trading was gross or net.

### **3.22 Tariff**

- 3.22.1 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 12.2 P/U for 2004-05 for all DISTCOs.
- 3.22.2 Some others estimated that GRIDCO should have a surplus of Rs.201.82 crore for 2004-05. The objector suggested that the energy charge should be reduced by 12.2 P/U for 2004-05 for all DISTCOs. The objectors estimated that the surplus amount to be earned by GRIDCO should be of the order of Rs.215.56 crore for 2004-05 at the existing tariff.
- 3.22.3 Some objectors stated that the prevailing BST was already putting a great deal of strength on the survival of existing Ferro alloys and other power intensive industries. Therefore, the proposed BST by GRIDCO for 2004-05 constituted a sure recipe for the demise of the industrial activities of the state.
- 3.22.4 One objector suggested that the demand charges might be kept constant at Rs.200/KVA.
- 3.22.5 Another objector stated that as the recommendations of Soven Kanungo Committee had been accepted, tariff should not be enhanced for five years.
- 3.22.6 One of the objectors stated that the BST rate should be uniform for all DISTCOs.

### **3.23 Other Issues**

- 3.23.1 Another objector submitted that OERC should undertake review of all on going Transmission Projects and fix target dates for their completion.
- 3.23.2 One objector stated that no proper step had been taken to create consumer awareness about the reform process and the establishment cost had increased.
- 3.23.3 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.
- 3.23.4 One of the objectors stated that the stipulations fixed by the Commission in respect of performance parameters should be adhered to during 2004-05. 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.

- 3.23.5 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.
- 3.23.6 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 component and cost towards dam had been allocated accordingly. There exists a co-ordination committee to determine the generation schedule. 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. The litigation and other expenses as stated by the licensee under heading capital investment were deceptive.
- 3.23.7 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 level should be given periodic orientation training at regular intervals.

### 3.24 **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. In respect of determination of tariff for CGSs (Thermal) with effect from 01-04-2004 and onwards, the Commission wanted to know about the 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 of 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 regarding 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 fact that there was no drive on the part of GRIDCO to complete the projects in time and reap its benefits.

### 3.25 **Views of Government of Orissa**

- 3.25.1 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 (if so determined by the Commission) 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 state consumers in the hours of need, it should be allowed to adjust the past losses though these losses included controllable costs (if so determined by the Commission).

#### **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 2004-05 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 projections in line with the Long Term Demand Forecast made by the licensee for DISTCOs for the period 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 Losses**

- 4.2.1 GRIDCO in its reply to the various issues raised on transmission loss said that the calculation of transmission loss of 4% in its ARR application for 2004-05 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 also in PGCIL, which operates mostly on 400 kV lines. In reply to the 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 increasing 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 maximized 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 optimize 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 Costs**

- 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 required 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 Costs**

- 4.5.1 **Employees Costs, 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. 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 witnessed a decline to 5088. GRIDCO operated with all these vacant positions despite the fact that its business had increased manifold over the years. It was submitted that under the provisions of the Transfer Scheme, it had to pay pension to all the pensioners of erstwhile OSEB as on 31.03.1996, the employees who had retired up to 31.03.1999 even if they were in the pay roll of distribution companies and also the employees of Gridco who would retire after 01.04.1999 and their number had increased to 5702 as on 31.03.2004.
- 4.5.2 GRIDCO clarified that the projections for BST applications for 2004-05 could not be based on the OERC approved costs for 2003-04. These should be based on the audited accounts for 2002-03 and the provisional accounts prepared for filing of IT return by the licensee for 2003-04. 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 GRIDCO 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 utilized 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.
- 4.5.4 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 the 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**
- 4.7.1 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. GRIDCO 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. The licensee 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 Losses**
- 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 had been 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 at Income Tax Return), all expenditure reflected in these accounts should be allowed as a pass through in the tariff.
- 4.8.2 GRIDCO 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 were dependent on several unknown risk factors like the behavior 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 behavior 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 & Regulatory Assets**

- 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. The revenue and expenditure projections for 2004-05 were based on audited figures for 2002-03 and, therefore, such expenses should be allowed to be recovered through the tariff. 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 Receipt. This shortfall in Miscellaneous Receipt would have to be compensated from the expected revenue from DISTCOs and, therefore, the burden would be shifted to the state 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, GRIDCO was 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 for the payment of the generators' bills, 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 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-Meramunduli 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 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 – 9</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 the 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. Hence, this amount should not be deducted from the ARR for 2004-05. GRIDCO mentioned that the above amount would be accounted for in the accounts for 2003-04 and profit, if any, could be adjusted against past losses.

- 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 finalized by CERC.
- 4.15.4 With regard to the query of 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 finalized. 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 had stated in the hearing that CERC was yet to determine tariff of individual stations based on the Tariff Regulations effective from 01-04-2004. Hence the tariff to be determined by the OERC for 2004-05 should be provisional subject to adjustment after final determination on tariff by CERC. GRIDCO responded by saying that the tariff to be determined by the Commission for 2004-05 might be based on the existing rates and would remain provisional till tariff for the individual stations were notified by CERC.
- 4.15.6 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.

- 4.15.7 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.
- 4.15.8 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.
- 4.15.9 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 here 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.
- 4.15.10 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 have been projected in the ARR & BST applications for 2004-05.

- 4.15.11 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 in its application, 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.
- 4.15.12 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.

- 4.15.13 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 through out 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 Right of Way 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.
- 4.15.14 Besides the above, some of the projects, even though partly completed and put to use, could not be capitalized 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.
- 4.15.15 Though some of the assets were put to use, no revenue could be generated as the projected industrial load did not materialize. 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.
- 4.15.16 GRIDCO also mentioned that once a project was finalized 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 resulted in little addition to the asset-base of the licensee.
- 4.15.17 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 capitalized 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 event, 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.

- 4.15.18 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 project in time, the IDC would be capitalized 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 time 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)**

- 5.1.1 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, 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.
- 5.1.2 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.

- 5.1.3 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.
- 5.1.4 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.
- 5.1.5 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 have given due consideration to these views expressed by the Hon'ble members in the present 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 2004-05, 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 Grid Corporation of Orissa (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 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 2004-05 for drawl of power from GRIDCO and the latter has prepared the estimate for the same. NESCO, SOUTHCO and CESCO have furnished their forecasts of demand for 2004-05. However, WESCO reportedly did not supply the same to GRIDCO. GRIDCO on its own estimated a growth rate of 3.69% over the OERC approved figure for 2003-04 in respect of WESCO. Thus, 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, assuming 85% availability of GRIDCO's share from the CGSs.
- 6.1.4 The Commission, after detailed analysis of the figures presented by GRIDCO for drawl of power, considers the actual availability of power upto December, 2004 and an estimate for the balance period from January'05 to March'05 except for any abnormal variation during that period.
- 6.1.5 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 no other addition of EHT consumers during the period under review. CESCO covers mostly the coastal belts of Orissa with urban, semi-urban and rural conglomerates. In case of CESCO, out of 8.24 lakh of consumers, 491 consumers belonging to HT & EHT category consume 20.36% of the total power purchased by CESCO. In case of SOUTHCO, out of 4.36 lakh consumers, only 91 under HT & EHT category consume 22.22% of the total power purchased by SOUTHCO. In both CESCO & SOUTHCO more than 99% of the consumers receive power supply at LT where there is hardly any variation in load pattern. For the purpose of load estimation during the last 3 months of 2004-05, it would be quite appropriate to consider the consumption trend of the first nine months of the current financial year and adopt the same on an average basis for the whole year.
- 6.1.6 WESCO and NESCO have a higher ratio of consumer mix in respect of HT & EHT industrial consumers, as compared to other two distribution

utilities. WESCO has a consumer base of 4.35 lakh of which 326 consumers belong to HT & EHT categories and consume 46.10% of the total sale of WESCO. The HT/EHT consumer base of NESCO comprising of 397 consumers accounts for 39.58% of the licensee's total consumption. Due to upward swing in the consumption by the existing consumers, especially the consumers of mineral based & sponge iron industries in EHT/HT categories, as reported by the Distribution Companies, the Commission decided to treat the latest available monthly consumption figures of December, 2004 as an indicator of consumption for balance three months of the financial year.

- 6.1.7 The total consumption for 2004-05 has been determined by combining the current year's consumption of past nine months and estimation for the last quarter of the year. Drawl from GRIDCO also includes the units lost on account of EHT transmission. as the DISTCOs receive metered power supply at EHT consumer end as well as EHT substations. For CPPs, the consumption upto December 2004 has been considered for the year 2004-05. The Commission has worked out the surplus availability from different sources after meeting the State's demand and considers the balance amount of power for the purpose of export by GRIDCO during the current financial year. These have been projected in the table below:

**Table : 10**  
**Purchase of Power by GRIDCO for 2004-05**

(Figures in MU)

AGENCY	FY 2003-04 (Actual)	GRIDCO's proposal in ARR(04-05)	DISTCOS' Proposal in RST(04-05)	Actual From 4/04 to 12/04	Prorating for 12 months	Actual for Dec,04	Prorating for 3 months	Commission's Approval(200 4-05)
CESCO	3,899.57	4,079.46	4140.00	2904.66	3872.88	304.52	884.10	3872.88
NESCO	2,636.74	2,824.00	2778.58	2207.72	2943.63	257.42	747.33	2955.05
WESCO	3,784.16	3,912.90	4028.00	2982.56	3976.75	360.30	1046.04	4028.60
SOUTHCO	1,608.67	1,653.00	1630.00	1209.98	1613.31	134.65	390.91	1613.31
<b>TOTAL DISTCOs</b>	<b>11929.14</b>	<b>12469.36</b>	<b>12576.58</b>	<b>9304.92</b>	<b>12406.56</b>	<b>1056.89</b>	<b>3068.38</b>	<b>12469.84</b>
CPP	9.03	10.00		18.76				20.00
Export	3,299.37	4300.00		3738.89				4301.65
<b>TOTAL SALE</b>	<b>15237.54</b>	<b>16779.36</b>		<b>13062.57</b>				<b>16791.48</b>
Transmission loss for DISTCOs @ (4 % on DISTCOs drawal)		519.56		468.87				519.58
Transmission loss for export								84.10
<b>Total purchase</b>	<b>15774.43</b>	<b>17298.92</b>		<b>13531.44</b>				<b>17395.16</b>

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

6.2.1 The Commission examined the monthly demand for power (in MVA) by the DISTCOs from GRIDCO's system. The SMD billing to DISTCOs for the first nine months of the current financial year is given in the table below:

**Table : 11**  
**Actual Demand Billed By GRIDCO (In MVA) During 2004-05**

<b>DISTCO</b>	<b>Apr-04</b>	<b>May-04</b>	<b>Jun-04</b>	<b>Jul-04</b>	<b>Aug-04</b>	<b>Sep-04</b>	<b>Oct-04</b>	<b>Nov-04</b>	<b>Dec-04</b>
CESCO	655.32	658.59	655.58	658.90	690.62	698.35	689.23	678.41	661.74
NESCO	418.02	413.44	437.35	445.38	446.08	441.83	465.82	472.92	467.12
WESCO	617.08	599.77	601.16	635.67	617.82	643.92	635.42	635.32	651.21
SOUTHCO	286.63	286.23	258.66	262.12	278.62	273.99	278.82	286.46	272.36
<b>TOTAL</b>	<b>1977.04</b>	<b>1958.04</b>	<b>1952.75</b>	<b>2002.07</b>	<b>2033.14</b>	<b>2058.08</b>	<b>2069.28</b>	<b>2073.11</b>	<b>2052.43</b>

6.2.2 BST contains a component of demand charge which is calculated on the basis of average system demand of the distribution companies. An analysis of demand of CESCO indicates that it has varied between 655.32 and 698.35 MVA during first nine months of the current financial year. The average SMD of the first nine months of the current year of CESCO is 671.86 MVA. It may be remembered that while estimating energy the average of the past nine months were extrapolated for the whole year of 2004-05. The same philosophy is applied here for estimation of demand of CESCO. The Commission, therefore, approves the average demand of 671.86 MVA to be maintained by CESCO for the year 2004-05. On the same analogy, the average SMD of 275.99 MVA for SOUTHCO is considered for determination of BST for 2004-05.

6.2.3 The assessment of energy consumption for NESCO and WESCO for the last three months of 2004-05 have been projected on the basis of December, 2004 drawl as explained in the preceding paragraph. Applying the same logic the average SMD of December 2004 at 467.12 MVA for NESCO and 651.21 MVA for WESCO are approved for 2004-05. Accordingly, the total estimated SMD for the four companies is worked out at 2066.18 MVA as presented in the table-12.



**Table : 12**

**Demand in MVA**

<b>DISTCO</b>	<b>Proposal by DISTCO in RST</b>	<b>Proposal by GRIDCO in ARR</b>	<b>Demand in Dec- 04</b>	<b>Average from 4/04 to 12/04</b>	<b>Minimum (4/04 to 12/04)</b>	<b>Maximum (4/04 to 12/04)</b>	<b>Commission Approval for 2004-05</b>
CESCO	707.27	670.00	661.74	671.86	655.32	698.35	671.86
NESCO	460.00	430.00	467.12	445.33	413.44	472.92	467.12
WESCO	640.00	615.00	651.21	626.37	599.77	651.21	651.21
SOUTHCO	280.30	280.00	272.36	275.99	258.66	286.63	275.99
<b>TOTAL</b>	<b>2,087.57</b>	<b>1,995.00</b>	<b>2,052.43</b>	<b>2,019.55</b>	<b>1,927.19</b>	<b>2,109.11</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 2004-05 had submitted that the actual transmission loss for the first six months of the current year worked out to 4.00% adopting gross method of calculation (summarised in DF-1). Further, GRIDCO had also stated that it had no control over the transmission loss since the same depended 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-station, export/import in tie lines etc.
- 6.3.2 The Commission in its earlier BST orders has categorically iterated 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, out of the total transmission of 310.94 MU, 42.05 MU has been attributed to the units lost in transmission on account of wheeling to outside the state through EREB.
- 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-13.

**Table : 13 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 For the year 2004-05, the cost of power has been determined incorporating 84 MU (extrapolating the units lost for the first six months of 2004-05, ie. 42 MU) lost on account of export to EREB.

#### 6.4 Purchase of Power from the 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 during 2003-04 and the projections made by OHPC for 2004-05 are presented in the following table.

**Table : 14**  
**Hydro Drawl and Projections For 2004-05**

Sl. No.	Name of the HE Project	Installed Capacity (MW)	Design Energy (MU)	Net power available to GRIDCO during FY 2003-04	OHPC's Projection for 2004-05(MU)	Proposed drawl by GRIDCO for FY 2004-05
1	Hirakud (Burla & Chiplima)	331.5	1174.00	901.17	772.20	772.20
2.	Balimela	360	1183.00	1121.39	1267.20	1267.20
3.	Rengali	250	525.00	1028.99	863.28	863.28
4.	Upper Kolab	320	832.00	636.96	893.06	893.06
	<b>Total</b>		3714.00	3688.51	3795.74	3795.74
5.	UIHEP	600	1962.00	2109.86	2678.48	2678.48
	<b>Total Hydro</b>		<b>5676.00</b>	<b>5798.37</b>	<b>6474.22</b>	<b>6474.22</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 Since the year 2004-05 is nearing closer, it would be ideal on the part of the Commission to consider the actual generation of different generating stations upto 10<sup>th</sup> February, 2005 and the balance generation scheduled upto 31.03.2005 as per projections made by OHPC while deciding the level of drawl from OHPC stations. 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 provides sufficient ground to arrive at the drawl by GRIDCO during 2004-05 from hydro sources. The same is presented in a tabular format.

**Table : 15**  
**Review of Generation During 2004-05**

Particulars	HPS (MU)	Rengali	Upper Kolab	Balimela	UIHEP	Total
Generation target as fixed by CEA	929	814	645	957	1962	5307
Generation target as per monthly generation schedule of OHPC upto 2/05	783.512	816.72	865.96	1600.8	2824.8	6891.792
Actual generation from 1.4.04 upto 10.02.05	770.804	689.881	772.994	1339.603	2534.63	6107.912
Actual generation from 1.4.03 upto 10.02.04	846.63	1010.648	527.244	870.157	1754.824	5009.503
Reservoir level on 11.2.05	619.21 ft.	118.25 M.	853.46 M	1470.80 ft.	634.45 M	
Minimum Drawdown level	590 ft. (179.83 M)	109.73 M	844 M	1440 ft.	625 M	
FRL	630 ft.	123.50 M	858 M	1516 ft.	642 M	
Reservoir level on 11.02.04	621.52 ft.	118.11 M	854.90 M	1493.20 ft.	637.80 M	
Expected RL as per working table on 31.03.05	606.77 ft.	114.01 M	850.32 M	1456.76 ft.	630.59 M	
Actual RL on 31.03.04	613.41 ft.	116.37 M	852.57 M	1473.80 ft.	634.00 M	
Balance generation from 10.02.05 upto 31.03.05	45.638 MU/ 32.11 MW	63.12 MU/ 53.67 MW	117.6 MU/ 100 MW	177 MU/ 150.5 MW	235.2 MU /200 MW	638.558 MU

Balance generation scheduled upto June'05 (from April to June'05)	74.592 MU/ 34.15 MW	69.02 MU/ 31.6 MW	174.72 MU/ 80 MW	275.94 MU/ 126.34 MW	589.68 MU /270 MW	1183.952 MU
Gross generation during 04-05 (Sl.3 + Sl.12)	816.44	753.00	890.59	1516.60	2769.83	6746.47
<b>Net availability after auxiliary</b>	<b>808.27</b>	<b>747.47</b>	<b>881.68</b>	<b>1501.43</b>	<b>2742.13</b>	<b>6679.00</b>

6.5.5 Considering the generation upto 10<sup>th</sup> February 2005 and the balance generation scheduled for the remaining period of 2004-05, the total quantum comes to 6746.470 MU. After accounting for auxiliary consumption @ 1%, it comes to 6679 MU. The Commission accepts the projections made by OHPC for a drawl of 6679 MU by GRIDCO from the old stations (3936.87 MU) and UIHEP (2742.13 MU) taken together.

6.5.6 **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 320 MU corresponding to 34.2 MW firm power for 2004-05.

6.5.7 GRIDCO had drawn 265.40 MU during 2003-04 as per Commission's approval. Considering higher reservoir level in all hydro stations, GRIDCO had projected higher drawl for the year 2004-05. The Commission approves 320 MU to be drawn from this station during 2004-05.

6.5.8 GRIDCO's proposal and the Commission's approval for 2004-05 for various stations of OHPC are given in the table below.

**Table : 16**  
**Drawl From Hydro Stations(2004-05)**

Source of Generation	GRIDCO Proposal (2004-05)	Commission's Approval (2004-05)
OHPC (Old stations)	3795.74	3936.87
Upper Indravati	2678.48	2742.13
Machkund	320.00	320.00
<b>Total Hydro</b>	<b>6794.22</b>	<b>6999.00</b>

6.5.9 **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 2004-05 implying thereby that all Units shall be fully operated. Thus the annual energy sale works out to 2670.00 MU from TTPS at 74.45% PLF for 2004-05.

GRIDCO had proposed the net drawl at 2670.00 MU for the current year. Taking the CERC guidelines into consideration, the Commission approves net drawl of 2689.76 MU for the year 2004-05.

- 6.5.10 **Ib Thermal (OPGC):** Orissa Power Generation Corporation (OPGC) owns the thermal generating stations at Ib with an installed capacity of 2x210 MW.
- 6.5.11 OPGC in its generation plan for 2004-05 had projected a target generation of 3120.00 MU with auxiliary consumption of 312.00 MU thereby showing net availability of 2808.00 MU at PLF of 85%. Accordingly, GRIDCO has proposed to draw 2808.00 MU from OPGC during the year considering 10% auxiliary consumption.
- 6.5.12 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 2830.22 MU at 85% PLF as against 2808.00 MU proposed by GRIDCO.
- 6.5.13 **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 needed. The actual availability from the CPPs varied widely from the quantum approved by the Commission in the past years. Considering the present trend, the total drawl from CPPs as proposed by GRIDCO is 630 MU for 2004-05. However, GRIDCO had drawn 492.27 MU from the CPPs upto December, 2004.
- 6.5.14 Considering the past trend and also the relatively low cost of power, GRIDCO should maximise the drawl from the CPPs. Thus, the Commission approves drawl of power to the extent of 650 MU from CPPs for 2004-05.

## 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 2004-05, had stated that the scheduled system loss for ER system varied from week to week ranging 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 2004-05. 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. As ABT system is in operation and Loss has been calculated by ERLDC on weekly basis, the Commission considers the Central Sector loss at 2.94% for 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 the basis of 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 85% PLF. The details of GRIDCO's proposal to draw power from NTPC's ER stations in 2004-05 are furnished in a table below:

**Table : 17**  
**Energy Sent Out and Drawl For 2004-05**

Central Thermal Stations	Availability at 85% PLF (MU)	Share of GRIDCO (%)	GRIDCO Share excluding Central loss 3.3% (MU)	GRIDCO proposed drawal (MU)
TSTPS	6805.00	31.80	2092.58	2092.58
FSTPS	10845.00	14.69	1540.56	1540.56
KhSTPS	5540.00	9.40	503.57	503.57
TOTAL	23190.00		4136.71	4136.71

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. It is observed from the ABT based provisional REA for the month of January, 2005 that the actual cumulative availability for 2004-05 upto January, 2005 for FSTPS, KHSTPS and TSTPS comes to 68.97%, 82.58% and 83.94% respectively. PLF level of FSTPS may not reach 80% whereas KHSTPS and TSTPS may go beyond 80% PLF. Thus, the energy drawl from the above central sector stations has been estimated taking PLF of 70% for FSTPS, 83% for KHSTPS & 84 % for TSTPS based on the trend of last ten months of current 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-18.

**Table : 18**  
**Drawl From Central Generating Stations(2004-05)**

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons (%)	Estimate PLF (%)	Net Availability	GRIDCO Share (%) from 1 <sup>st</sup> Apr,04 to 30 <sup>th</sup> sept,04	GRIDCO Share (%) from 1 <sup>st</sup> Oct,04 to 31 <sup>st</sup> Mar,05	GRIDCO share (MU)	Share excluding Central sector transmission loss of 2.94% (MU)	Comm. Appr. for 2004-05 (MU)
TSTPS	1000	7.50	84.00	6806.52	31.80	31.90	2167.88	2104.22	<b>2104.22</b>
FSTPS	1600	7.56	70.00	9069.47	14.69	15.37	1363.14	1323.12	<b>1323.12</b>
KhSTPS	840	9.00	83.00	5557.80	9.40	11.43	578.84	561.85	<b>561.85</b>
TOTAL				21433.79			4109.86	3989.19	<b>3989.19</b>

6.6.4 **Chukha:** Orissa has been assigned share of 17.4% upto 30<sup>th</sup> September 2004 and 15.19% w.e.f. 1<sup>st</sup> October 2004 (Vide CEA letter dt.29.09.04) in 270 MW Chukha Hydro Power Station, Bhutan. This Orissa quota works out to 45 MW on an average. GRIDCO's drawl from Chukha has been projected at 259.96 MU for 2004-05.

6.6.5 In absence of the Load Generation Balance Report (LGBR) of the Eastern Region for the year 2004-05, the actual receipt of power at Birpara for the period April,04 to January,05 and actual for 2/04 to 3/04 has been considered for projecting Chukka drawl by GRIDCO for 2004-05. The total GRIDCO share for 2004-05 comes to 236.99 after deducting the Central Sector transmission loss @ 2.94%. Further, it is noticed from the figures furnished in Pool Cost that GRIDCO has drawn 223.25 MU upto December, 04. Hence, the Commission adheres to the share estimates and approves 236.99 MU in respect of drawl from Chukha Hydro Station for 2004-05.

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 2004-05 is given in the table-19.



**Table : 19**  
**Quantum of Power Purchase from Various Sources for 2004-05**  
**(Figures in MU)**

<b>Sources of Purchase</b>	<b>GRIDCO's Proposal (2004-05)</b>	<b>Commission's approval (2004-05)</b>
<b>OHPC (OLD)</b>	3795.74	3936.87
Machhkund	320.00	320.00
Indravati	2678.48	2742.13
<b>TOTAL HYDRO</b>	<b>6794.23</b>	<b>6999.00</b>
TTPS	2670.00	2689.76
OPGC	2808.00	2830.22
CPP	630.00	650
<b>TOTAL ORISSA</b>	<b>12,902.22</b>	<b>13168.98</b>
<b>Chukha</b>	259.96	236.99
<b>TSTPS</b>	2092.58	2104.22
<b>FSTPS</b>	1540.56	1323.12
<b>KSTPS</b>	503.57	561.85
<b>TOTAL EREB</b>	<b>4396.67</b>	<b>4226.18</b>
<b>TOTAL GRIDCO PURCHASE</b>	<b>17,298.90</b>	<b>17395.16</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 2004-05. 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 2004-05. 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 the power procurement cost assessment 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 The tariff calculations 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 2004-05.
- 6.7.5 As per the relevant provisions of the Electricity Act, 2003, OHPC has filed ARR for 2004-05 with OERC. The Commission has made necessary arrangement to conduct a public hearing soon on OHPC's filing after which the per unit rate of various stations of OHPC shall be finalised w.e.f. 01.04.2004 for a period of five years in line with CERC guidelines.
- 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 29.34 paise/unit (TRT-10) with pass through of electricity duty on auxiliary consumption. Subsequently, GRIDCO had submitted revised calculation of tariff at 28.66 paise/unit for 2004-05.
- 6.7.7 The revised rate of 28.66 paise/unit as proposed by GRIDCO for the year 2004-05 has been duly examined and the Commission approves the tariff on the following considerations:
- (i) O&M Expenses are taken as per actuals for the year 2003-04 and annual escalation of 4% allowed for 2004-05.
  - (ii) Depreciation is linked to loan repayment.
  - (iii) ROE taken @ 12% for new projects only commissioned after 01.04.1996 (as per Govt. of Orissa notification).
- 6.7.8 On the basis of the above parameters, the total annual revenue for the year 2004-05 in respect of old OHPC stations comes to Rs.105.41 crore computed at the rate of 28.67 paise/unit. This is based on the the annual generation of 3714 MU.

## 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 taken .The Commission urges OHPC to expedite the matter and get the approval for final project cost from CEA. Till the exercise is over, the tariff may be treated as provisional.
- 6.8.2 GRIDCO had proposed a rate of 62.38 paise/unit in respect of UIHEP with pass through of ED on auxiliary consumption of power. The

detailed calculation of the proposed rate of 62.38 paise/unit has been furnished in form TRT-11 of ARR 2004-05 by GRIDCO.

6.8.3 The calculation submitted by GRIDCO for the year 2004-05 was examined and found that the rate of 62.38 paise/unit needed certain modifications as under:

- (i) Interest on PFC loan with guarantee commission for 2004-05 comes to Rs.20.46 crore instead of Rs.20.74 crore.
- (ii) O&M escalation factor has not been considered for calculating O&M expenses for 2004-05. GRIDCO had submitted the revised calculation of tariff for UIHEP on 6.01.05, which indicated a rate of 62.86 paise/unit.

6.8.4 The Commission has adopted the parameters as applicable to OHPC old stations for calculation of tariff of UIHEP. Accordingly, the total fixed cost comes to Rs.122.11 crore taking annual generation of 1962.00 MU for the year 2004-05. Thus, the unit rate comes to 62.86 paise/kwh.

6.8.5 Due to favourable monsoon and high reservoir levels, UIHEP has been able to generate excess energy to the extent of 736.10 MU over and above the design energy. This 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 and the total cost comes to 46.28 crore.

## 6.9 **Machhkund**

6.9.1 OHPC had furnished a rate for Machhkund Power Station at @17.43 paise/unit for 2004-05 inclusive of the arrear O&M charges based on energy drawl of 320 MU. On scrutiny of the calculation, the following observations were 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, O&M expenses comes to Rs.2.94 crore and the rate per unit comes to 16.99 paise for the year 2004-05. Accordingly, the procurement cost is worked out at Rs.4.46 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 the fixed cost of Rs.233.276 crore as against NTPC's petition before the CERC stating fixed cost as Rs.236.96 crore for 2004-05. CERC has already approved the TTPS tariff in which the total fixed cost comes to Rs.159.28 crore for the year 2003-04. The relevant extract of the CERC's order dated 5<sup>th</sup> November, 2003 (Petition No.62/2000) is reproduced below:

*"Para 18 : All other elements of tariff decided by the Commission in its order dated 19.06.2002 shall remain valid. The total fixed charges, to which the petitioner will be entitled in the light of the decisions in the preceding paragraphs, which are in supersession of the fixed charges approved by the Commission in its order dated 19.06.2002, are summarized below:*

**Table : 20**

**(Rs. in Lakh)**

<b>Particulars</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
<i>Depreciation</i>	3083	1943	1943	1943
<i>Interest on Loan</i>	1491	1190	890	586
<i>Return on Equity</i>	3455	3455	3455	3455
<i>Advance Against Depreciation</i>	00	00	00	00
<i>Interest on Working Capital</i>	763	818	857	898
<i>O&amp;M expenses</i>	5556	8051	8534	9046
<b>Total</b>	<b>14349</b>	<b>15456</b>	<b>15678</b>	<b>15928</b>

*Para 19 : The above (revised) fixed charges are approved, subject to other terms and conditions contained in the Commission's order dated 19.06.2002."*

- 6.10.3 The R&M expenditure allowed by the CERC upto October, 2003 is Rs.437 crore. As the matter of TTPS tariff comes under the purview of the CERC, the Commission has not allowed the fixed cost as proposed by GRIDCO unless the same is approved by CERC. Thus, the Commission assumes the fixed cost as Rs.159.28 crore for 2004-05 as already approved by CERC for 2003-04.
- 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 2004-05 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 year 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. Taking Rs.126.35 crore as R&M capitalisation, the Commission approves Rs.25.78 crore of additional capital cost. As such, the total fixed cost for TTPS for the year 2004-05 comes to Rs.185.06 crore. However, the actual expenditure on account of R&M would be considered after receipt of due approval from CERC.

#### **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. At present TTPS charges an average of 4.45 paise/unit towards FPA as shown in their bills from April 04 to June 04. The same FPA rate of 4.45 paise/unit has been allowed by the Commission for 2004-05.

#### **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 2004-05 which included Rs.20.03 crore towards Income Tax. The Commission on examination of the claims has observed that GRIDCO has received some 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. 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 considered in the ARR of 2004-05 and the same may be passed on at actual as and when the relevant documents would be produced before the Commission. The following projections as year-end adjustments for 2004-05 have been accepted by the Commission. (i) Electricity duty of Rs.5.78 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 2004-05 comes to Rs.5.78 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 under review and the matter is subjudice. At present, the per unit rate for OPGC has been finalised based on GRIDCO's filing of the cost components of OPGC station for 2004-05 subject to revision, if deemed necessary, depending upon the outcome of the case pending before the Hon'ble High Court of Orissa.

- 6.13.2 **Fixed Cost:** GRIDCO had projected the annual fixed cost at Rs.237.18 crore for 2004-05 (DF-13). On scrutiny of the evidential documents it is revealed that GRIDCO has accepted the fixed cost as worked out by OPGC at Rs.225.39 crore. Hence, the Commission approves the fixed cost at Rs.225.39 crore for the year 2004-05.
- 6.13.3 **Variable Charges:** GRIDCO has proposed variable charges in respect of Ib Thermal Power Stations at 54.46 paise/unit for 2003-04 and 2004-05. On the other hand, in the evidential documents produced by OPGC and accepted by GRIDCO, variable charge have been taken as 56.54 paise/unit. The Commission after detailed scrutiny of these proposals accepts 56.54 paise/unit as variable charges.
- 6.13.4 **FPA:** FPA for 2004-05 is projected 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 0.36 paise/unit for 2004-05.
- 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.5.94 crore towards Electricity Duty for 2004-05. Since generation has been accepted at 85% PLF, an incentive of Rs.18.38 crore has been allowed over the normative fixed cost at 68.5% PLF for the year 2004-05. Considering all the factors mentioned above, the total year-end charges as approved for 2004-05 by the Commission comes to Rs.31.15 crore.
- 6.13.6 **Captive Power Plants (CPPs)**
- GRIDCO in its application for 2004-05 had stated that the procurement cost for energy received from CPPs was 102.45 paise/unit comprising 77 paise/unit as the base rate and 25.45 paise/unit towards escalation on account of increase in fuel cost. The Commission has endorsed this rate for determining the cost of power purchase from the CPPs.
- 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 principle and norms as determined by the CERC from time to time. Based on CERC notification and CEA 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 the ABT based monthly provisional REA.

- 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 Rs.322.691 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). 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 2004-05.
- 6.15.3 Further, GRIDCO has considered a sum of Rs.27.03 crore as year-end charges which comprises of 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 2004-05.
- 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 have been supplied.
- 6.15.4.3 The Commission approves an amount of Rs.5.00 lakh for maintenance of the special type of energy meter for the period 2004-05.
- 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 details of GRIDCO's proposal & Commission's approval towards year-end adjustment during 2004-05 are given in table-21.

**Table : 21****Rs. in crore**

<b>Description</b>	<b>GRIDCO Proposal</b>	<b>Commission Approval</b>
Incentive	12.98	12.98
FERV	4.80	4.08
Income Tax	9.20	2.51
AMC for Special meters	0.05	0.05
<b>Total</b>	<b>27.03</b>	<b>19.62</b>

6.15.5 The total fixed cost comes to Rs.351.76 crore inclusive of year-end charges for 2004-05. GRIDCO's share is Rs. 63.42 crore based on allocation of 17.728% upto 30<sup>th</sup> September 2004 and 18.33% with effect from October 2004. An amount 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.57.59 crore. The details are furnished below:

**Table : 22**  
**PGCIL Transmission Charges**

<b>Annual tariff as claimed by PGCIL for (Reference Bill for 12/04 )</b>	<b>GRIDCO Proposal</b>	<b>Commission Approval</b>
Regional Transmission System (Rs. In Cr)	185.440	204.44
Inter-Regional Transmission system (Rs. In Cr)	135.754	127.70
<b>TOTAL FIXED COST</b>	<b>321.194</b>	<b>332.144</b>
Year end Charges (Rs. In Cr)	27.03	19.62
<b>Total Transmission Cost (Rs. In Cr)</b>	<b>348.22</b>	<b>351.76</b>
GRIDCO Share (Rs. in Cr.) (17.73% upto Sept,04 & 18.33 w.e.f Oct,04)		63.42
Less allocated to Short term customer (Prorating actual receipt from 4/04 to 12/04 for whole year as billed by PGCIL)		5.83
<b>Net amount payable by GRIDCO towards Tr. Charge (Rs. In Cr)</b>		<b>57.59</b>
Energy Drawal by GRIDCO (MU)		4354.03
PGCIL Tr. Charge P/U		13.23
PGCIL Tr. Charge P/U Including Central loss of 2.94%	14.20	13.63



- 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 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 145.74 paise/unit for 2004-05.
- 6.15.8 Based on GRIDCO's drawl from Chukha power station, the average rate per unit of Chukka power has been worked out by the Commission at 144.21 paise/unit inclusive of central transmission loss and transmission charges for 2004-05.

#### 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 their 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 their 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's 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 applicable on 31<sup>st</sup> March, 2004 for 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 18/19/24.06.2000 and the share allocation made by CEA. Accordingly, the fixed cost has been arrived at Rs.352.70 crore by GRIDCO. The Commission approves the fixed cost at Rs.285.87 crore for 2004-05 in line with the CERC notification dated 30.04.2004 and CEA notification dated 29.09.2004. Fixed cost calculation as approved, is indicated in the table below:

**Table : 23**  
**Fixed Cost of Central Thermal Power Stations**

Central Thermal Stations	Date of Order	Fixed cost applicable for FY 03-04 (Rs. in crore)	Estimate Availability (%)	Estimated Fixed Cost (Rs. in crore)	Provisional fixed cost for GRIDCO approved by Commission for 2004-05 (Rs. in crore)
Talcher STPS	24.08.2004	501.27	84%	501.27	159.65
Farakka STPS	19.07.2004	581.26	70%	508.60	76.44
Kahalgaoon STPS	18.06.2002	477.88	83%	477.88	49.77
Total		1560.41		1487.75	285.87

#### 6.18 Variable Charges

- 6.18.1 GRIDCO in para 1.5.8.2 of the BST application for 2004-05 has furnished the calculation for variable charges. The Commission has accepted the variable charges calculated by NTPC based on the CERC revised norms as applicable for 2004-05.

6.18.2 FPA has been calculated by GRIDCO on the basis of actual bills for the period from April, 2003 to March, 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 2004-05 are given in Table below.

**Table : 24**  
**Variable Charges of Central Thermal Power Stations (P/U)**

Stations	GRIDCO Proposal for 2004-05			Provisional Variable cost calculated based on new norm W.e.f. 2004-05		
	V.C	F.P.A.	TOTAL	V.C	F.P.A.	TOTAL
<b>FSTPS</b>	46.16	54.03	100.19	107.32	-2.03	105.29
<b>KHSTPS</b>	50.86	61.00	111.86	107.48	7.01	114.50
<b>TSTPS</b>	32.72	12.28	45.00	41.06	5.32	46.38

6.18.4 **Year-end Charges:** GRIDCO has projected the year-end charges for 2004-05 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 : 25**  
**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 2004-05.

- i) Income tax constitutes a major part in 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.
- 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 2004-05.

iv) Incentive has been given as per CERC order at a flat rate of 25 P/U over the PLF of 80% achieved by the CGSs for 2004-05.

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

**Table : 26**  
**Approved Year-end Charges (2004-05) )(Paise/unit)**

Central Thermal Stations	GRIDCO's Proposal	Commission's Approval
Talcher STPS	8.45	2.82
Farakka STPS	8.60	3.05
Kahalgaon STPS	7.40	0.92

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-27 & 28 respectively.

**Table : 27**  
**GRIDCO's Proposal for Power Purchase Cost**

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	3795.74		29.34				29.34	111.38
MACHAKUND	320.00		17.43				17.43	5.58
INDRAVATI	2678.48		62.38				62.38	167.08
<b>TOTAL HYDRO</b>	<b>6794.23</b>		<b>41.81</b>				<b>41.81</b>	<b>284.03</b>
TTPS	2670.00	87.37	48.37	2.82	9.36		147.93	394.96
IB TPS	2808.00	84.46	54.05	0.36	9.37		148.24	416.26
CPPs	630.00		77.00	25.45			102.45	64.54
<b>TOTAL STATE</b>	<b>12902.23</b>	<b>36.46</b>	<b>47.55</b>	<b>1.91</b>	<b>3.98</b>		<b>89.89</b>	<b>1159.80</b>
FSTPS	1540.56	66.65	47.74	61.46	8.60	14.67	199.12	306.75
KHSTPS	503.57	89.20	52.60	69.39	7.41	14.68	233.28	117.47
TSTPS	2092.58	98.02	33.84	13.97	8.46	14.23	168.51	352.61
CHUKKA	259.96		131.51			14.23	145.75	37.89
<b>TOTAL C.S.</b>	<b>4396.67</b>	<b>80.22</b>	<b>46.63</b>	<b>36.13</b>	<b>7.89</b>	<b>14.43</b>	<b>185.31</b>	<b>814.73</b>
<b>TOTAL</b>	<b>17298.90</b>	<b>45.78</b>	<b>47.31</b>	<b>10.60</b>	<b>4.97</b>	<b>3.67</b>	<b>114.14</b>	<b>1974.53</b>

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

**Table : 28**  
**Commission's Approval of Power Purchase Cost**

Source	Energy Drawal	Fixed cost (Rs. in crore)	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	3936.87			28.67				28.67	112.87
MACHAKUND	320.00			16.99				16.99	5.44
INDRAVATI	2742.13			62.86				62.86	172.38
<b>TOTAL HYDRO</b>	<b>6999.00</b>							<b>41.53</b>	<b>290.69</b>
TTPS	2689.76	185.06	68.80	48.37	4.45	2.15		123.77	332.90
IB TPS	2830.22	225.39	79.64	56.54	0.36	11.00	-	147.54	417.57
CPPs	650			77.00	25.45			102.45	66.59
<b>TOTAL STATE</b>	<b>13168.98</b>	<b>384.67</b>						<b>84.12</b>	<b>1107.75</b>
FSTPS	1323.12	76.44	57.78	110.57	-2.10	3.14	13.63	183.01	242.14
KHSTPS	561.85	49.77	88.58	110.74	7.23	0.95	13.63	221.12	124.24
TSTPS	2104.22	159.65	75.87	42.30	5.48	2.91	13.63	140.19	294.98
CHUKKA	236.99			130.59			13.63	144.21	34.18
<b>TOTAL C.S.</b>	<b>4226.18</b>	<b>285.87</b>	<b>67.64</b>	<b>77.72</b>	<b>3.03</b>	<b>2.56</b>	<b>13.63</b>	<b>164.58</b>	<b>695.54</b>
<b>GRAND TOTAL</b>	<b>17395.16</b>	<b>670.54</b>						<b>103.67</b>	<b>1803.29</b>

**Note :** (Central transmission loss of 2.94% for central stations included)

#### 6.19 Rebate for Prompt Payment from the Generators

The PPA between the generators and GRIDCO provides for a rebate of 2.5% 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.

#### 6.20 Additional power purchase liability of GRIDCO

6.20.1 PGCIL has submitted a bill amounting to Rs.8.8050 crore on account of contracted power for the period from 01.4.2003 to 31.3.2004 in terms of CERC Notification dated 26.3.2001. GRIDCO has submitted that the same amount may be considered as a pass through in the ARR for 2004-05. The Commission has accepted the above proposal of GRIDCO and has incorporated the said amount in the ARR of 2004-05.

- 6.20.2 PGCIL has submitted a bill for Rs.28.42 crore towards outstanding dues for inter-Regional tariff against GRIDCO for the period from 01.4.2001 to 31.11.2004 vide their letter dated 17.12.2004 in line with the CERC Order dated 03.9.2003. Now the matter is subjudice in the High Court of Orissa as GRIDCO has filed a Writ Petition against the CERC Order dated 03.9.2003. GRIDCO has requested the Commission to consider for pass through of this amount in the ARR for 2004-05, pending the decision of Hon'ble High Court of Orissa. Since the above matter is subjudice, the Commission is of the view that the said amount may be adjusted in subsequent ARR after the case is disposed of by the Court.

## 6.21 Operation and Maintenance Expenses

The operating expenses for GRIDCO may be considered under the following heads:-

Employees Cost

Administration & General Expenses

Repair and Maintenance Expenses

Less expenses capitalized

### 6.21.1 Employees Cost

- 6.21.1.1 GRIDCO has projected employee expenses of Rs.183.36 crore for the year 2004-05. Major components are:

**Table : 29**

**Rs. in crore**

Basic Pay	36.90
DA	23.61
HRA	4.43
Others	2.68
Terminal benefit (Pension Gratuity)	117.54
Total	185.16
Less capitalisation	1.80
Net	183.36

- 6.21.1.2 The actual expenditure for the year 2003-04 based on the provisional account of GRIDCO vis-a-vis the expenditure approved by the Commission for the year are given below:

**Table : 30**  
**FY 2003-04**

	<b>Rs. in crore</b>	
	As per provisional account	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

6.21.1.3 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 actual 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, as per the previous orders of the Commission.

6.21.1.4 As regards DA, GRIDCO has proposed 64% on the basic pay for 2004-05. The DA rate revised from time to time by Govt. of Orissa is given below:

**Table : 31**

	<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

6.21.1.5 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 an anticipated half-yearly rise in DA @ 3% the annual average DA rate may be around 64%. The Commission approves the D.A. rate of 64% over the Basic pay for 2004-05.

6.21.1.6 **Terminal benefits** : GRIDCO has claimed a sum of Rs.117.54 crore towards terminal benefits for the year 2004-05. In the last years filing for 2003-04, GRIDCO had proposed Rs.50 crore as against which the Commission had accepted Rs.33.57 crore.

- 6.21.1.7 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.
- 6.21.1.8 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 appointed by the Commission from time to time.
- 6.21.1.9 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.”*
- 6.21.1.10 As such, for the present, the Commission allows terminal benefits of Rs.117.54 crore for 2004-05 subject to verification as discussed in para 6.21.1.8 above.
- 6.21.1.11 The statement of employee's cost proposed by GRIDCO and approved by the Commission is shown in the table below.



**Table : 32**  
**Employee's Cost**

		<b>Rs. in Crore</b>			
<b>Sl. No.</b>	<b>Particulars</b>	<b>FY-03-04 (Provn)</b>	<b>FY -03-04 (Appr.)</b>	<b>FY-04-05 (Prop.)</b>	<b>FY-04-05 (Appr.)</b>
1	Salaries	36.53	40.75	36.90	37.63
2	Over-time	0.00	0.01	0.00	0.00
3	Dearness Allowance	20.61	24.67	23.61	24.08
4	Other Allowance	0.35	0.6	0.35	0.35
5	Bonus	0.00	0.28	-	-
6	<b>Sub Total (1 to 5)</b>	<b>57.50</b>	<b>66.31</b>	<b>60.87</b>	<b>62.07</b>
	<b>OTHER STAFF COST</b>				
7	Reimbursement of Medical Expenses	1.62	1.81	1.48	1.48
8	Lease Travel Concession	(0.00)	0	-	-
9	Reimbursement of House Rent	3.87	4.94	4.43	3.99
10	Interim Relief to Staff	0.00	0.48	0.00	0.00
11	Encashment of Earned Leave	0.01	1.00	-	-
12	Honorarium	0.01	0.09	0.01	0.01
13	Payment under Workmen compensation Act	0.05	0.03	0.04	0.04
14	Ex-gratia	0.00	1.77	0.00	0.00
15	Miscellaneous	0.19	0.5	0.20	0.20
16	<b>Sub Total (7 to 15)</b>	<b>5.74</b>	<b>10.62</b>	<b>6.15</b>	<b>6.27</b>
17	Staff Welfare Expenses	0.60	1.11	0.60	0.60
18	Terminal Benefits	117.54	33.57	117.54	117.54
19	<b>Total (6+16+17+18)</b>	<b>181.38</b>	<b>111.61</b>	<b>185.16</b>	<b>185.93</b>
	Less :Capitalisation	1.76	11.55	1.80	1.82
	<b>Net Total</b>	<b>179.61</b>	<b>100.06</b>	<b>183.36</b>	<b>184.11</b>

#### 6.21.2 Repair & Maintenance Expenses

6.21.2.1 GRIDCO has proposed an expenditure of Rs.17.58 crore in its BST application for 2004-05 towards repair and maintenance expenses after capitalisation of Rs.0.01 crore.

6.21.2.2 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 5.4% over the approved figure of 2003-04, due to inflation to factor in changes in WPI and CPI.

**Table : 33**

**(Rs. in Crore)**

2003-04		2004-05	
GRIDCO's Proposal	Commission's Approval	GRIDCO's Proposal	Commission's Approval
13.35	13.35	17.59	14.07

#### 6.21.3 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 proposes Rs.18.02 crore under this head for 2004-05 excluding capitalization expenses of Rs.0.89 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 and approves an amount of Rs.14.96 crore for 2004-05 which is 5.4% more than the approved figure of Rs.14.19 crore for the previous year to factor in changes in WPI and CPI.

**Table : 34**

**(Rs. in Crore)**

2003-04		2004-05	
GRIDCO's Proposal	Commission's Approval	GRIDCO's Proposal	Commission's Approval
21.03	14.19	18.02	14.96

#### 6.22 Interest on Loan

In para 3.8 of the ARR application for 2004-05, GRIDCO has proposed gross interest expenses of Rs.410.74 crore. A loan-wise interest payment proposed for the year 2004-05 is reproduced below:

Table : 35

Rs. in crore

			2003-04		2004-05			
		Rate of Interest	As on 31.03.2004	Interest (proposed)	Addition	Repayment	As on 31.03.05	Interest
A	GRIDCO Bonds including securitisation							
I	Exisisting							
	Power Bond-I	15%	41.79	10.91		41.79	-	
	Power Bond-I (residual)	7%			14.73	14.73	-	
	Power Bond-II	15.25%	0.20	17.68		0.20	-	
	Power Bond-II (residual)	9.00%	86.30		7.00	46.65	46.65	
	OPGC-I	15%	-	2.48			-	
	OHPC-I	15.00%	50.00	7.51			50.00	
	Nalco-I	15%	50.00	7.51		50.00	-	
	Nalco-II	10.95%	150.00	16.43		150.00	-	
	NTPC-I	15%	-	-			-	
	NTPC-II	12.50%	-	-			-	
	NTPC-III (GoO Bonds)	8.50%	1,102.88	93.74			1,102.88	
	NTPC-IV	10.00%	342.85	34.32			342.85	
	Sub Total		1,824.02	190.58	21.73	303.37	1,542.38	-
II	Proposed							
	Loan Syndication	8.25%	-		50.00		50.00	
	Unrated New Bonds	10.00%	-				-	
	Sub Total		-	-	50.00	-	50.00	-
III	Other Bonds							
	Pension Trust Bonds	9.00%	150.00	18.03		18.00	132.00	
	GoO Bonds	0.00%	400.00	26.00			400.00	
	Sub Total		550.00	44.03	-	18.00	532.00	-
	Total Bonds		2,374.02	234.61	71.73	321.37	2,124.38	-
B	Other Loans							
	PFC Loan	16.05%	159.21	29.91		86.96	72.25	
	PFC WCL	9.50%	400.00	30.35		400.00	-	
	PFC STL	7.50%			150.00	50.00	100.00	
	IBRD Loan	13.00%	441.12	53.45		200.00	241.12	
	REC Loan	12.15%	317.40	43.84		61.15	256.25	
	LIC Loan	14.00%	140.66	4.92		140.66	-	
	State Govt. Loan	14.00%	168.71	19.19		10.95	157.76	
	Central Govt. Loan	9.25%	11.26	1.01		0.75	10.51	

	Open Market Loan	11.50%	24.03	2.75			24.03	
	Commercial Banks	15.00%	0.00	0.34			0.00	
	SPA Loan	14.00%	-	0.07			-	
	ICICI	13.12%	31.46	4.71		31.46	-	
	Union Bank of India (loan Synd)	8.25%	97.20	11.15	100.00	16.71	180.49	
	Allahabad Bank (loan synd)	8.25%	150.00	5.02		3.57	146.43	
	HUDCO	7.75%	300.00	0.06	300.00	47.37	552.63	
	Dena Bank	8.25%	100.00	2.35			100.00	
	U Co Bank	8.25%			200.00		200.00	
	Short term Borrowings	10.00%	-				-	
	<b>Other Loan Total of B</b>		<b>2,341.05</b>	<b>209.14</b>	<b>750.00</b>	<b>1,049.58</b>	<b>2,041.47</b>	<b>-</b>
	Finance Charge			36.71				
<b>C</b>	<b>Grand Total(A+B)</b>		<b>4,715.06</b>	<b>480.46</b>	<b>821.73</b>	<b>1,370.94</b>	<b>4,165.85</b>	<b>410.74</b>
<b>D</b>	Total Loan		<b>5,314.48</b>				<b>4,755.26</b>	
<b>E</b>	Less: Int. on Loan receivable from DISTCOs			129.05				129.05
<b>F</b>	Less: Interest Capitalisation			51.60				46.47
<b>G</b>	Interest Chargeable			<b>299.81</b>				<b>235.22</b>
	Average rate of interest			10.76%				9.25%

6.22.1 The interest chargeable to revenue comes to Rs.235.22 crore after deducting interest of back to back loan for Rs.129.05 crore and interest capitalised for Rs.46.47 crore. GRIDCO has not furnished the loan-wise calculation of interest in details but calculated the impact of interest at an average rate of 9.25% on the average loan balance.

6.22.2 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% would be 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.

### **6.22.3 GRIDCO back to back loan (PFC/REC etc.)**

6.22.3.1 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.

6.22.3.2 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 monthly recovery of these loan elements through BST rate as LC is already in place.

6.22.3.3 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.

6.22.3.4 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 are different from different companies. Obviously, with the same rate of interest on project related loan, liabilities were different from company to company. 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 tariff.

6.22.3.5 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.

6.22.3.6 The summary of back to back loan as per GRIDCO and as per DISTCOs is given in the table below:

**Table : 36**  
**Summary of back to back loan including GRIDCO portion of IBRD loan**  
**(Position as on 31.03.2004)**

						Rs. in crore
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	245.22	255.46	500.68
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.

6.22.3.7 The Commission in their previous orders directed the DISTCOs as well as GRIDCO to reconcile the loan amount. But they failed to reconcile the same till date. The Commission viewed it seriously and directs the licensees to reconcile the same by 31.03.2005 and submit the joint reconciliation statement.

#### 6.22.4 GRIDCO Bond

6.22.4.1 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 : 37**

**Rs. in crore**

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

6.22.4.2 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 power purchase liabilities.

6.22.4.3 GRIDCO in the meantime has swapped and rescheduled all high cost 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 is given in table 38.

6.22.4.4 Since, the Commission in its earlier tariff order has allowed interest recovery of 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 2004-05.

6.22.4.5 An extract of Govt. of Orissa notification No.R&R1-2/2002/1068 dt.29.01.2003 regarding outstanding dues of OHPC is given hereunder:

*“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.”*

6.22.4.6 The reconciled amount between GRIDCO and OHPC about the outstanding liabilities as on 31.03.2001 have not been filed with the Commission, though a provisional figure of Rs.258.54 crore is shown in the books of accounts of GRIDCO payable to OHPC as on 31.03.2001. This needs to be reconciled between OHPC & GRIDCO after which the Commission will consider securitising the power purchase dues of OHPC as on 31.03.2001.

#### **6.22.5 Loan from PFC**

6.22.5.1 GRIDCO has estimated an amount of Rs.159.21 crore as 31.03.2004 and assumes repayment of Rs.86.96 crore for the year 2004-05, thereby reducing the loan balance to Rs.72.25 crore as on 31.03.2005. 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% tax free as per Govt. of Orissa notification discussed in earlier paragraph.

6.22.5.2 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. The Commission approves the same and calculates interest accordingly.

#### **6.22.6 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 at 12.15%. The loan balance as on 31.03.2004 and 31.03.2005 is shown at Rs.317.40 and Rs.256.25 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.

#### **6.22.7 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 analyses in details and 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.



#### **6.22.8 World Bank Loan**

6.22.8.1 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.

6.22.8.2 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.

#### **6.22.9 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 a repayment of Rs.10.95 crore during 2004-05. 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.

#### **6.22.10 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 2004-05.

#### **6.22.11 Open Market Loan**

GRIDCO has inherited all these loans from OSEB drawn by the latter during 1981 to 1989. The Commission approves the same and allows the interest to be passed on to tariff for 2004-05.

#### **6.22.12 ICICI Loan**

GRIDCO took loan amount to Rs.31.46 crore at an 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 low rate of interest during 2003-04. As such, no interest is due during 2004-05.

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

6.22.13.1 Besides, GRIDCO during 2002-03 to 2004-05 loans from different commercial banks and financial institution 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 : 38**

**Rs. in crore**

		<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	
<b>Particulars</b>	<b>Rate of Interest</b>	<b>Principal</b>	<b>Principal</b>	<b>Principal</b>	<b>Total</b>
Loans Brought					
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>

6.22.13.2 Though the year 2004-05 is not over, the actual loan availed by GRIDCO upto December 2004 comes to Rs.530 crore. GRIDCO would bring further loans of 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.

6.22.13.3 The Commission has found that GRIDCO as a result of swapping has saved around Rs.78 crore of interest in a year. The Commission, considers the interest on Rs.1450 crore loan for the purpose of retiring high cost loan to be passed on to tariff.

#### 6.22.14 Pension Trust Bond

GRIDCO has proposed Rs.12.69 crore of interest on this bond to be recovered through tariff. The Commission in line with previous order approves the pension trust bond and its interest impact.

#### 6.22.15 Capitalisation of Interest

6.22.15.1 GRIDCO in its application has projected a sum of Rs.46.47 crore as interest during construction. An abstract of interest during construction on project related works is given below:

**Table : 39**

<b>Rs. in crore</b>		
Sl.No.	Particulars	Interest
1.	PFC/ADB Funded Project	21.59
2.	REC Funded Project	0.05
3.	HIW Funded (ICICI Fund) Project	3.34
4.	World Bank Funded Project	13.37
5.	Other Funded Project	8.12
	Total	46.47

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

6.22.15.3 Therefore, considering the above factors, the interest liability of GRIDCO has been calculated and the average rate of interest during 2004-05 works out to 7.90% on the average loan balance. The Commission for the purpose of simplification rounded it to 8% on the loan outstanding and approves Rs.308.77 crore towards interest chargeable to revenue for 2004-05 as detailed in table 40. Out of this amount Rs.151.33 crore relate to interest on project related loans which shall be taken into consideration while designing the transmission tariff.

Table : 40

Rs. in crore

	2004-05	
Source	GRIDCO's proposal	Commission's approval
Power Bond-I	-	1.04
Power Bond-I residual	-	0.86
Power Bond-II	-	-
Power Bond-II residual	-	5.98
OPGC-I	-	-
OHPC-I	-	7.50
Nalco-I	-	3.75
Nalco-II	-	8.21
NTPC-I	-	-
NTPC-II	-	-
NTPC-III (GoO Bonds)	-	93.74
NTPC-IV	-	34.29
Loan Syndication	-	2.06
Unrated New Bonds	-	-
<b>Sub Total</b>	-	<b>2.06</b>
Pension Trust Bonds	-	12.69
GoO Bonds	-	-
<b>Total Bonds</b>	-	<b>170.13</b>
<b>Other Loans</b>		
PFC Loan	-	9.84
PFC WCL	-	19.00
PFC STL	-	3.75
IBRD Loan	-	44.35
REC Loan	-	24.38
LIC Loan	-	2.46
State Govt. Loan	-	-
Central Govt. Loan	-	1.01
Open Market Loan	-	2.76
Commercial Banks	-	-
SPA Loan	-	-
ICICI	-	-
UBI	-	11.45
Ahalabad Bank	-	12.23
HUDCO	-	33.04
Dena Bank	-	8.25
UCO Bank	-	8.25
Short term Borrowings	-	-
<b>Other Loan Total of B</b>	-	<b>180.77</b>
Finance charges	-	-
<b>Grand Total(A+B)</b>	<b>410.74</b>	<b>350.90</b>
Interest O/s	-	-

Total Loan	-	-
Less: Int. on Loan receivable from DISTCOs	129.05	0.00
Less: Interest Capitalisation	46.47	46.47
Interest Chargeable to revenue	235.22	304.43
Average rate of interest	9.25%	7.90
Av. rate of interest approved by Comm.		8%
Total interest impact 8% average rate		355.24
Less interest capitalised		46.47
Net interest chargeable to revenue	<b>235.22</b>	<b>308.77</b>

## 6.23 Depreciation

6.23.1 GRIDCO has claimed Rs.44.58 crore towards depreciation. The licensee has calculated depreciation at pre-92 rate prescribed by Govt. of India.

6.23.2 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.

6.23.3 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.

6.23.4 A table showing the Gross Book Value of asset as on 01.04.1996 and yearwise addition upto 2003-04 for the purpose of calculation of depreciation is shown below:

**Table : 41**

<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	143.69		
Total	1274.41	3.13%	39.89

6.23.5 The Commission approves Rs.39.89 crore towards depreciation for 2004-05 at par with the weighted average rate of depreciation based on pre-92 rate as approved in the tariff order dated 24.06.2003.

#### 6.24 Contribution to Contingency Reserve

For the year 2004-05, GRIDCO has proposed Rs.11.61 crore towards contribution to contingency reserve to be provided in the computation of revenue requirement. The same is allowed by the Commission to be passed on to tariff.

#### 6.25 Expected Revenue at Existing BST

The expected revenue of GRIDCO for bulk supply to DISTCOs based on the approved demand and energy charges at the existing BST rate is analysed below:

**Table : 42**  
**REVENUE FROM SALE OF POWER TO DISTCOS**

	CESCO	NESCO	WESCO	SOUTHCO	ORISSA
Demand (MVA)	671.86	467.12	651.21	275.99	2,066.18
Energy MU	3,872.88	2,955.05	4,028.60	1,613.31	12,469.84
Energy Charge P/U	92.00	86.00	96.50	84.00	91.00
Demand charge @Rs.200/- Month (Crs)	161.25	112.11	156.29	66.24	495.88
Energy charge (Crs)	356.30	254.13	388.76	135.52	1,134.72
Total cost of power(Crs.)	517.55	366.24	545.05	201.76	1,630.60

#### 6.26 Miscellaneous Receipts

6.26.1 The Licensee had proposed Rs.983.07 crore as miscellaneous receipts for the year 2004-05 at the transmission tariff of 38.36 paise/unit.

**Table : 43**  
**Miscellaneous Receipts (GRIDCO's Proposal 2004-05)**

	Quantity In MU	Rate Paisa/unit	Amount Rs. Crore
Wheeling to CPPs	430	38.36	16.49
Wheeling to other States	1000	17.50	17.50
Sale to CPPs	10	307.35	3.07
Export	4300	220.00	946.00
<b>Total</b>			<b>983.07</b>

- 6.26.2 **Revenue from Export of Power:** GRIDCO had proposed revenue earning of Rs.946 crore by way of export of 4300 MU to outside state at an average rate of 220 paise per unit. The Commission scrutinised the proposal of GRIDCO and approves 4301.65 MU for export after meeting the state demand. The total revenue from export @220 p/u (reported by GRIDCO) works out to Rs.946.36 crore which is rounded up to Rs.946 crore.
- 6.26.3 The estimated Miscellaneous Receipts excluding export of power has been recalculated by the Commission as depicted in the table below.

**Table : 44**

	<b>Quantity In MU</b>	<b>Rate Paise/unit</b>	<b>Amount Rs. Crore</b>
Wheeling to CPPs	430.00	32.00	13.76
Wheeling to other States	1000.00	17.50	17.50
Sale to CPPs	20.00	307.35	6.15
<b>Total</b>			<b>37.41</b>

- 6.26.4 **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 did not consider the revenue from UI charges for 2004-05. GRIDCO has projected nil figure towards the UI charges. The Commission directs that any revenue earning by GRIDCO on account of UI charges during 2004-05 should be accounted for in the ARR of subsequent years.
- 6.26.5 **Revenue Requirement for the Year 2004-05**

In the light of above discussion, the Commission approves the revenue requirement of GRIDCO for 2004-05 as given in the table below:

Table – 45

		Rs. in crore	
		2004-05	
A.	Expenditure	Proposed	Approved
	Cost of Power Purchase	1974.53	1812.10
	Employee costs	185.16	185.93
	Repair & Maintenance	17.59	14.07
	Administrative and General Expenses	18.91	14.96
	Provision for Bad & Doubtful Debts	0.00	0.00
	Other expenses	2.32	2.32
	Depreciation	44.58	39.89
	Interest Chargeable to Revenue	235.22	308.77
	Sub-Total	2478.31	2378.04
	Less: Expenses capitalised	2.70	1.81
	<b>Total expenses</b>	<b>2475.61</b>	<b>2376.23</b>
B.	Special appropriation		
	Carry forward of Previous Losses	1372.32	8.82
	Contingency reserve	11.61	11.61
	<b>Total</b>	<b>1383.93</b>	<b>20.43</b>
	<b>TOTAL(A+B)</b>	<b>3859.54</b>	<b>2396.66</b>
C.	Less Miscellaneous Receipt	37.06	37.41
D.	Total Revenue Requirement	3822.48	2359.25
E.	Expected Revenue (Full year) from DISTCOs	2876.47	1630.60
	Revenue from Export	946.00	946.00
	<b>Total Revenue</b>	<b>3822.47</b>	<b>2576.60</b>
	<b>GAP</b>	<b>0.00</b>	<b>217.35</b>

## 6.27 Tariff Hike

6.27.1 The Electricity Act, 2003 envisages a tariff structure that would bring about efficiency and economy in the supply and consumption of electricity. The Act also aims at a tariff that would reflect cost, would be linked to efficiency and would eliminate inter-class and intra-class subsidies.

6.27.2 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 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 endeavor to strike a balance



between the interests of end consumers on one hand and financial viability of licensee on the other.

#### 6.28 Past Losses

It is observed that as against an approved annual revenue requirement of Rs.2359.25 crore the expected revenue is Rs.2578.08 crore for 2004-05 but GRIDCO has also proposed special appropriation of Rs.1372.32 crore to cover the entire accumulated losses as on 31.3.2004. Only one full month of the current financial year shall be available if the existing tariff is revised for implementation by the licensee. The tariff and revenue requirement application for 2005-06 is also before the Commission to be disposed off in accordance with section 64(3) of the Electricity Act, 2003. GRIDCO is also carrying a power purchase liability through issuance of bonds to the tune of Rs.2063.28 crore to NTPC, OHPC, etc. The Commission, therefore, decides that it will be administratively convenient to address the issue of past losses while finalising the revenue requirement and tariff for the year 2005-06. Issues raised during the course of public hearing which could not be addressed in this order will also be addressed in the tariff order of 2005-06.

#### 6.29 Transmission Tariff

6.29.1 The total energy to be transmitted in the system is estimated at 12919.84 MU, the details of which are presented in the table below:

**Table : 46**

Transmission Details	MU
Sale to DISTCOs	12469.84
Wheeling to CPP	430.00
Sale to CPPs	20.00
TOTAL	12919.84

6.29.2 Excluding the cost of power purchase, the net cost of transmission works out to Rs.409.61 crore as approved by OERC. The details of the calculation of transmission charges is depicted in the table below:

**Table : 47**

<b>Transmission Cost</b>	<b>Rs.in crore</b>
Employee Cost	185.93
R&M Cost	14.07
A&G Cost	14.96
Interest on project related Loan	151.33
Depreciation	39.89
Other expenses (ERLDC fees)	2.32
<b>Sub-total</b>	<b>408.50</b>
Less Expenses capitalised	1.82
<b>Total</b>	<b>406.68</b>
Special Appropriation	8.82
Contingency Reserve	11.61
<b>Grand Total</b>	<b>427.11</b>
Less Inter-state wheeling	17.50
<b>Net Transmission Cost</b>	<b>409.61</b>
Total transmission in MU	12,919.84
Transmission Tariff (p/u)	31.70 paise

6.29.3 The transmission charges works out to 31.70 paise/unit which is rounded off to 32 paise/unit for 2004-05 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.

### **6.30 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 2004-05 works out to 4%. For the purpose of billing, the transmission loss shall be 4%.

### **6.31 Tariff for Bulk Supply**

The Commission directs that the existing bulk supply tariff shall continue unchanged until further order.

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

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

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

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